D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

*Promoting and protecting the health of the public and the environment.*

MAR 14 2007

MR CRAIG HURST
GROUNDWATER & ENVIRONMENTAL SERVICES
380 NORTHLAKE BLVD
ALTAMONTE SPRINGS, FL 32701

Re: Pay for Performance Projects
$H_2O$ Environmental, Inc.

Dear Mr. Hurst:

The pay-for-performance corrective action projects listed in the table below were awarded to $H_2O$ Environmental, Inc. ($H_2O$) between the dates of May 1997 and January 2000.

| Permit # | Site Name | Remove and Abandon Treatment System | Abandon Monitoring Wells |
|---|---|---|---|
| 04102 | City of Greenville | X | X |
| 00781 | SCDOT Bamberg Maintenance | X | |
| 02382 | Black's 66 | X* | X |
| 06851 | Spinx | X | |
| 09413 | Gaulden's Grocery | X | X |
| 15971 | Nesmith Well Contamination | X | |
| 16090 | Fmr Ellison's (Owens Well) | X | |
| 12335 | Crawford's Store | X | |

* Contact Mr. Tommy Keels at G&K Tank Services (803-799-0054) to pick up this trailer.

In the time since Groundwater & Environmental Services (GES) acquired $H_2O$, little work has been done to advance these projects toward completion. It has been determined that it is in the best interests of the UST Program to release GES/$H_2O$ from the listed contracts.

The release of GES/ $H_2O$ from these contracts is unconditional and will not prejudice any current or future work by your company. In accordance with the terms and conditions of the PfP contracts, you are to remove your equipment from the listed facilities, abandon the remediation wells, piping, electrical service, etc., and restore the sites to the conditions prior to corrective action (e.g., asphalt paved areas will be repaved with asphalt, concrete areas will be replaced with concrete, grass areas will have soil replaced to the original grade and reseeded or sodded with grass, etc.). The monitoring wells are to be abandoned only at the facilities indicated in the table above. The Department will make no further payments from the SUPERB Account. Your performance bonds will be returned as soon as completion of these activities has been verified by DHEC staff.

UST PROGRAM
DOCKETING # 2 Sealed

Please feel free to contact me at (803) 896-6249 if you have any questions or need additional information.

Sincerely,

Kent M. Coleman, P.G., Director
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management

cc: Technical Files
Matt Winslow, Bureau of Business Management

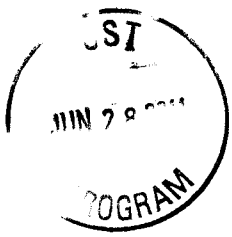
DHEC/UST/030207

UST Permit #: 12335

Facility Name: Crawford's Country Store

Facility Address: 5870 SC-28 North

City and Zip Code: Antreville, SC 29620 County: Abbeville




The Underground Storage Tank Management Division is currently directing cleanup of petroleum chemicals of concern (CoC) in groundwater at the referenced facility. Information regarding your inactive water supply well (CP-WW) is needed as part of the cleanup. Please check the appropriate response and return this form to the address listed below:

✓ An inactive water supply well is currently located on my property. I do not intend to use the well again and wish to have it properly abandoned by a SC-certified well driller. I understand that the Underground Storage Tank Management Division will provide all funding for the abandonment.

_____ An inactive water supply well is currently located on my property. I intend to keep the well for future use.

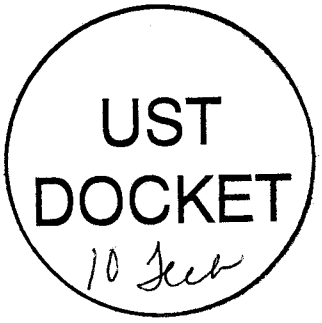
HAROLD F. CRAWFORD
Name (Please Print)

6-27-2011
Date

Harold Franklin Crawford
Signature

864-348-7442
Telephone Number

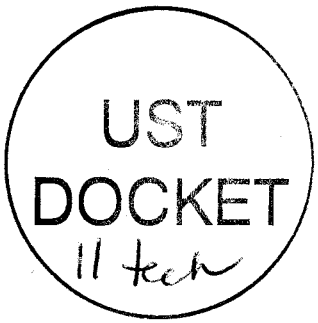
Please return this form to: Joel P. Padgett, P.G., SCDHEC
Underground Storage Tank Management Division
2600 Bull Street
Columbia, SC 29201



Midlands
Environmental
Consultants, Inc.

July 19, 2011

Mr. Joel Padgett, P.G., Hydrogeologist
Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201




Subject: Aggressive Fluid Vapor Recovery Report
Crawford's Country Store
Antreville, South Carolina
SCDHEC Site ID # 12335; CA #41829
MECI Project Number 11-3449A
Certified Site Rehabilitation Contractor UCC-009

Dear Mr. Padgett,

On behalf of Mr. H. Franklin Crawford, Midlands Environmental Consultants, Inc. (MECI) is pleased to submit the attached Aggressive Fluid Vapor Recovery Report for the referenced site. This describes the aggressive fluid vapor recovery activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines.

**AGGRESSIVE FLUID VAPOR RECOVERY**

MECI personnel conducted an Aggressive Fluid Vapor Recovery (AFVR) event at Crawford's Country Store from July 18, 2011 to July 19, 2011. The event was conducted on monitoring wells MW-1R, MW-3, and OMW-1 to remove free phase petroleum product and reduce dissolved CoC concentrations. Free phase petroleum product was detected in monitoring well MW-1R at a thickness 0.06 feet and in OMW-1 at a thickness of 0.24 feet prior to the AFVR event. The event was conducted continuously for eight hours by MECI personnel utilizing a vacuum extraction unit. Free phase petroleum product was detected in the wells immediately following the event.

MECI treated the off gas produced during the AFVR event using an activated carbon filter system. Calculated total petroleum hydrocarbons removed from the well were 6.39 pounds or approximately 1.10 equivalent gallons. The average rate of removal for the hydrocarbons was calculated to be 0.80 pounds per hour. Concentrations of off gas produced during the event were recorded from 128 parts per million by volume (PPM) to 629 PPM. Measurements were obtained from vapors prior to entering off gas treatment. Vacuum readings were recorded at a range of 9.0 to 12.0 inches of mercury during the event. A complete compilation of measurements recorded is presented in attached Table 1A.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Differential pressures and groundwater levels were measured and recorded for selected site monitoring wells at regular intervals. This data is summarized in the attached Table 2A. Monitoring well locations are depicted on attached Figure 1.

A total of 150 gallons of liquid was removed from MW-1R, MW-3, and OMW-1 during this event. Free phase petroleum product was not observed in the holding tank at the end of the event. The fluids produced were transported to TK Tank Services of Sumter, S.C. for disposal. A disposal manifest for these fluids is attached at the end of this report.

## QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assignment are consistent with those normally employed in enhanced fluid recovery events and waste management projects of this type. Contents of this report are intended for the use by Mr. H. Franklin Crawford, MECI and the South Carolina Department of Health and Environmental Control, under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

Midlands Environmental appreciates the opportunity to offer our professional environmental related services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
**Midlands Environmental Consultants, Inc.**

Brian J. Owen
Field Technician

Brendon P. Kelly
Project Scientist

Attachments:

# TABLE 1A
# AFVR MONITORING DATA
# CRAWFORD'S COUNTRY STORE
# Abbeville, SOUTH CAROLINA
# MECI PROJECT NUMBER 11-3449A
# SCDHEC SITE ID NUMBER 12335

| Extraction Well | Date | Time (hh:mm) | Differential Time (hr) | Extraction Well Head Vacuum (in. Hg) | Off Gas Measurements | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Concentration (PPM) | Offgas Velocity Ft/Min | Flow Rate CFM | Removal Rate Lbs/Hr | Interval Removal Lbs |
| MW-1R | 07/18/11 | 20:00 | 0.50 | 11.0 | 629 | 2,340 | 210.60 | 1.59 | 0.79 |
| MW-3 | 07/18/11 | 20:30 | 0.50 | 11.0 | 270 | 2,460 | 221.40 | 0.72 | 0.36 |
| OMW-1 | 07/18/11 | 21:00 | 0.50 | 11.0 | 242 | 2,550 | 229.50 | 0.67 | 0.33 |
| | 07/18/11 | 21:30 | 0.50 | 11.0 | 171 | 2,600 | 234.00 | 0.48 | 0.24 |
| | 07/18/11 | 22:00 | 0.50 | 12.0 | 246 | 2,450 | 220.50 | 0.65 | 0.33 |
| | 07/18/11 | 22:30 | 0.50 | 12.0 | 244 | 2,520 | 226.80 | 0.66 | 0.33 |
| | 07/18/11 | 23:00 | 0.50 | 12.0 | 236 | 2,500 | 225.00 | 0.64 | 0.32 |
| | 07/18/11 | 23:30 | 0.50 | 12.0 | 261 | 2,500 | 225.00 | 0.70 | 0.35 |
| | 07/19/11 | 0:00 | 0.50 | 12.0 | 568 | 2,480 | 223.20 | 1.52 | 0.76 |
| | 07/19/11 | 0:30 | 0.50 | 12.0 | 295 | 2,500 | 225.00 | 0.80 | 0.40 |
| | 07/19/11 | 1:00 | 0.50 | 12.0 | 389 | 2,450 | 220.50 | 1.03 | 0.51 |
| | 07/19/11 | 1:30 | 0.50 | 12.0 | 237 | 2,450 | 220.50 | 0.63 | 0.31 |
| | 07/19/11 | 2:00 | 0.50 | 12.0 | 229 | 2,480 | 223.20 | 0.61 | 0.31 |
| | 07/19/11 | 2:30 | 0.50 | 12.0 | 226 | 2,480 | 223.20 | 0.61 | 0.30 |
| | 07/19/11 | 3:00 | 0.50 | 9.0 | 203 | 2,840 | 255.60 | 0.62 | 0.31 |
| | 07/19/11 | 3:30 | 0.50 | 9.0 | 152 | 2,810 | 252.90 | 0.46 | 0.23 |
| | 07/19/11 | 4:00 | 0.50 | 9.0 | 128 | 2,800 | 252.00 | 0.39 | 0.19 |
| | | | | | | | | | TOTAL 6.39 |

| Well Data: | | | Pre AFVR Event | | | Post AFVR Event | | | Corrected Depth to Water Change (ft) |
|---|---|---|---|---|---|---|---|---|---|
| Well No. | Diameter (in) | Screened Interval (ft) | Depth to Product (ft) | Depth to Water (ft) | Product Thickness (ft) | Depth to Product (ft) | Depth to Water (ft) | Product Thickness (ft) | |
| MW-1R | 2" | 15-25 | 20.78 | 20.84 | 0.06 | *** | 20.43 | *** | -0.36 |
| MW-3 | 2" | 15-25 | *** | 20.92 | *** | *** | 21.06 | *** | *** |
| OMW-1 | 2" | 15-25 | 20.77 | 21.01 | 0.24 | *** | 20.30 | *** | -0.51 |

| Vacuum Truck Information | | Well ID | Stinger Depth |
|---|---|---|---|
| Subcontrator: | MECI | MW-1R | 21.50 |
| Truck Operator: | R. Ariail | MW-3 | 21.00 |
| Stack I.D. (feet) | 0.33 feet | OMW-1 | 21.50 |

Corrected Depth to Water Prior to AFVR event in MW-1R: 20.79
Corrected Depth to Water Prior to AFVR event in OMW-1: 20.81

| Recovery / Disposal Information | | |
|---|---|---|
| Hydro carbons Removed (vapor): | 6.39 | Pounds |
| Hydro carbons Removed (liquid): | 0 | Gallons |
| Total Hydrocarbons Removed: | 1.10 | Equivilant Gallons |
| Molecular Weight Utilized: | 75 | g / mole |
| Disposal Facility | TK Tank Services | |
| Total Liquids Removed: | 150 | Gallons |

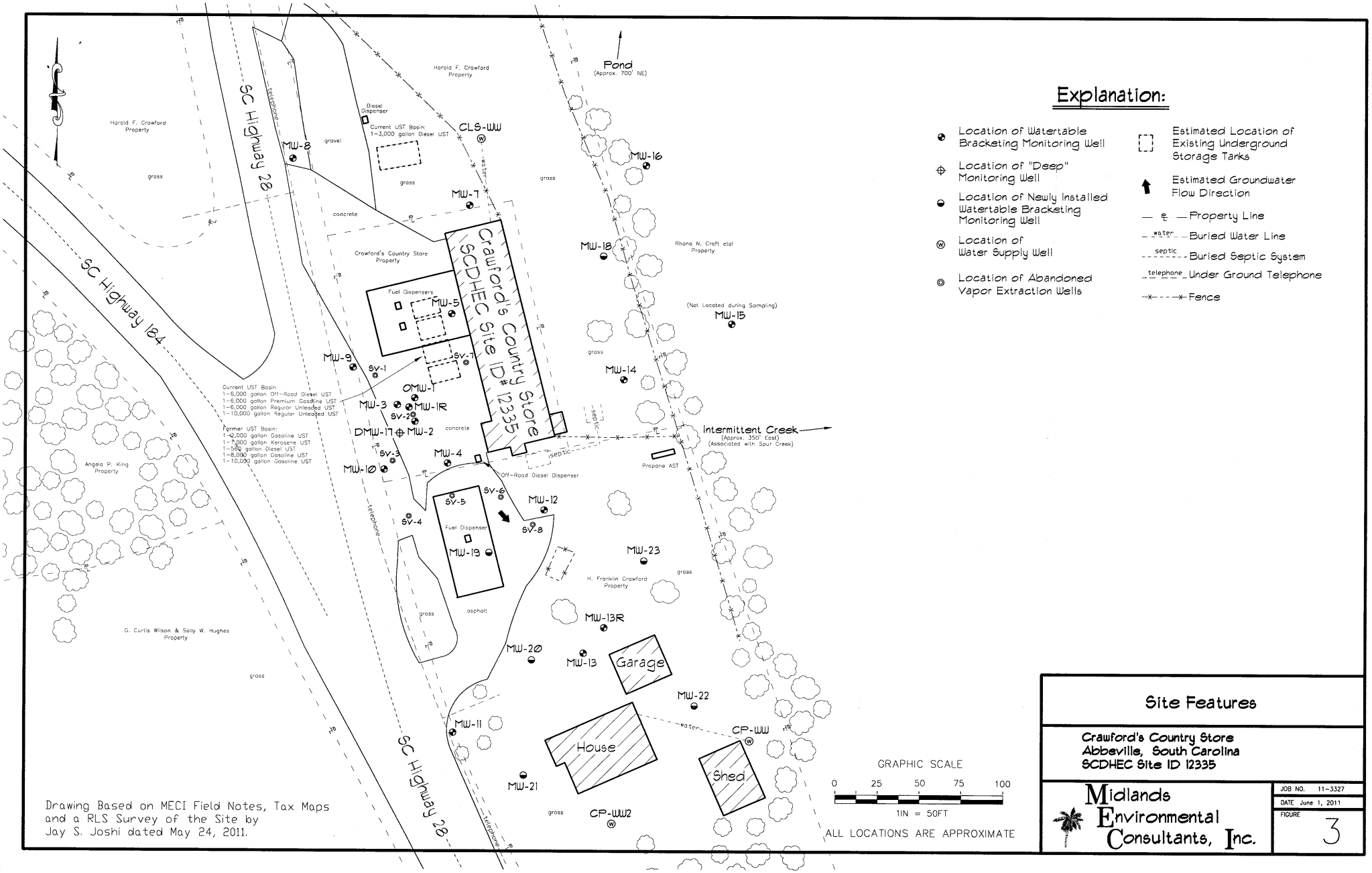
# TABLE 2A
# DIFFERENTIAL PRESSURE AND GROUNDWATER DRAWDOWN DATA
# CRAWFORD'S COUNRY STORE
# ANTREVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 11-3449A
# SCDHEC SITE ID NUMBER 12335

## DIFFERENTIAL PRESSURE DATA

| | | Well Designation: | | |
|---|---|---|---|---|
| | | **MW-2** | **MW-9** | **MW-10** |
| Nearest Extraction Well: | | MW-1R | MW-3 | MW-3 |
| Approximate Distance: | | 9 ft | 34 ft | 39 ft |
| **Time** | **Elapsed Time** | **Differential Pressure Readings (inches of water)** | | |
| 20:00 | 0.0 | 0.0 | 0.0 | 0.0 |
| 20:30 | 0.5 | 0.0 | 0.0 | 0.0 |
| 21:00 | 1.0 | 0.0 | 0.0 | 0.0 |
| 21:30 | 1.5 | 0.0 | 0.0 | 0.0 |
| 22:00 | 2.0 | 0.0 | 0.0 | 0.0 |
| 22:30 | 2.5 | 0.0 | 0.0 | 0.0 |
| 23:00 | 3.0 | 0.0 | 0.0 | 0.0 |
| 23:30 | 3.5 | 0.0 | 0.0 | 0.0 |
| 0:00 | 4.0 | 0.0 | 0.0 | 0.0 |
| 0:30 | 4.5 | 0.0 | 0.0 | 0.0 |
| 1:00 | 5.0 | 0.0 | 0.0 | 0.0 |
| 1:30 | 5.5 | 0.0 | 0.0 | 0.0 |
| 2:00 | 6.0 | 0.0 | 0.0 | 0.0 |
| 2:30 | 6.5 | 0.0 | 0.0 | 0.0 |
| 3:00 | 7.0 | 0.0 | 0.0 | 0.0 |
| 3:30 | 7.5 | 0.0 | 0.0 | 0.0 |
| 4:00 | 8.0 | 0.0 | 0.0 | 0.0 |
| **Maximum Change:** | | 0.0 | 0.0 | 0.0 |

## GROUNDWATER DRAWDOWN DATA

| | | Well Designation: | | |
|---|---|---|---|---|
| | | **MW-2** | **MW-9** | **MW-10** |
| Nearest Extraction Well: | | MW-1R | MW-3 | MW-3 |
| Approximate Distance: | | 9 ft | 34 ft | 39 ft |
| **Time** | **Elapsed Time** | **Depth to Liquid (feet below of casing):** | | |
| Prior toAFVR | | 21.19 | 20.44 | 21.12 |
| 0:00 | 4 hours | 21.40 | 20.48 | 21.19 |
| 4:00 | 8 hours | 21.30 | 20.47 | 21.17 |
| **Maximum Change:** | | -0.21 | -0.04 | -0.07 |


Explanation:
Location of Watertable Bracketing Monitoring Well
Location of "Deep" Monitoring Well
Location of Newly Installed Watertable Bracketing Monitoring Well
Location of Water Supply Well
Location of Abandoned Vapor Extraction Wells
Estimated Location of Existing Underground Storage Tanks
Estimated Groundwater Flow Direction
Property Line
Buried Water Line
Buried Septic System
Under Ground Telephone
Fence
SC Highway 28
SC Highway 124
Crawford's Country Store SCDHEC Site ID #12335
Pond
(Approx. 700' NE)
Intermittent Creek
(Approx. 350' East)
(Associated with Spur Creek)
Harold F. Crawford Property
Crawford's Country Store Property
Rhona N. Craft etal Property
H. Franklin Crawford Property
Angela P. King Property
G. Curtis Wilson & Sally W. Hughes Property
Current UST Basin:
1-3,000 gallon Diesel UST
Current UST Basin:
1-6,000 gallon Off-Road Diesel UST
1-6,000 gallon Premium Gasoline UST
1-6,000 gallon Regular Unleaded UST
1-10,000 gallon Regular Unleaded UST
Former UST Basin:
1-2,000 gallon Gasoline UST
1-1,000 gallon Kerosene UST
1-500 gallon Diesel UST
1-8,000 gallon Gasoline UST
1-10,000 gallon Gasoline UST
Diesel Dispenser
Fuel Dispensers
Fuel Dispenser
Off-Road Diesel Dispenser
Propane AST
Garage
House
Shed
(Not Located during Sampling)
MW-1
MW-1R
MW-2
MW-3
MW-4
MW-5
MW-7
MW-8
MW-9
MW-10
MW-11
MW-12
MW-13
MW-13R
MW-14
MW-15
MW-16
MW-18
MW-19
MW-20
MW-21
MW-22
MW-23
DMW-17
SV-1
SV-2
SV-3
SV-4
SV-5
SV-6
SV-7
SV-8
CLS-WW
CP-WW
CP-WW2
GRAPHIC SCALE
0 25 50 75 100
1IN = 50FT
ALL LOCATIONS ARE APPROXIMATE
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated May 24, 2011.
Site Features
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID 12335
Midlands Environmental Consultants, Inc.
JOB NO. 11-3327
DATE June 1, 2011
FIGURE 3

**NON-HAZARDOUS WASTE MANIFEST**

1. Generator ID Number

2. Page 1 of

3. Emergency Response Phone

**4. Waste Tracking Number** TK10497

5. Generator's Name and Mailing Address

MIDLANDS ENVIRONMENTAL
1144 TWO NOTCH ROAD
LEXINGTON, SC 29073

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name: TK TANK SERVICE SUMTER, SC — U.S. EPA ID Number: 98757355 7

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address — U.S. EPA ID Number

TK TANK SERVICES
325 BOULEVARD ROAD
SUMTER, SC 29153

Facility's Phone: 803-418-5314 — 98757355 7

| 9. Waste Shipping Name and Description | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. |
|---|---|---|---|---|
| 1. NON HAZARDOUS PETROLEUM CONTAMINATED WATER | 01 | TT | 2900 | gallons |

| SCDHEC Site | Permit Number | Gallons Produced |
|---|---|---|
| York County School Bus Shop | 09164 | 150 |
| Gregory's Store | 08979 | 150 |
| Weaver & Sons Lounge | 18685 | 200 |
| Venter's Grocery | 09081 | 125 |
| Former Ralph Infinger Grocery | 03021 | 100 |
| Pratts Grocery | 06974 | 50 |
| Midway Service Station | 13046 | 100 |
| Phillips Rental Property | 19328 | 50 |
| EZ Stop Food Shop | 14555 | 50 |
| Former McCoy Oil Site | 19002 | 325 |
| McGill Grocery | 19440 | 200 |
| Crawford's Country Store | 12335 | 150 |
| Newberry County Airport | 15590 | 325 |
| F&T Service Center | 09012 | 100 |
| West State Line Gulf | 08606 | 200 |
| McCutcheon's Grocery | 09125 | 150 |
| Calcutt's Grocery | 19120 | 150 |
| Strickland's Exxon | 02906 | 100 |
| Markette 23 | 10092 | 225 |

13.

14. ...egulations for reporting proper disposal of Hazardous Waste.

Gen... Month Day Year

15. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Steve A. Gamble — Signature: Steve A. Gamble — Month 7 Day 22 Year 11

Transporter 2 Printed/Typed Name — Signature — Month Day Year

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name — Signature — Month Day Year

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

Midlands
Environmental
Consultants, Inc.

September 7, 2011

Mr. Joel Padgett, P.G., Hydrogeologist
Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Subject: Aggressive Fluid Vapor Recovery Report
Crawford's Country Store
Antreville, South Carolina
SCDHEC Site ID # 12335; CA #41829
MECI Project Number 11-3449B
Certified Site Rehabilitation Contractor UCC-009

Dear Mr. Padgett,

On behalf of Mr. H. Franklin Crawford, Midlands Environmental Consultants, Inc. (MECI) is pleased to submit the attached Aggressive Fluid Vapor Recovery Report for the referenced site. This describes the aggressive fluid vapor recovery activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines.

**AGGRESSIVE FLUID VAPOR RECOVERY**

MECI personnel conducted an Aggressive Fluid Vapor Recovery (AFVR) event at Crawford's Country Store from August 31 and September 01, 2011. The event was conducted on monitoring wells MW-1R, MW-3, and OMW-1 to reduce dissolved CoC concentrations. Free phase petroleum product was not detected in monitoring wells MW-1R MW-3, and OMW-1 prior to the AFVR event. The event was conducted continuously for eight hours by MECI personnel utilizing a vacuum extraction unit. Free phase petroleum product was detected in the wells immediately following the event.

MECI treated the off gas produced during the AFVR event using an activated carbon filter system. Calculated total petroleum hydrocarbons removed from the well were 9.76 pounds or approximately 1.69 equivalent gallons. The average rate of removal for the hydrocarbons was calculated to be 1.22 pounds per hour. Concentrations of off gas produced during the event were recorded from 195 parts per million by volume (PPM) to 1,901 PPM. Measurements were obtained from vapors prior to entering off gas treatment. Vacuum readings were recorded at a range of 5.0 to 22.0 inches of mercury during the event. A complete compilation of measurements recorded is presented in attached Table 1B.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Differential pressures and groundwater levels were measured and recorded for selected site monitoring wells at regular intervals. This data is summarized in the attached Table 2B. Monitoring well locations are depicted on attached Figure 1.

A total of 185 gallons of liquid was removed from MW-1R, MW-3, and OMW-1 during this event. Free phase petroleum product was not observed in the holding tank at the end of the event. The fluids produced were transported to TK Tank Services of Sumter, S.C. for disposal. A disposal manifest for these fluids is attached at the end of this report.

## QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assignment are consistent with those normally employed in enhanced fluid recovery events and waste management projects of this type. Contents of this report are intended for the use by Mr. H. Franklin Crawford, MECI and the South Carolina Department of Health and Environmental Control, under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

Midlands Environmental appreciates the opportunity to offer our professional environmental related services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
**Midlands Environmental Consultants, Inc.**

Courtney M. Sanders
Staff Biologist

Brendon P. Kelly
Project Scientist

Attachments:

# TABLE 1B
# AFVR MONITORING DATA
# CRAWFORD'S COUNTRY STORE
# ANTREVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 11-3449B
# SCDHEC SITE ID NUMBER 12335

| Extraction Well | Date | Time (hh:mm) | Differential Time (hr) | Extraction Well Head Vacuum (in. Hg) | Off Gas Measurements | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Concentration (PPM) | Offgas Velocity Ft/Min | Flow Rate CFM | Removal Rate Lbs/Hr | Interval Removal Lbs |
| MW-1R | 08/31/11 | 20:30 | 0.50 | 5.0 | 195 | 2,260 | 203.40 | 0.48 | 0.24 |
| MW-3 | 08/31/11 | 21:00 | 0.50 | 5.0 | 197 | 2,250 | 202.50 | 0.48 | 0.24 |
| OMW-1 | 08/31/11 | 21:30 | 0.50 | 5.0 | 225 | 2,260 | 203.40 | 0.55 | 0.27 |
| | 08/31/11 | 22:00 | 0.50 | 7.0 | 390 | 2,150 | 193.50 | 0.91 | 0.45 |
| | 08/31/11 | 22:30 | 0.50 | 7.0 | 382 | 2,170 | 195.30 | 0.90 | 0.45 |
| | 08/31/11 | 23:00 | 0.50 | 7.0 | 361 | 2,160 | 194.40 | 0.84 | 0.42 |
| | 08/31/11 | 23:30 | 0.50 | 7.0 | 348 | 2,140 | 192.60 | 0.80 | 0.40 |
| | 09/01/11 | 0:00 | 0.50 | 10.0 | 611 | 1,840 | 165.60 | 1.21 | 0.61 |
| | 09/01/11 | 0:30 | 0.50 | 10.0 | 605 | 1,810 | 162.90 | 1.18 | 0.59 |
| | 09/01/11 | 1:00 | 0.50 | 12.0 | 832 | 1,610 | 144.90 | 1.45 | 0.72 |
| | 09/01/11 | 1:30 | 0.50 | 12.0 | 818 | 1,630 | 146.70 | 1.44 | 0.72 |
| | 09/01/11 | 2:00 | 0.50 | 15.0 | 1,171 | 1,440 | 129.60 | 1.82 | 0.91 |
| | 09/01/11 | 2:30 | 0.50 | 15.0 | 1,158 | 1,450 | 130.50 | 1.81 | 0.91 |
| | 09/01/11 | 3:00 | 0.50 | 19.0 | 1,510 | 990 | 89.10 | 1.61 | 0.81 |
| | 09/01/11 | 3:30 | 0.50 | 19.0 | 1,476 | 1,020 | 91.80 | 1.63 | 0.81 |
| | 09/01/11 | 4:00 | 0.50 | 22.0 | 1,887 | 580 | 52.20 | 1.18 | 0.59 |
| | 09/01/11 | 4:30 | 0.50 | 22.0 | 1,901 | 600 | 54.00 | 1.23 | 0.62 |
| | | | | | | | | | **TOTAL** **9.76** |

| Well Data: | | | Pre AFVR Event | | | Post AFVR Event | | | Corrected Depth to Water Change (ft) |
|---|---|---|---|---|---|---|---|---|---|
| Well No. | Diameter (in) | Screened Interval (ft) | Depth to Product (ft) | Depth to Water (ft) | Product Thickness (ft) | Depth to Product (ft) | Depth to Water (ft) | Product Thickness (ft) | |
| MW-1R | 2" | 15-25 | *** | 22.77 | *** | *** | 22.28 | *** | -0.49 |
| MW-3 | 2" | 15-25 | *** | 22.96 | *** | *** | 23.70 | *** | 0.74 |
| OMW-1 | 2" | 15-25 | *** | 21.55 | *** | *** | 21.01 | *** | -0.54 |

| Vacuum Truck Information | | Well ID | Stinger Depth |
|---|---|---|---|
| Subcontrator: | MECI | MW-1R | 22.00 |
| Truck Operator: | R. Ariail | MW-3 | 22.00 |
| Stack I.D. (feet) | 0.33 feet | OMW-1 | 21.00 |

| Recovery / Disposal Information | | |
|---|---|---|
| Hydro carbons Removed (vapor): | 9.76 | Pounds |
| Hydro carbons Removed (liquid): | 0 | Gallons |
| Total Hydrocarbons Removed: | 1.69 | Equivilant Gallons |
| Molecular Weight Utilized: | 75 | g / mole |
| Disposal Facility | TK Tank Services | |
| Total Liquids Removed: | 185 | Gallons |

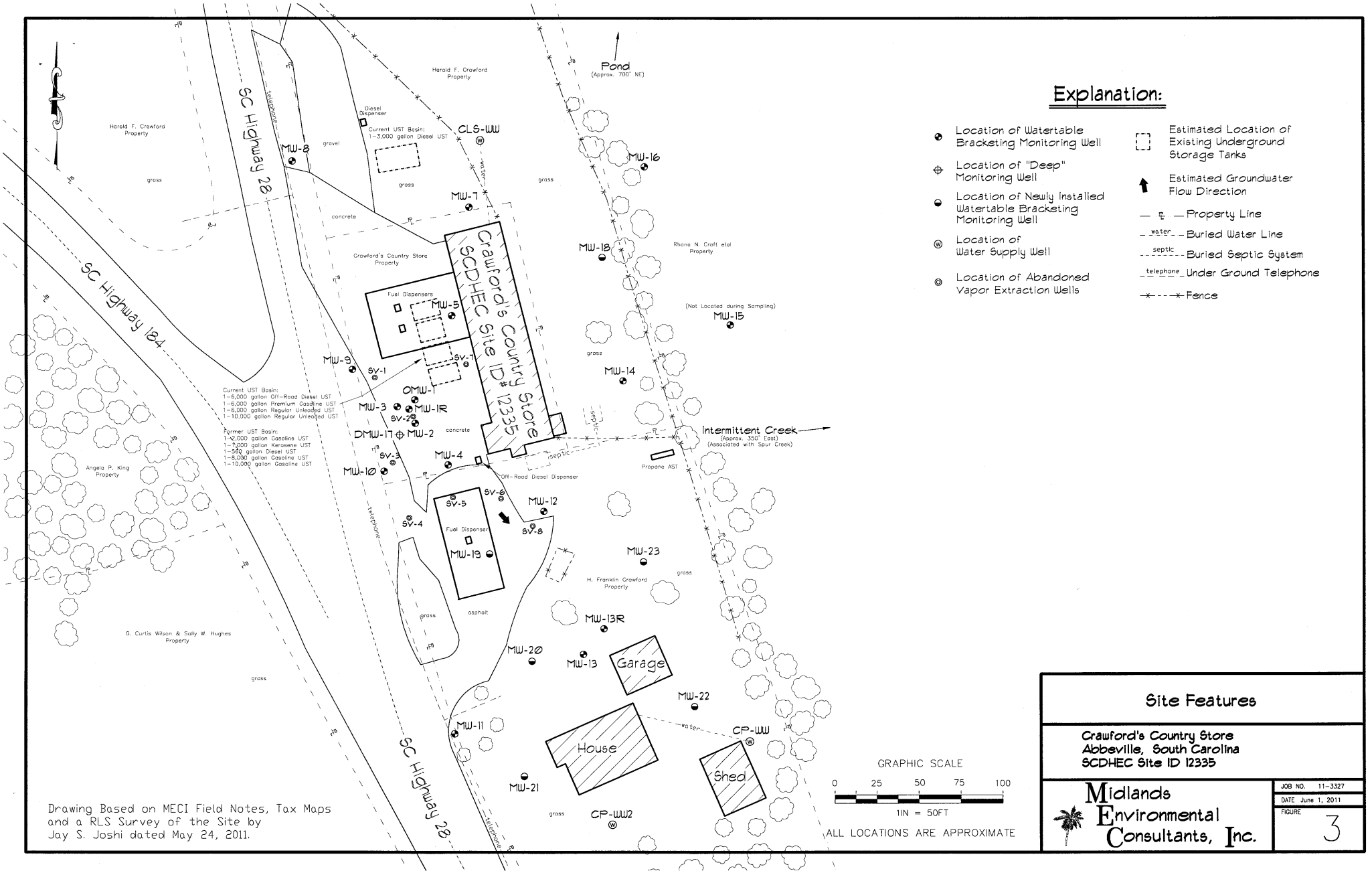
# TABLE 2B
# DIFFERENTIAL PRESSURE AND GROUNDWATER DRAWDOWN DATA
# CRAWFORD'S COUNRY STORE
# ANTREVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 11-3449B
# SCDHEC SITE ID NUMBER 12335

## DIFFERENTIAL PRESSURE DATA

| | | Well Designation: | | |
|---|---|---|---|---|
| | | **MW-2** | **MW-9** | **MW-10** |
| Nearest Extraction Well: | | MW-1R | MW-3 | MW-3 |
| Approximate Distance: | | 9 ft | 34 ft | 39 ft |
| **Time** | **Elapsed Time** | **Differential Pressure Readings (inches of water)** | | |
| 20:30 | 0.0 | 0.0 | 0.0 | 0.0 |
| 21:00 | 0.5 | 0.0 | 0.0 | 0.0 |
| 21:30 | 1.0 | 0.0 | 0.0 | 0.0 |
| 22:00 | 1.5 | 0.0 | 0.0 | 0.0 |
| 22:30 | 2.0 | 1.0 | 0.0 | 0.0 |
| 23:00 | 2.5 | 1.0 | 0.0 | 0.0 |
| 23:30 | 3.0 | 1.0 | 0.0 | 0.0 |
| 0:00 | 3.5 | 1.0 | 0.0 | 0.0 |
| 0:30 | 4.0 | 1.0 | 0.0 | 0.0 |
| 1:00 | 4.5 | 1.0 | 0.0 | 0.0 |
| 1:30 | 5.0 | 1.5 | 0.0 | 0.0 |
| 2:00 | 5.5 | 1.5 | 0.0 | 0.0 |
| 2:30 | 6.0 | 3.0 | 0.0 | 0.0 |
| 3:00 | 6.5 | 3.0 | 0.0 | 0.0 |
| 3:30 | 7.0 | 4.5 | 1.0 | 1.0 |
| 4:00 | 7.5 | 4.5 | 1.0 | 1.0 |
| 4:30 | 8.0 | 6.0 | 1.0 | 1.0 |
| **Maximum Change:** | | 5.0 | 1.0 | 1.0 |

## GROUNDWATER DRAWDOWN DATA

| | | Well Designation: | | |
|---|---|---|---|---|
| | | **MW-2** | **MW-9** | **MW-10** |
| Nearest Extraction Well: | | MW-1R | MW-3 | MW-3 |
| Approximate Distance: | | 9 ft | 34 ft | 39 ft |
| **Time** | **Elapsed Time** | **Depth to Liquid (feet below of casing):** | | |
| Prior toAFVR | | 23.09 | 22.66 | 23.05 |
| 0:30 | 4 hours | 23.33 | 22.68 | 23.13 |
| 4:30 | 8 hours | 24.35 | 22.76 | 23.37 |
| **Maximum Change:** | | 1.26 | 0.10 | 0.32 |




## Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of "Deep" Monitoring Well
- Location of Newly Installed Watertable Bracketing Monitoring Well
- Location of Water Supply Well
- Location of Abandoned Vapor Extraction Wells
- Estimated Location of Existing Underground Storage Tanks
- Estimated Groundwater Flow Direction
- Property Line
- Buried Water Line
- Buried Septic System
- Under Ground Telephone
- Fence

GRAPHIC SCALE
0 25 50 75 100
1IN = 50FT

ALL LOCATIONS ARE APPROXIMATE

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated May 24, 2011.

# Site Features

**Crawford's Country Store**
**Abbeville, South Carolina**
**SCDHEC Site ID 12335**

Midlands Environmental Consultants, Inc.

JOB NO. 11-3327
DATE June 1, 2011
FIGURE 3

**NON-HAZARDOUS WASTE MANIFEST**

| 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Waste Tracking Number |
|---|---|---|---|
| | | | |

**GENERATOR**

5. Generator's Name and Mailing Address

BIRLAUNG ENVIRONMENTAL
[illegible] NO. 2 ROAD
LEXINGTON, SC 29072

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name: TK TANK SERVICE — SUMTER, SC — U.S. EPA ID Number: [illegible]

7. Transporter 2 Company Name — U.S. EPA ID Number

8. Designated Facility Name and Site Address

TK TANK SERVICE
155 BOOKER BOOM ROAD
SUMTER, SC 29150

U.S. EPA ID Number: [illegible]

Facility's Phone: 803-418-5514

| | 9. Waste Shipping Name and Description | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | |
|---|---|---|---|---|---|---|
| 1. | NON HAZARDOUS PETROLEUM CONTAMINATED WATER | 1 | TT | 3070 | G | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |

| SCDHEC Site | Permit Number | Gallons Produced |
|---|---|---|
| Mary Moorehead Property | 16009 | 140 |
| Crawford's Country Store | 12335 | 185 |
| El Cheapo | 11773 | 175 |
| Heath Self Serve 2 | 08932 | 150 |
| Boles Enterprise | 04768 | 20 |
| Horton's Grocery | 06768 | 150 |
| Horton's Grocery | 06768 | 150 |
| Richland County Public Works | 11805 | 325 |
| Weaver & Sons Lounge | 18685 | 200 |
| Calcutt's Grocery | 09120 | 100 |
| Sweatman Grocery | 17292 | 150 |
| Phillips Rental Property | 19328 | 75 |
| Former Royal Petroleum | 19426 | 325 |
| Weed's Landing | 06157 | 350 |
| Corner Pantry 103 | 07686 | 100 |
| Burnette Cleaner's | 15724 | 150 |
| Dubose Bait & Feed | 08843 | 325 |

13. Special Ha

14. GENERAT — s for reporting proper disposal of Hazardous Waste.

Generator's/Offi — Month Day Year

**INT'L**

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Steve A. Gamble — Signature: Steve A. Gamble — Month 9 Day 14 Year 11

Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name — Signature — Month Day Year

D H E C
PROMOTE PROTECT PROSPER
C. Earl Hunter, Commissioner
*Promoting and protecting the health of the public and the environment.*

UST 13ecd DOCKETING

MR H FRANKLIN CRAWFORD
5870 SC-28 N
ANTREVILLE SC 29620

OCT 20 2011

Re: Water supply well abandonment directive
Crawford's Country Store, 5870 SC-28 North, Antreville, SC
UST Permit #12335; CA #42536
Release reported December 3, 1991
Abbeville County

Dear Mr. Crawford:

On June 28, 2011, the Underground Storage Tank (UST) Management Division received a water supply well information form that indicates your desire to abandon water supply well CP-WW located on your property. Accordingly, the Division requested that your contractor of choice, Midlands Environmental Consultants, Inc., secure a price quote for the abandonment from a SC-licensed well driller.

The Division received a response in the amount of $762.00 from Environmental Drilling and Probing Services, LLC (EDPS) on October 11, 2011. Since the Division considers the price quote to be fair and reasonable for the scope of work, the quote has been accepted.

Cost Agreement (CA) #42536 has been approved in the amount shown on the enclosed cost agreement form for the water supply well abandonment. Midlands and EDPS may proceed with the water supply well abandonment upon receipt of this correspondence. The abandonment must be conducted in accordance with the UST Quality Assurance Program Plan (QAPP) and with the South Carolina Well Standards and Regulations (R. 61-71). A brief report documenting the abandonment and completed SCDHEC 1903 Water Well Record must be submitted to the Division within 90 days of the date of this correspondence.

Midlands can submit an invoice direct billing from the SUPERB Account. The invoice must be submitted within 120 days of the date of this correspondence or monies allocated to pay the invoice will be uncommitted. This means that the invoice will not be processed for payment until all other committed funds are paid or monies become available.

Please note that Sections 44-2-110(4) and 44-2-130 of the SUPERB Statute state that no costs will be allowed unless prior approval from the SCDHEC is obtained. If for any reason additional tasks will be completed, these additional tasks and the associated cost must be pre-approved by the Department for the cost to be paid. SCDHEC reserves the authority to pay only for work properly performed and/or technically justified and will only pay rates in accordance with established criteria. Further, SCDHEC reserves the right to question and/or reject costs if

deemed unreasonable and the right to audit project records at any time during the project or after completion of work.

On all correspondence concerning this site, please reference UST Permit #12335. If there are any questions concerning this scope of work, please feel free to contact me by telephone at (803) 896-6398, by fax at (803) 896-6145, or by e-mail at padgetjp@dhec.sc.gov.

Sincerely,

Joel P. Padgett, P.G., Geologist/Hydrologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

JPP/jpp
12335.3

enc: Approved cost agreement form

cc: Midlands Environmental Consultants, Inc., P.O. Box 854, Lexington, SC 29071 (w/enc)
Technical file (w/enc)

# Approved Cost Agreement 42536

Facility: 12335 CRAWFORDS STORE

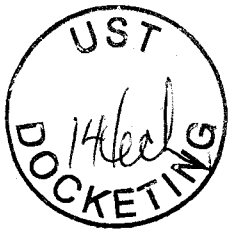
PADGETJP

PO Number:

| Task / Description | Categories | Item | Description | Qty / Pct | Unit Price | Amount |
|---|---|---|---|---|---|---|
| 04 MOB/DEMOB | | | | | | |
| | | B | PERSONNEL | 1.0000 | 290.00 | 290.00 |
| 18 MISCELLANEOUS | | | | | | |
| | | | WSW ABANDONMENT | 1.0000 | 762.00 | 762.00 |
| 19 RPT/PROJECT MNGT & COORDINATIO | | | | | | |
| | | PCT | PERCENT | 0.1500 | 1,052.00 | 157.80 |
| | | | | **Total Amount** | | 1,209.80 |

D H E C
PROMOTE PROTECT PROSPER
South Carolina Department of Health
and Environmental Control

**UST MANAGEMENT DIVISION**
**BUREAU OF LAND AND WASTE MANAGEMENT**
**2600 Bull Street**
**Columbia, SC 29201**
**Telephone (803) 896-6241**
**Fax (803) 896-6245**




Date: October 18, 2011

TO: Larry Sorrell, Manager
Financial Section

FROM: Joel Padgett, P.G.
Corrective Action Section

SUBJECT: Crawford's Country Store, 5870 SC-28 North, Antreville, SC
UST Permit #12335; CA #42536
Release reported December 3, 1991
Abbeville County

The inactive water supply well on the H. Franklin Crawford property near the Crawford's Country Store facility is considered a potential receptor for the referenced release. The property owner no longer needs the well and has elected to have it abandoned using funds from the State Underground Petroleum Environmental Response Bank (SUPERB) Account. The well is 6-inch diameter and approximately 34 feet deep. Since there is not a SUPERB allowable rate for the abandonment of a 6-inch water supply well, the UST Management Division requested that owner/operator's contractor, Midlands Environmental, provide price quotes for the abandonment. One solicitation for the abandonment has been received:

- Environmental Drilling and Probing Services, LLC $762.00

The price quote include costs to mobilize to and from the site, remove the well equipment, cut and pressure grout the well casing, clean up the site, and submit an abandonment report to Midlands Environmental. Since the quote is less than $2500.00, no additional quotes are required. The Division considers the price quote submitted by EDPS to be fair and reasonable for this work scope. Therefore the Division has accepted the price quote for the water supply well abandonment. The quote should be approved as a miscellaneous item under Cost Agreement #42536.

enc: Price quote

cc: Technical file (w/enc)

UST
OCT 1 1 2011
PROGRAM

July 12, 2011

Mr. Jeff Coleman
Midlands Environmental Consultants
235 Dooley Road #B
Lexington, South Carolina 29073
Phone: (803) 808-2043

RE: Proposal to Provide Well Abandonment Services
Autryville, South Carolina
Proposal No. EDPS-11-1168

Dear Mr. Coleman:

Environmental Drilling and Probing Services, LLC (EDPS) is pleased to provide this proposal to conduct well abandonment services at the subject site. Based on our understanding of the project, EDPS proposes to conduct the following scope of services:

- Mobilize crew and equipment to the subject site.
- Abandon one 34-foot (6") diameter water supply well.

The above scope of work could be completed for an estimated total cost of $762.00. The following is a breakdown of the total estimated cost:

Mobilization.....$575.00
WSW Abandonment (34ft x $5.50/ft).....$187.00

**NOTES:**

- Assumes locations are accessible with truck mounted equipment.
- EDPS not responsible for any permits or utility locating that may be necessary for project.
- Proposal prices are good for 60 days.
- EDPS will submit the required Well Abandonment Record to the South Carolina DHEC at no charge.

We appreciate the opportunity to provide our services to you on this project. Please contact me at (704) 607-7529 to if you would like to discuss this Proposal or to schedule this work.

Sincerely,
EDPS

Tommy Bolyard
Field Operations Manager

D H E C
PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director
*Promoting and protecting the health of the public and the environment*

APR 30 2012

MR ROBERT BIEDERMAN
NATIONWIDE INSURANCE
PO BOX 80208
SIMPSONVILLE SC 29680

Re: Concern letter
Crawford's Country Store, 5870 SC 28 North, Abbeville, SC
UST Permit #12335
Petroleum release reported December 3, 1991
Abbeville County

Dear Mr. Biederman:

Per your request, the Underground Storage Tank (UST) Management Division is providing you with this update on environmental conditions and liability associated with the referenced facility.

According to Division records, Mr. Frank Crawford has operated ten underground storage tanks (USTs) at the Crawaford's Country Store facility to supply gasoline, diesel fuel, and kerosene. Five tanks were abandoned by removal in October 1991. Five replacement tanks have been operated from November 1991 to the present. The operating tanks were last inspected on September 8, 2011 and found to be in compliance with state and federal regulations.

On December 3, 1991, the Division received a report that documented a release of petroleum products at the facility. In response to the initial report of contamination, the Division directed the owner/operator on record, Mr. Frank Crawford, to assess the severity and extent of the petroleum contamination. Assessment work conducted from 2007 through 1999 confirmed and delineated petroleum contamination in groundwater at the site. In November 1999, the Division solicited bids to perform active corrective action (ACA) at the site to reduce the contamination to acceptable levels protective of human health and the environment. The successful bidder, $H_2O$ Environmental, began ACA in June 2000. ACA was performed until October 2004 when $H_2O$ went out of business. During ACA, an additional water supply well (CP-WW2) was installed at the facility to replace a water supply well (CP-WW) that had been impacted by petroleum. Since 2004, the Division has conducted periodic groundwater sampling and aggressive fluid and vapor recovery events (AFVR) to reduce petroleum contaminates at the facility. Recently, the Division directed the state lead contractor, Midlands Environmental Consultants, to abandon CP-WW with Mr. Crawford's permission. The Division will direct additional AFVR events in the near future.

The referenced release of petroleum products from the USTs is qualified to receive funding under the conditions of the State Underground Petroleum Environmental Response Bank (SUPERB) Act. This means that reasonable costs up to $1,000,000.00 can be paid by the SUPERB account for site rehabilitation associated with the release. Should cleanup costs exceed $1,000,000.00, Mr. Frank Crawford, pursuant to state and federal laws, retains responsibility for any additional site rehabilitation and

costs associated with the release. Division records show that a total of $224,327.79 of SUPERB funds has been expended on rehabilitation of the site.

In 1997, the General Assembly amended Section 80 (B) of the SUPERB Act to clarify that persons who hold "indicia of ownership" primarily to protect a security interest in property impacted by a release from a UST are exempt from the requirements to conduct site rehabilitation activities other than necessary abatement actions to eliminate any imminent threat to human health or the environment. The "indicia of ownership" exemption includes those persons who acquire title to property through foreclosure or other means necessary to protect their security interest, provided that person does not participate in the management of the UST and is not otherwise engaged in petroleum production, marketing, or refining. This applies equally to subsequent lenders who acquire the USTs and property through foreclosure in the future.

Please note there are currently no laws or regulations that prohibit the use, sale or development of properties at or near the location of a UST petroleum release. Should the current owner sell the property, the Division requests that the buyer coordinate with the Division to allow for continued access for necessary site rehabilitation activities.

If you have any questions, please contact me by telephone at (803) 896-6398, by fax at (803) 896-6245, or by e-mail at padgetjp@dhec.sc.gov.

Sincerely,

Joel P. Padgett, P.G., Geologist/Hydrologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

JPP/jpp
12335.4

cc: Technical file

# Midlands Environmental Consultants, Inc.

March 29, 2012

Mr. Joel Padgett, P.G., Hydrogeologist
Corrective Action Section
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health and
Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RECEIVED
JUN 13 2012
SC DHEC
BUREAU OF LAND & WASTE MGT.

UST
DOCKETING

Subject: Water Supply Well Abandonment
Crawford's Country Store
5870 SC-28 North
Antreville, South Carolina
SCDHEC Site ID# 12335, CA # 42536
MECI Project Number 12-3807

Dear Mr. Padgett:

On behalf of Mr. H. Franklin Crawford, Midlands Environmental Consultants, Inc. (MECI) is pleased to submit this letter report outlining the water supply well abandonment activities performed at the subject site. This describes the abandonment conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines.

One (1) water supply well was abandoned on March 8, 2012 at the subject site according to South Carolina Well Standards and Regulations R.61-71.H. The well abandonment was conducted under the direction of Mr. Tommy Bolyard (SC Driller's License # B 01846) of Environmental Drilling and Probing Services, Inc. of Rock Hill. SC. The following matrix presents the well identification numbers, surface coverings, well diameter, and total well depth:

| Well Number | Surface Covering | Well Diameter (Inches) | Total Depth (Feet) |
|---|---|---|---|
| WW-CP | Grass | 6" | 39.0 |
| Total Well Footage Abandoned | | | 39.0 |

The water supply well was abandoned with portland bentonite slurry utilizing tremie pipe. A total of 39.0 feet of water supply well was abandoned by the methods described above. Following the abandonment, monitoring wells that were located in paved areas were finished with an aggregate-reinforced concrete cap to the level of the surrounding pavement. Additionally, the well pad, vault, and cover were removed from wells located in unpaved areas and the resulting space was filled with backfill to the level of the surrounding land surface. Please find the attached SCDHEC 1903 Water Well Records and site maps.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Midlands Environmental appreciates the opportunity to offer our professional environmental services on this project. If you have any questions concerning this project, please contact the undersigned at (803) 808-2043.

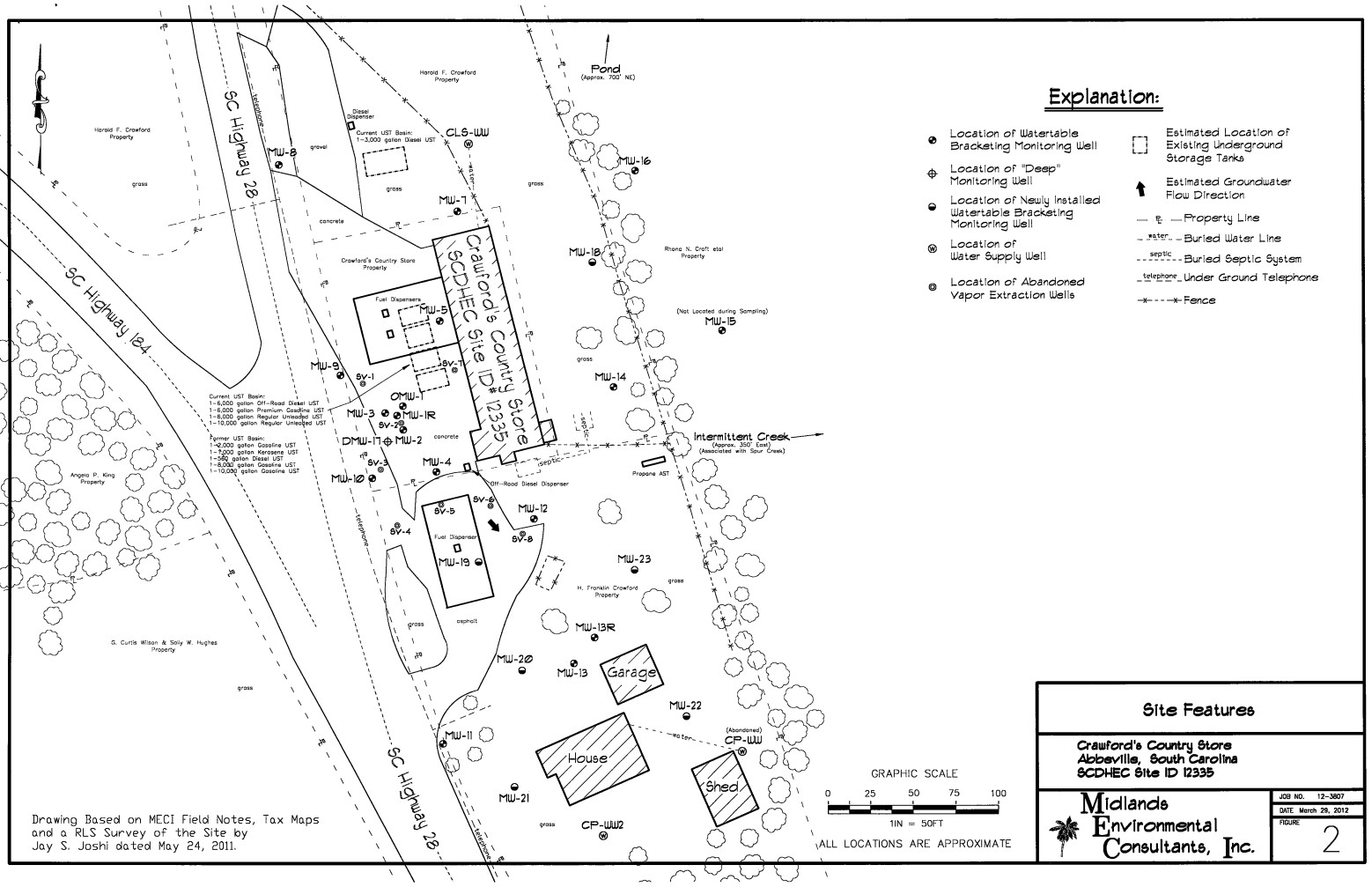
Sincerely,
**MIDLANDS ENVIRONMENTAL CONSULTANTS, INC.**

Courtney M. Sanders
Staff Biologist

Jeff L. Coleman
Project Scientist

Attachments:

# SITE MAPS




## Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of "Deep" Monitoring Well
- Location of Newly Installed Watertable Bracketing Monitoring Well
- Location of Water Supply Well
- Location of Abandoned Vapor Extraction Wells
- Estimated Location of Existing Underground Storage Tanks
- Estimated Groundwater Flow Direction
- Property Line
- Buried Water Line
- Buried Septic System
- Under Ground Telephone
- Fence

GRAPHIC SCALE
0 25 50 75 100
1IN = 50FT

ALL LOCATIONS ARE APPROXIMATE

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated May 24, 2011.

# Site Features

**Crawford's Country Store**
**Abbeville, South Carolina**
**SCDHEC Site ID 12335**

Midlands Environmental Consultants, Inc.

JOB NO. 12-3807
DATE March 29, 2012
FIGURE 2

**SCDHEC 1903 WATER WELL RECORDS**

DHEC
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

**2. LOCATION OF WELL:** Antreville **COUNTY:** Abbeville
Name: Markette #23
Street Address: 5870 SC-28 North
City: Antreville Zip: 29620
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** CP-WW (12335)

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 0.0 ft. to 39.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well Abandoned by EDPS on | | |
| 3/8/12 via tremie pipe with | | |
| Portland-Bentonite Cement Slurry. | | |
| Approx. 57.20 gal. of Slurry | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
Well ID# CP-WW (12335)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** 12335

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 39.0 ft. Date Started: 3/8/12 Date Completed: 3/8/12

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: 6"
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above /Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 39.0 ft. to 0.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Tommy Bolyard **CERT. NO.:** 01846
Address: (Print) Level: A B C D (circle one)
17538 Greenhill Road
Charlotte. NC 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ (Well Driller) Date: 3/10/2012

If D Level Driller, provide supervising driller's name:

D H E C
ROMOTE PROTECT PROSPER
)00 Bull Street
)lumbia, SC 29201-1708

)MMISSIONER:
Earl Hunter

)ARD:
radford W. Wyche
hairman

ark B. Kent
ice Chairman

oward L. Brilliant, MD
ecretary

rl L. Brazell

uisiana W. Wright

Michael Blackmon

rry R. Chewning, Jr., DMD

August 9, 2002

Harold Crawford
5870 Highway 28 North
Abbeville, SC 29620

Re: Underground Injection Control Permit #505
Crawford's Country Store, Site Id #12335
Abbeville County, South Carolina

Dear Mr. Crawford:

Enclosed is a Permit to Operate for ten (10) Class VA-I (Aquifer Remediation) injection well at the Crawford's Country Store as per your application.

Affected parties may appeal this permit decision in accordance with State Regulation R.61-72. To contest a case, a request for a hearing must be made to the Clerk of the DHEC Board within 15 days of the date of this letter. All requests must include the following information:

1) name of the party requesting the hearing,
2) issue(s) for which the hearing is requested,
3) caption or other information sufficient to identify the decision, order, action or inaction which is the subject of the hearing,
4) relief requested.

Note further that Administrative Law Judge (ALJ) Division rules require that persons requesting a contested case hearing must file a copy of the request and pay a filing fee in the amount of $100 dollars (US) with the ALJ Division at the following address:

Clerk, ALJ Division
1205 Pendleton Street, Suite 224
P.O. Box 11667
Columbia, SC 29211

If you have any questions, please feel free to call me at (803) 898-3549.

Sincerely,

Todd Adams, Hydrogeologist
GroundWater Management Section
Water Monitoring, Assessment & Protection Division
Bureau of Water

cc: John Abernathy, BLWM-USTP
Richard Gillespie, H2O Environmental

UST PROGRAM
DOCKETING # 17 Feb

) H E C
ROMOTE PROTECT PROSPER
)00 Bull Street
)lumbia, SC 29201-1708

)MMISSIONER:
Earl Hunter

)ARD:
adford W. Wyche
iairman

ark B. Kent
ce Chairman

oward L. Brilliant, MD
ecretary

irl L. Brazell

)uisiana W. Wright

Michael Blackmon

irry R. Chewning, Jr., DMD

**WATER MONITORING, ASSESSMENT AND PROTECTION DIVISION**

Injection Well Operating Approval
for

Class II, III, and V.A. Injection Well(s)

Permit #505 Date of Issue: August 9, 2002

In accordance with the provisions of Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended, and pursuant to receiving a Permit to Construct ten (10) Class V.A.-I (Aquifer Remediation) injection wells, authorization is granted to Mr. Crawford to operate ten (10) Class V.A.-I (Aquifer Remediation) injection wells located at the Crawford's Country Store, Abbeville County, and are subject to the attached provisos noted for the operator.

The Class V.A.-I (Aquifer Remediation) injection wells are a true diameter of 1 inch, a total depth of 10-30 feet located at the Crawford's Country Store, Abbeville County, South Carolina.

Pursuant to Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended, this authorization may be rescinded if these injection wells should, at any time, contaminate, pollute, or otherwise adversely affect other water in the vicinity or for any other conditions contained in R61-87, Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended.

Expires: August 9, 2004

Todd Adams, Hydrologist
GroundWater Management Section
Bureau of Water

August 9, 2002
Date

DHEC 2104 (6/88)

Provisos to the Injection Well Operating Approval
for
Underground Injection Well Permit #505
Crawford's Country Store
Abbeville County, S.C.
August 9, 2002

1) Construction of new or abandonment of existing wells must be reported to the Department within thirty (30) days of completion.

2) Only bacteria mixture approved by Dr. Brown may be injected into the subsurface. Any changes in the system operation other than as presented in the UIC Permit Application must be reported to the Department prior to implementation.

H E C
PROMOTE PROTECT PROSPER
South Carolina Department of Health and Environmental Control

BUREAU OF
BUSINESS MANAGEMENT
DIVISION OF PROCUREMENT SERVICES
2600 Bull Street
Columbia, SC 29201-1708
Telephone (803) 898-3501 Fax (803) 898-3505

BID MUST BE SUBMITTED ON THIS FORM TO BE ACCEPTED

| SEALED BID INVITATION | BID NUMBER: SB-9570-12/02/99-TC<br>(Number Must Be Shown On Front Of Envelope) | DATE ISSUED: 10/20/99<br>PAGE 1 OF 123 |
|---|---|---|

| SEALED BIDS WILL BE RECEIVED UNTIL:<br>TIME: 2:30 pm DATE: 12/02/99<br>(Local Time)<br>AND THEN PUBLICLY OPENED | Mail To:<br>S.C. Department of Health & Environmental Control<br>Division of Procurement Services<br>2600 Bull Street<br>Columbia, South Carolina 29201-1708<br>ATTENTION: BID CLERK<br>BID#: SB-9570-12/02/99-TC |
|---|---|

| DIRECT INQUIRIES TO:<br>Tripp Clark, (803) 898-3501 | REASON FOR NO BID |
|---|---|
| VENDOR: | |

**This Section Must Be Completed By Vendor:**

_____ Area Code: Telephone Number _____
Vendor Name

Toll Free Number _____

_____ Federal I.D. Or Social Security Number: _____
Mailing Address

_____ Bid Security Is Attached When Required In
City State Zip Code The Amount of: $_____

I certify that this bid is made without prior understanding, agreement or connection with any corporation, firm or person submitting a bid for the same materials, supplies or equipment and is in all respects fair and without collusion or fraud. I agree to abide by all conditions of this bid and certify that I am authorized to sign this bid for the bidder. In compliance with the invitation and subject to all conditions thereof, the above signed offers and agrees, if this bid is accepted within 60 days from date of opening, to furnish any or all items/services quoted at the prices set forth.

_____ _____ ___/___/___
Authorized Signature (Manual) Authorized Signature (Typed) Title Date Signed

COMMODITY: To perform corrective action of a petroleum release from a regulated underground storage tank site at Crawfords Country Store (UST Permit #12335), 5870 Hwy. 28 N., Abbeville, South Carolina

METHOD OF BID AWARD: Award will be made by total to the lowest responsive and responsible bidder.



UST PROGRAM DOCKETING # 18 tech

## SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
## BID NUMBER: SB-9570-12/02/99-TC

### PURPOSE and SCOPE OF WORK

The Division of Underground Storage Tank (UST) Management of the South Carolina Department of Health and Environmental Control (DHEC) is seeking services to perform corrective action of a petroleum release from a regulated underground storage tank site in accordance with defined remediation goals. The objective is to remove free product AND/OR reduce the levels of chemicals of concern (CoC) in the ground water and subsurface soil to or below defined site specific target levels (SSTLs). All bidders must be South Carolina Certified Class I Site Rehabilitation Contractors. The scope of work defined in this bid invitation is to be implemented at Crawfords Country Store (UST Permit #12335), 5870 Hwy. 28 N., Abbeville, South Carolina for the release reported on December 3, 1991.

### SPECIAL CONDITIONS

1. CONTRACT PERIOD: The contract will be effective from date of award until the corrective action is complete as described in this contract.

2. This contract is for corrective action at only one (1) site in South Carolina. Compensation from the SUPERB Account is not considered a state contract for purposes of procurement or subject to state bid requirements in accordance with Section 44-2-130(D) of the SUPERB Act.

3. AWARD: Award will be made to a South Carolina Certified UST Site Rehabilitation Contractor based on the total cost of corrective action to SSTLs and removal or abandonment of assessment and rehabilitation items. The proposed implementation schedule to achieve the remediation goals, the removal of all equipment and abandonment of wells, (including pre-existing wells), trenches, etc. installed by the contractor, and the proposed remediation technology(ies) or method(s) must protect public health and the environment and be eligible for permitting by DHEC. The total cost, methods, and estimated time to complete the contract must also be advantageous to the State of South Carolina.

4. REASONABLE BID: DHEC reserves the right to reject any and all bids that appear to be above the customary and reasonable cost for the same scope of work in a similar geologic setting.

5. Contractor must agree to make positive efforts to use women and minority owned businesses and individuals.

6. AMENDMENTS: All amendments to this solicitation will be in writing from the DHEC Procurement Officer indicated on page one of this solicitation. DHEC will not be legally bound by any amendment or interpretation that is not in writing.

7. QUESTIONS: Questions or requests for information must be submitted in writing and received by 5:00 P.M.,November 9, 1999. After this date, no further questions will be addressed. A written response will be mailed to all requestors of the bid package. The questions may be faxed to Tripp Clark, fax number (803) 898-3505.

8. **NOTE . . . THE ONLY OFFICIAL CONTACT PERSON AT DHEC DURING THE BIDDING AND AWARDING PROCESS IS THE PROCUREMENT OFFICER INDICATED ON PAGE ONE OF THIS SOLICITATION. BIDDING CONTRACTORS ARE NOT TO CONTACT DHEC PERSONNEL LOCATED OUTSIDE THE BUREAU OF BUSINESS MANAGEMENT.**

9. The contractor will be required to treat the area where the petroleum chemicals of concern are above site-specific target levels (see figure #2). Verification that interim corrective action goals have been met will be based upon ground-water quality samples collected from monitoring wells OMW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, DMW-17, and water wells CLS-WW, and CP-WW. Verification that final corrective goals have been met will be based upon ground-water quality samples collected from all existing monitoring wells (including water wells CLS-WW and CP-WW), and additional verification wells and verification soil borings to be installed at locations designated by SCDHEC (see specification #10 for more detail).

## SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
## BID NUMBER: SB-9570-12/02/99-TC

10. REPORTS: Deliver the reports to: SCDHEC, Division of UST Management, ATTN: **H. Reed Corley**, 2600 Bull Street, Columbia, SC 29201. A minimum of two (2) copies of each plan and two (2) copies of each report must be delivered to the above address. Based on permitting and other requirements, an engineering report, UIC permits, air modeling forms or NPDES Permits may be required. Please contact the Department for the exact number of copies of each document to be submitted.

11. INVOICING: Invoices will be submitted to: SCDHEC, Division of UST Management, ATTN: Financial Section, 2600 Bull Street, Columbia, SC 29201, using the Department's Corrective Action (CA) Bid Invoice form. The initial invoice must be received at the above address within four months of CAP approval or funds will be uncommitted as required by the Section 44-2-40(B) of the SUPERB Act. If funds are uncommitted the submitted invoice will be held until funding is available. Payment to the contractor will be a pay for performance system as follows:

A. Payment of forty percent (40%) of the total bid price will be made within 90 days of operation of the remediation system or implementation of corrective action as described in the approved corrective action plan (CAP), subject to the limitations of Section 44-2-40 of the SUPERB Act. The implementation should be documented in the first corrective action monitoring report.

B. Payment of thirty-five percent (35%) of the total bid price will be made based on removal of free product to .01 foot as verified in monitoring wells OMW-1, MW-2, MW-3, and MW-10 and achieving interim CoC mass reduction goals at the site as verified in monitoring wells OMW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, DMW-17, and water wells CLS-WW, and CP-WW. Payment will be made for interim goals of 25, 50, and 75 percent reduction of <u>total</u> CoC mass by the implementation of corrective action. **NOTE: Payment cannot be based on laboratory analyses for any well that has been used for injection unless that well has returned to ambient conditions.** The CoC mass requiring reduction is as follows:

CoC mass in parts per billion (mg/l) based on 08/05/99, sampling: (CoC may increase or decrease in the future)

| Well | Benzene | Toluene | Ethylbenzene | Xylenes | MTBE | Naphthalene | Total Mass |
|---|---|---|---|---|---|---|---|
| OMW-1** | 226,000 | 301,000 | 280,000 | 278,000 | 5,110,000 | 2,000 | 6,197,000 |
| MW-2** | 226,000 | 301,000 | 280,000 | 278,000 | 5,110,000 | 2,000 | 6,197,000 |
| MW-3** | 226,000 | 301,000 | 280,000 | 278,000 | 5,110,000 | 2,000 | 6,197,000 |
| MW-4 | 14,200 | 34,600 | 2,750 | 15,900 | 109,000 | <5 | 176,455 |
| MW-5 | 6,400 | 61,600 | 2,460 | 12,100 | 410 | 335 | 83,305 |
| MW-7 | <1 | <1 | <1 | <1 | 41 | <1 | 46 |
| MW-8 | <1 | <1 | <1 | <1 | <1 | <1 | 6 |
| MW-9 | 110 | 4,280 | 2,450 | 17,000 | 150 | <500 | 24,490 |
| MW-10** | 226,000 | 301,000 | 280,000 | 278,000 | 5,110,000 | 2,000 | 6,197,000 |
| MW-11 | <1 | <1 | <1 | <1 | 7 | <5 | 16 |

## SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
## BID NUMBER: SB-9570-12/02/99-TC

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| MW-12 | 5,000 | 260 | <200 | <200 | 41,200 | <1000 | 47,860 |
| MW-13 | 3 | <1 | <1 | <1 | 604 | <5 | 615 |
| MW-14 | 57 | 7 | 1 | 23 | 606 | 5 | 699 |
| MW-15 | 3 | 6 | 1 | 6 | 27 | <5 | 48 |
| DMW-17 | <1 | <1 | <1 | <1 | <1 | <1 | 6 |
| CLS-WW | <1 | <1 | <1 | <1 | <1 | <1 | 6 |
| CP-WW+ | 81 | 1 | <1 | 10 | 35 | <5 | 133 |
| Initial Mass* | 929,859 | 1,304,760 | 1,127,869 | 1,157,245 | 20,592,083 | 9,869 | 25,121,685 |
| SSTL Mass | 61 | 7,280 | 5,109 | 70,245 | 473 | 209 | 83,377 |
| Initial Mass above SSTL | 929,798 | 1,297,480 | 1,122,760 | 1,087,000 | 20,591,610 | 9,660 | 25,038,308 |

* CoC mass may change due to seasonal fluctuations in the groundwater.

** Contains free phase product (OMW-1 {1.05 ft.}, MW-2 {2.29 ft.}, MW-3 {1.01 ft.}, and MW-10 {1.01 ft.}) initial mass based on maximum solubility limits

\+ Sample collected December 1997

(1) 25 percent total mass reduction will be achieved when free product has been removed to .01 foot from OMW-1, MW-2, MW-3, and MW-10, and one-quarter of the initial BTEX, MTBE, and Naphthalene mass from monitoring wells OMW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, DMW-17, and water wells CLS-WW, and CP-WW is removed compared to the SSTLs. The following formula will be used to calculate the percent total mass reduction: total mass above SSTLs from initial sampling less total mass above SSTLs from subsequent sampling divided by total mass above SSTLs from initial sampling. Payment of 10 percent (10%) of the total bid price will be made upon verification (see Specifications item 10 for the method of verification) of at least one-quarter of the total CoC mass above SSTLs is removed.

(2) 50 percent total mass reduction will be achieved when one-half of the initial BTEX, MTBE, and Naphthalene mass from monitoring wells OMW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, DMW-17, and water wells CLS-WW, and CP-WW is removed as compared to the SSTLs. The formula outlined in item 11. B. (1) will be used. Payment of 10 percent (10%) of the total bid price will be made upon verification (see Specifications item 10 for the method of verification) of at least one-half of the total CoC mass above SSTLs is removed.

(3) 75 percent total mass reduction will be achieved when three-quarters of the initial BTEX, MTBE, and Naphthalene mass from monitoring wells OMW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, DMW-17, and water wells CLS-WW, and CP-WW is removed as compared to the SSTLs. The formula outlined in item 11 B (1) will be used. Payment of 15 percent (15%) of the total bid price will be made upon verification (see Specifications item 10 for the method of verification) of at least three-quarters of the total CoC mass above SSTLs is removed.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
BID NUMBER: SB-9570-12/02/99-TC

C. **The final 25 percent (25%) of the total bid price will be paid upon: 1) verification that the thickness of free product does not exceed .01 foot and the levels of CoC do not exceed the site-specific target levels (SSTLs) defined in item 11.C. at any point in the area of concern (see figure #2). Verification that the SSTLs have been met will be based upon ground-water quality samples collected from all existing monitoring wells, additional verification wells, and soil quality samples from verification soil borings to be installed at locations designated by DHEC (see specification #10 for more detail); and 2) all remediation and assessment items installed by the contractor (e.g., wells [including preexisting wells], trenches, etc.) are removed from the site or properly abandoned.** The SSTLs are as follows:

Site Specific Target Levels (SSTLs) in parts per billion (mg/l)

| Well | Benzene | Toluene | Ethylbenzene | Xylenes | MTBE | Naphthalene |
|---|---|---|---|---|---|---|
| OMW-1 | 5 | 1,000 | 700 | 10,000 | 40 | 25 |
| MW-2 | 5 | 1,000 | 700 | 10,000 | 40 | 25 |
| MW-3 | 5 | 1,000 | 700 | 10,000 | 40 | 25 |
| MW-4 | 5 | 1,000 | 700 | 10,000 | 40 | <5** |
| MW-5 | 5 | 1,000 | 700 | 10,000 | 40 | 25 |
| MW-7 | <1** | <1** | <1** | <1** | <1** | <1** |
| MW-8 | <1** | <1** | <1** | <1** | <1** | <1** |
| MW-9 | 5 | 1,000 | 700 | 10,000 | 40 | 25 |
| MW-10 | 5 | 1,000 | 700 | 10,000 | 40 | 25 |
| MW-11 | <1** | <1** | <1** | <1** | 7* | <5** |
| MW-12 | 5 | 260* | <200** | <200** | 40 | 25 |
| MW-13 | 3* | <1** | <1** | <1** | 40 | <5** |
| MW-14 | 5 | 7* | 1* | 23* | 40 | 5* |
| MW-15 | 3* | 6* | 1* | 6* | 27* | <5** |
| DMW-17 | <1** | <1** | <1** | <1** | <1** | <1** |
| CLS-WW | <1** | <1** | <1** | <1** | <1** | <1** |
| CP-WW | 5 | <1** | <1** | 10* | 35* | <5** |
| Total | 61 | 7,280 | 5,109 | 70,245 | 473 | 209 |

* Laboratory analysis is less than calculated SSTLs; therefore, SSTL mass is set equal to laboratory mass.
** Laboratory analysis is below detection limits; therefore, SSTL mass is set equal to detection limits.

Soil CoC mass is parts per billion (ug/kg) based on 11/10/97, sampling: (CoC mass may increase or decrease in the future)

| Soil Boring | Benzene | Toluene | Ethylbenzene | Xylenes | Naphthalene |
|---|---|---|---|---|---|
| SB-1 | 26 | 19 | <5 | 18 | 7 |

| | | | | | |
|---|---|---|---|---|---|
| SB-4 | 4,170 | 119,000 | 43,700 | 262,000 | 7,500 |
| SB-5 | 401 | 1,940 | 372 | 2,120 | 551 |
| SB-7 | 172 | 145 | 62 | 374 | 204 |

Soil Site Specific Target Levels (SSTLs) in parts per billion (ug/kg):

| Soil Boring | Benzene | Toluene | Ethylbenzene | Xylenes | Naphthalene |
|---|---|---|---|---|---|
| SB-1 | 5 | 19* | <5** | 18* | 6* |
| SB-4 | 5 | 1,622 | 1,260 | 42,470 | 210 |
| SB-5 | 5 | 1,622 | 373* | 2,120* | 210 |
| SB-7 | 5 | 145* | 62* | 374* | 204* |

* Laboratory analysis is less than calculated SSTLs; therefore, SSTL mass is set equal to laboratory mass.

** Laboratory analysis is below detection limits; therefore, SSTL masss is set equal to detection limits.

1. NOTIFICATION FOR FAILURE TO PERFORM: If the contractor fails to meet any specification of corrective action as outlined in this document, DHEC will notify the contractor by certified letter of the deficiency (ies). If the contractor does not correct the deficiency(ies) within 30 days, the contractor will be in breach of contract and the bid award may be voided by DHEC. DHEC will notify the contractor by certified letter that the bid award is void and any invoices are payable upon review and approval of DHEC. If the contractor corrects the deficiency(ies) within 30 days, the bid award will continue. Please note contractor-owned items used on-site for the contract that are destroyed by acts of nature, improper maintenance or handling, theft or vandalism will not be replaced or reimbursed by the SUPERB fund. The accepted bid will be final and will not be increased or cancelled for any reason (e.g., unanticipated iron fouling of a system, wells clogging because of biological activity or sediments, increased subcontractor costs, loss of utilities, modification to the system to meet the remediation goals, etc.) with the exception of unforeseen geologic circumstances or identification of additional CoC from another release.

2. SITE SPECIFIC DETAILS: A brief technical summary of the release, including a location map and specifics of existing wells, is attached. The detailed technical file will be available for review through the Freedom of Information (FOI) Office located on the third floor of the Sims Building, 2600 Bull Street, Columbia, SC. **Review of the detailed technical file is not mandatory; however, bidders are strongly encouraged to review the file to ensure a complete understanding of the contract requirements. The successful bidder will be responsible for all information included in the technical file.** Appointments to view the technical file may be scheduled on weekdays between the hours of 8:30 A.M. to 5:00 P.M. by calling the SCDHEC Freedom of Information Office at (803) 898-3882. Please request file #12335.

3. **The contractor will submit a CAP within 30 days of Statement of Award notification from the Bureau of Business Management in accordance with Specification item 2.** The implementation of the CAP will be initiated immediately upon Departmental approval of the CAP and all associated permit(s), and in accordance with the schedule presented in the bid. A performance bond or irrevocable standby letter of credit, equal to the award price, will be required by DHEC. The issuing institution for an irrevocable standby letter of credit must be an entity that has the authority to issue letters of credit in South Carolina and whose letter-of-credit operations are regulated and examined by a federal or state agency. The original performance bond or irrevocable standby letter of credit will be submitted to the Division of UST Management, Attn: Chris Doll, within 30 days of award. The performance bond or irrevocable standby letter of credit will specify that the SUPERB Account will be the recipient of any forfeiture.

4. **MINIMUM REQUIREMENTS: Corrective action will be considered complete once the levels of CoC in the area of concern (see figure #2) are verified to be at or below the SSTLs listed in item 11.C., and removal or abandonment of all remediation and assessment items installed by the contractor (e.g., wells [including preexisting wells], trenches, etc.). See Specification #10 for the method of verification.** All rehabilitation activities associated with a UST release must be performed by a SCDHEC certified Class I site rehabilitation contractor as required by R. 61-98. All corrective action plans and reports must be sealed by a Professional Engineer or Professional Geologist registered in the State of South Carolina. All engineering reports, drawings and plans must be sealed by a Professional Engineer registered in the State of South Carolina. All laboratory analysis for CoC must be performed by a SC certified laboratory. All monitoring, verification, injection, or recovery wells must be installed and abandoned by a SC certified well driller. All applicable certification, training, permits, applications, and fees associated with well installation; injection, discharge, treatment, or transportation of ground water, air, or soil; construction or operation of a remediation system; and any other action requiring a permit are the responsibility of the contractor. Any required business or occupation license and occupational safety and health training (e.g., OSHA) as defined by the laws and regulations of the United States of America, State of South Carolina, county or city is also the responsibility of the contractor. The terms and conditions of all applicable permits will be met. Any contaminated ground water, soil, or construction material must be properly transported and disposed of, or treated at an approved facility with prior approval from DHEC. Any costs for utilities construction and service (electric, telephone, sewer, etc.) required by the corrective action are the responsibility of the contractor.

**SPECIFICATIONS for CORRECTIVE ACTION**

The successful contractor must meet the following specifications as required by the proposed treatment method(s) or corrective action technology(ies):

1. Submit a CAP bid proposal. The proposal will outline in general terms an approach to achieve the remediation goals (e.g., reduction of each CoC to SSTL). The proposal must outline the following:

   A. A description of the proposed treatment method(s) or technology(ies) for corrective action.

   B. The total cost (in thousands of dollars) to complete site rehabilitation to meet the remediation goals and to remove or abandon all assessment and remediation items installed as part of corrective action.

   C. The estimated amount of time in months to complete site rehabilitation to meet the remediation goals, install verification wells, and remove or abandon all assessment and remediation items installed as part of corrective action.

2. Complete and submit a detailed CAP (three copies) for the release at Crawford's Country Store, 5870 Hwy. 28 N., Abbeville, South Carolina **within 30 days of Statement of Award notification by the Bureau of Business Management. NOTE: *Use of monitoring well(s) for injection purposes is not allowed.*** A condition of the plan may include installation of additional recovery, sparge, compliance, or injection wells. The plan must define all active (pump and treat, sparge, vapor extraction, excavation of impacted soils, bioremediation, etc.) and passive (intrinsic remediation, monitoring, etc.) corrective action method(s) proposed to reduce CoC to SSTLs. It must be shown, by use of scientific models, computations, or discussion, how each CoC will be reduced to the SSTL for each remediation method proposed for the release. Any assumptions used in a model will be listed or shown, as well as, appropriate references. Intrinsic corrective action will require monitoring to verify remediation. General construction details will be included (e.g., install four additional recovery wells, construct a compliance point, install four air injection wells, excavate 3,000 cubic yards of impacted soils, etc.) as well as details of well abandonment and equipment removal. A remediation timetable including abandonment of wells and removal of equipment will be included with the CAP. The Division of UST Management will review the CAP and initiate a public notice period for a maximum of 30 days. The contractor must obtain a copy of the applicable portion of the tax map. This map will depict the location of the facility,

and all impacted properties, and all properties located adjacent to the impacted properties. The names and addresses of the owners of each of these properties will be provided. The contractor may be required to attend or provide input at a public meeting upon request by DHEC. Any CAP amendments and modifications arising from public notice must be submitted within 15 days of notification by DHEC. The CAP and any amendments or modifications must be sealed by a qualified Professional Engineer or Geologist registered in the State of South Carolina. The owner/operator, Frank Crawford, will be consulted and will approve the location of the corrective action system. If permanent, the system must be enclosed in a fenced area or small building. The initial invoice must be received at the above address within four months or funds will be uncommitted as required by the SUPERB Act. If funds are uncommitted this invoice will be held until funding is available.

An initial monitoring report documenting CoC concentrations in all wells and potentiometric conditions prior to start up (including verification of system operation or CAP implementation) must be submitted to the Division of UST Management within 45 days after award. Sampling for the initial monitoring report must occur prior to system startup.

Based on naturally occurring conditions, the dissolved concentration of petroleum chemicals of concern (CoC) will increase or decrease. For the purposes of this contract, the total CoC mass for the wells included in the bid package may reasonably increase up to 150 percent or decrease as much as 50 percent. If the total CoC concentration in all wells listed in Special Condition 11.B. increases more than 150 percent based on this initial sampling or if measurable free product that has not been previously documented in any report is detected during the initial sampling event, the contractor may request in writing that the award be canceled. **If either of these conditions occurs, the contractor will contact the UST project manager within two days of problem identification and will submit written documentation within five days of notification.** The contractor will be reimbursed for one personnel mobilization to collect samples, one sample collection and one analytical fee each monitoring well sampled as outlined in SUPERB Allowable Costs, plus $6,000 for all other costs incurred (e.g., CAP preparation, obtaining performance bond, business license). The contract will be canceled and the performance bond will be returned to the company. If the total CoC concentration in all wells listed in Special Condition 11.B. decreases more than 50 percent based on this initial sampling the DHEC may cancel the award. If the corrective action system is started or treatment is performed, the contractor will be required to complete the contract unless geological conditions change or another release is confirmed. See special condition 12. If the contract is canceled by DHEC, the contractor will be notified by certified letter and an invoice for the above outlined items shall be submitted within 20 days from the date of the certified letter canceling the contract.

3. Complete and submit all applications for permits (injection, NPDES, BAQC modeling form, thermal treatment, construction, etc.; 3 copies) and an engineering report (ER; 4 copies) with the CAP. Any required permit changes or corrections will be submitted within 15 days of notification by DHEC. The ER and any ER amendments and modifications, must be sealed by a Professional Engineer registered in the State of South Carolina. After review of the CAP and all permit applications by DHEC, the Division of UST Management will issue a notice to proceed with CAP implementation.

   Implementation of the corrective action plan before the completion of the public notice process and approval of all permits by DHEC is not authorized. If premature implementation occurs, the Department will not reimburse those costs from the SUPERB Account, and the bid award will be reduced by that amount. If the Department agrees with early implementation to better protect human health in an emergency and provides approval in writing, early implementation without any reduction to the bid amount will be authorized.

4. Implement the CAP within 30 days of receipt of notice to proceed and any required permit to construct. Disruption to the owner/operator's normal business will be kept to a minimum. Upon completion of any required construction, DHEC will inspect the system and issue a permit to operate.

5. Gain access to the adjacent property to sample monitoring wells and to install any corrective action equipment, as required.

6. Initiate system startup within 15 days of receipt of the permit to operate. Remediation as defined in the CAP and ER will begin upon system startup. **If any problem with CAP implementation occurs, the contractor will contact the UST project manager within 24 hours of problem identification and will submit written documentation within five days of notification.** ***Note: The application of corrective action technologies can result in the mobilization and possible increase in the thickness of free phase product or elevated CoC concentrations in the monitoring wells.***

7. Complete and submit a corrective action monitoring report (first quarterly due within 90 days of the date of the permit to operate and quarterly thereafter) 3 copies plus one copy for any DHEC Bureau that issued a permit) on a quarterly basis. The corrective action monitoring reports must include:

   A. A narrative portion that documents current site conditions and system effectiveness in achieving the remediation goals (e.g., free product removal, reducing CoC to the SSTLs) as outlined in the CAP. Any system down time and the associated reason(s) will be included in the report.

   B. Conclusions and recommendations based on the reported data.

   C. Ground-water laboratory analytical data for all monitoring wells in the following format (additional parameters such as dissolved oxygen may be required; do not sample wells containing free product):

Analytical Data (mg/l)

| Monitoring Well | Date | Benzene | Toluene | Ethylbenzene | Xylenes | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|
| MW-1 | 7/15/97<br>10/15/97 | 145<br>140 | 200<br>190 | 146<br>140 | 1,000<br>900 | 170<br>50 | 47<br>165 |
| MW-2 | 7/15/97<br>10/15/97 | 580<br>480 | 800<br>690 | 300<br>257 | 1,000<br>912 | 60<br>50 | 20<br>19 |

   D. Ground-water potentiometric data for all monitoring wells in the following format:

Ground water Data (feet)

| Monitoring Well | Date | TOC Elevation | TOC to GW | TOC to FP | FP Thickness | GW Elevation |
|---|---|---|---|---|---|---|
| MW-1 | 7/15/97<br>10/15/97 | 98.0<br>98.0 | 17.54<br>17.90 | | | 80.46<br>80.10 |
| MW-2 | 7/15/97<br>10/15/97 | 100.0<br>100.0 | 20.50<br>21.50 | 20.47<br>21.48 | 0.03<br>0.02 | 79.50<br>78.50 |

E. A ground-water elevation contour map of the site based on current ground-water potentiometric data.

F. A CoC map based upon current ground-water laboratory analytical data. The ground-water data should be adjacent to the relevant monitoring well using the following format (additional parameters such as dissolved oxygen may be required):

MW - Number
Benzene (mg/l)
Toluene (mg/l)
Ethylbenzene (mg/l)
Xylenes (mg/l)
MTBE (mg/l)
Naphthalene (mg/l)

G. A copy of the DHEC approval letter and manifests for any contaminated soil and ground-water removed from the site for treatment and/or disposal.

H. Additional data required by permits (e.g., air analyses, wastewater effluent analyses and amounts, etc.). The data should be reported on a form or in a format specified in the permits, and attached to the monitoring report as an addendum.

All rehabilitation activities associated with the UST release must be performed by a SCDHEC Certified Site Rehabilitation Contractor. All air, soil, and ground-water analyses must be performed by a South Carolina certified laboratory. The corrective action monitoring report must be sealed by a Professional Engineer or Geologist registered in the State of South Carolina. All monitoring wells associated with the release will be sampled on a quarterly basis for the first year. Thereafter, the number of wells sampled may be reduced and/or the interval between corrective action monitoring reports may be lengthened upon clear demonstration of CoC reduction, unless restricted by permit requirements. DHEC may require data to be reported on a form or in a specific format. The contractor will be provided with the proper report forms and format prior to system startup. The contractor will be notified of any revisions to the report forms or format 90 days prior to the due date for the corrective action monitoring report.

8. Collect one (1) ground-water sample per monitoring event for all monitoring wells associated with the release. Each well should be purged prior to sampling. Purging is considered complete once the ground-water temperature and pH have stabilized. Sampling logs should note all temperature and pH measurements, as well as the location and type of each sample submitted for laboratory analysis. Each ground-water sample will be collected in accordance with established QA/QC protocol and submitted to a certified laboratory for analysis. The ground-water samples must be analyzed for the following parameters:

| Analyte | Analytical Method* | Reporting Limit (mg/l) |
|---|---|---|
| BTEX | 8260B/5030B | 5 |
| Naphthalene | 8260B/5030B | 5 |
| MTBE | 8260B/5030B | 5 |

*or EPA equivalent method that can achieve the same reporting level

The soil samples must be analyzed for the following parameters:

| Analyte | Analytical Method* | Reporting Limit (mg/kg) |
|---|---|---|
| BTEX | 8260B/5030B | 5 |
| Naphthalene | 8260B/5030B | 5 |

*or EPA equivalent method that can achieve the same reporting level

Additional samples (air, groundwater, effluent, soil) required by permits must be collected in accordance with established QA/QC protocol and submitted to a certified laboratory for analysis. The samples will be analyzed for parameters stipulated in the permits. Sampling and analytical data for each sample (e.g., field sampling logs, chain of custody forms, certificates of analysis, and the lab certification number) will be included in the corrective action monitoring report.

9. Properly dispose of all contaminated soil and ground water generated during the implementation of the CAP and installation of verification wells and soil borings. DHEC must approve the disposal facility selected for treatment and disposal of the free product and contaminated soil and ground water. The owner/operator of the facility is considered the generator for any contaminated soil and ground water. The contractor must document all disposal of free product and contaminated soil and ground water in the corrective action monitoring report.

10. Verification for the removal of free product will be conducted by SCDHEC personnel with an interface probe. If the remediation technology is in-situ (e.g., pump and treat, air sparging, vapor extraction): suspend operation of the system once the remediation goals for all CoC have been maintained for a period of 30 days. Samples are to be taken after one (1) quarter or after all CoC levels have reached equilibrium and again after a second quarter. Along with the parameters listed in Specification #8, the ground-water samples should also be sampled for the following parameters:

| Analyte | Analytical Method* | Reporting Limit (mg/l) |
|---|---|---|
| Dissolved Oxygen | SM4500-O G | 500 |
| Ferrous Iron | SM3500-Fe D | 30 |
| Methane | Kerr Method | 1000 |
| Nitrate | 9056/9210 | 100 |
| Sulfate | 9038/9056 | 1000 |

*or EPA equivalent method that can achieve the same reporting level

If sample results indicate that the remediation goals are not sustained, the contractor must submit a corrective action status report (3 copies) that outlines the deficiency(ies) and offers recommendations for achieving the remediation goals with a revised timetable. Modifying and restarting of the system will be directed by DHEC. The system will operate until all remediation goals are again maintained for a period of 30 days. Operation of the system will then be suspended again and samples taken to verify that remediation goals are sustained. This cycle of activity, including status reports, will be repeated until all CoC levels remain below SSTLs for all wells listed in Special Conditions item 11 C for two (2) consecutive quarters. **Three (3)** verification wells and **three (3)** verification soil borings may then be installed at locations designated by DHEC. Costs for verification well and soil boring installation are considered part of this bid price. Each well and soil boring will be sampled in accordance with Specifications item 8 and the analyses compared to the calculated SSTLs for the CoC at that well and soil boring location. If the laboratory analyses are at or below the SSTLs, corrective action will be considered complete. If any analysis is above the SSTL, the corrective action will not be considered complete, and the activity cycle described above must be repeated until all CoC levels remain below SSTLs for those wells and soil borings listed in Special Conditions item 11 C. Split or duplicate samples may be collected by DHEC **(or its subcontractors)** to verify achievement of remediation goals. **At least two weeks**

**notice will be provided to DHEC prior to mobilizing to the site for sampling to verify attainment of remediation goals.** Costs for transportation and analysis of split or duplicate samples will be paid by DHEC.

or

If the remediation technology is a single event (e. g. excavation of impacted soils, vacuum enhanced recovery): collect sufficient samples as outlined in the CAP to verify the reduction of CoC to the remediation goals. The contractor may be required to install and sample **three (3)** verification wells and **three (3)** verification soil borings at locations designated by DHEC. If the levels of CoC in all samples are at or below SSTLs, corrective action will be considered complete. If the level of any CoC is above the SSTL, additional corrective action will be required. The contractor will submit one (1) corrective action status report to document the reduction of CoC to the remediation goals. Split or duplicate samples will be collected **by DHEC (or its subcontractors)** to verify achievement of remediation goals. **At least two weeks notice will be provided to DHEC prior to mobilizing to the site for sampling to verify attainment of remediation goals.** Costs for transportation and analysis of split or duplicate samples will be paid by DHEC.

11. Disassemble and remove the remediation system and all associated remediation items including utilities from the site within 60 days of notification by DHEC that the remediation goal for the release associated with the UST(s) at the site has been achieved. Disruption to the owner/operator's normal business will be kept to a minimum.

12. Properly abandon all wells (including preexisting wells), borings, trenches, and piping/utility runs installed by the contractor as part of corrective action within 60 days of notification by DHEC that the remediation goal for the release associated with the UST(s) at the site has been achieved. The abandonment will be in accordance with South Carolina Well Standards and Regulations R. 61-71 and accepted industry standards for abandonment of trenches and piping/utility runs. Disruption to the property owner's normal business will be kept to a minimum. The contractor must notify DHEC of the method of well abandonment and final disposal of any free product and contaminated soil or ground water. The contractor will return the site to the condition prior to corrective action (e.g., asphalt paved areas will be repaved with asphalt, concrete areas will be replaced with concrete, grass areas will have soil replaced to the original grade and reseeded or sodded with grass, etc.).

BIDDING SCHEDULE

**The total cost in dollars to treat the area of concern (see figure #2) such that the thickness of free product does not exceed .01 foot and the levels of CoC do not exceed the site-specific target levels (SSTLs) defined in item 11.C. at any point, complete all associated monitoring and post-remediation verification, prepare all plans, reports, and correspondence; obtain and meet all terms and conditions of all required permits and licenses; design, install, monitor, operate, maintain, and when completed, properly abandon or remove all assessment and remediation items installed as part of corrective action; provide evidence of performance bond; and other items outlined in this bid invitation for the Crawford's Country Store, (UST Permit # 12335), 5870 Hwy. 28 N., Abbeville, South Carolina is:**

$ _____

**SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL**
**BID NUMBER: SB-9570-12/02/99-TC**

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**OTHER CRITERIA**

Please respond to the following questions that have been designed to verify your corrective action qualifications:

1. The corrective action method(s) or technology (ies) that will be proposed in the CAP will be (list all active and/or intrinsic methods or technologies for remediation of the aquifer; attach additional pages(s) as required):

   _____

   _____

   _____

   _____

2. The estimated time in months to complete the corrective action from the date of bid award, corrective action goals are met, and all corrective action items are removed from the site or properly abandoned is approximately _____ months. This time assumes all submitted plans and reports will be reviewed by DHEC within 30 days of receipt.

**BID ACCEPTANCE and DELIVERY STATEMENT**

In compliance with the bid solicitation and subject to all conditions thereof, the contractor offers and agrees, if this bid is accepted within _____ days from date of bid opening, to furnish any or all items/services quoted at the prices set forth.

## SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
## BID NUMBER: SB-9570-12/02/99-TC

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# PLEASE READ THE FOLLOWING CAREFULLY PRIOR TO COMPLETING BID

## INSTRUCTIONS TO BIDDERS

DISCUSSIONS AND NEGOTIATIONS: By submission of a bid, bidder agrees that during the period following issuance of this solicitation and prior to notification of intent or award of a contract, the bidder shall not discuss this procurement with any party except members of the DHEC Procurement Division or other parties designated in this solicitation. Bidder shall not discuss or attempt to negotiate with the using area or program any aspects of the procurement without prior approval of the DHEC Procurement Division Buyer responsible for the procurement. Infractions may result in rejection of the violator's bid.

1. Unless otherwise required herein, only one signed copy of the invitation to bid is required.
2. Bids "faxed" directly to the DHEC Procurement Office will not be accepted or considered for award.
3. Bids, amendments thereto or withdrawal request must be received by the time advertised for bid opening. It is the bidder's sole responsibility to insure that these documents are received by the person (or office) at the time indicated in this solicitation document. Any withdrawal request received after the time of the bid opening shall be governed by DHEC Underground Storage Tank Environmental Remediation Procedures.
4. When specifications or descriptive papers are submitted with the bid submission, enter bidder's name thereon.
5. Submit your signed bid on this form. Show the bid number on the envelope as instructed. DHEC assumes no responsibility for unmarked or improperly marked envelopes. All envelopes received showing a bid number are placed directly under locked security until the date and time of opening. Do not include more than one bid invitation per envelope. If directing any other correspondence, address the envelope to the Procurement Officer but do not include the bid number on the envelope since it does not include your bid.
6. Bidders must clearly mark as "CONFIDENTIAL" each part of their bid which they consider to be proprietary information that could be exempt from disclosure under Section 30-4-40, Code of Laws of South Carolina 1976 (1986 Cum. Supp.; Freedom of Information Act) If any part is designated as confidential, there must be attached to that part an explanation of how this information fits within one or more categories listed in Section 30-4-40. DHEC reserves the right to determine whether this information should be exempt from disclosure and no legal action may be brought against the State, DHEC or its agents for its determination in this regard.
7. By submission of a bid, you are guaranteeing that all goods and services meet the requirements of this solicitation during the contract period.
8. Tie bids will be resolved as outlined in DHEC Underground Storage Tank Environmental Remediation Procedures.
9. Do not include any taxes that DHEC may be required to pay in the bid price. Upon submission of a bid by a state agency, the Procurement Officer will compute a 5% sales and use tax to the non-state agency bids when applicable (service and labor excluded) in determining the low bidder. This procedure conforms with the SC Tax Commission Sales and Use Tax Regulation 117-174-.95.
10. Correction of errors on this bid form: All prices and notations should be printed in ink or typewritten. Errors should be crossed out corrections entered and initialed by the person signing the bid. Erasures or use of typewriter correction fluid may be cause for rejection. No bid shall be altered or amended after the time specified for the bid opening.
11. Ambiguous bids which are uncertain as to terms, delivery, quantity or compliance with this solicitation may be rejected or otherwise disregarded.
12. Any bidder desiring to exercise a grievance may do so under section IV of DHEC Underground Storage Tank Environmental Remediation Procedures. All correspondence should be directed to the Director of Procurement Services, Bureau of Business Management, 2600 Bull Street, Columbia, SC 29201.
13. Failure to respond to three consecutive bid notices may result in removal of bidder's name from the mailing list.

## GENERAL PROVISIONS

14. DHEC reserves the right to reject any and all bids, and to cancel this solicitation.
15. Unit prices will govern over extended prices unless otherwise stated in this solicitation.
16. Prohibition of Gratuities: Amended section 8-13-420 of the 1976 Code of Laws of South Carolina States: "Whoever gives or offers to any public official or public employee any compensation, including a promise of future employment, to influence his action, vote, opinion or judgement as a public official or public employee or such public official solicits or accepts such compensation to influence his action, vote, opinion or judgement shall be subject to the punishment as provided by Section 16-9-210 and Section 16-9-220. The provision of this section shall not apply to political contributions unless such contributions are conditioned upon the performance of specific action of the person accepting such contribution nor shall they prohibit a parent, grand-parent or relative from making a gift to a child, grandchild or other close relative for love and affection except as hereafter provided".
17. Bidder's Qualification: Bidders must, upon request of DHEC, furnish satisfactory evidence of their ability to furnish products or services in accordance with the terms and conditions of these specifications. DHEC reserves the right to make the final determination as to the bidder's ability to provide the products or services requested herein.

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

*Promoting and protecting the health of the public and the environment*

FRANK CRAWFORD
5870 HWY 28 N
ABBEVILLE SC 29620-3447

OCT 09 2013

Re: **QAPP Contractor Addendum**
Crawfords Country Store
5870 Hwy 28 North, Abbeville, SC 29620
UST Permit # 12335
Release Reported December 3, 1991
Abbeville County

Dear Mr. Crawford:

The Underground Storage Tank (UST) Management Division (Division) of the South Carolina Department of Health and Environmental Control (Agency) recognizes your commitment to continue work at this site using Midlands Environmental Consultants, Inc., as your contractor. Based upon review of site records, additional site assessment and groundwater monitoring is required at this time. The next scope of work will include field screening and comprehensive groundwater sampling as outlined in the UST Quality Assurance Program Plan (QAPP) Revision 2.0. The number of additional monitoring wells and their install locations will be based upon review of field screening data. Please have your contractor plan to conduct field screening in the areas outlined on the attached map and to sample all monitoring wells and area water supply wells for BTEX, Naphthalene, Oxygenates, 1,2-DCA, MTBE and EDB, in accordance with the QAPP Rev. 2.0, and in compliance with all applicable regulations. A copy of the QAPP is available at http://www.scdhec.gov/environment/lwm/usthome/Qapp.htm.

Your contractor must complete and submit a QAPP Contractor Addendum and cost agreement for the aforementioned scope of work within 30 days of the date of this letter. Upon review and approval of the Addendum and cost agreement, the Division will issue a directive to you for the work.

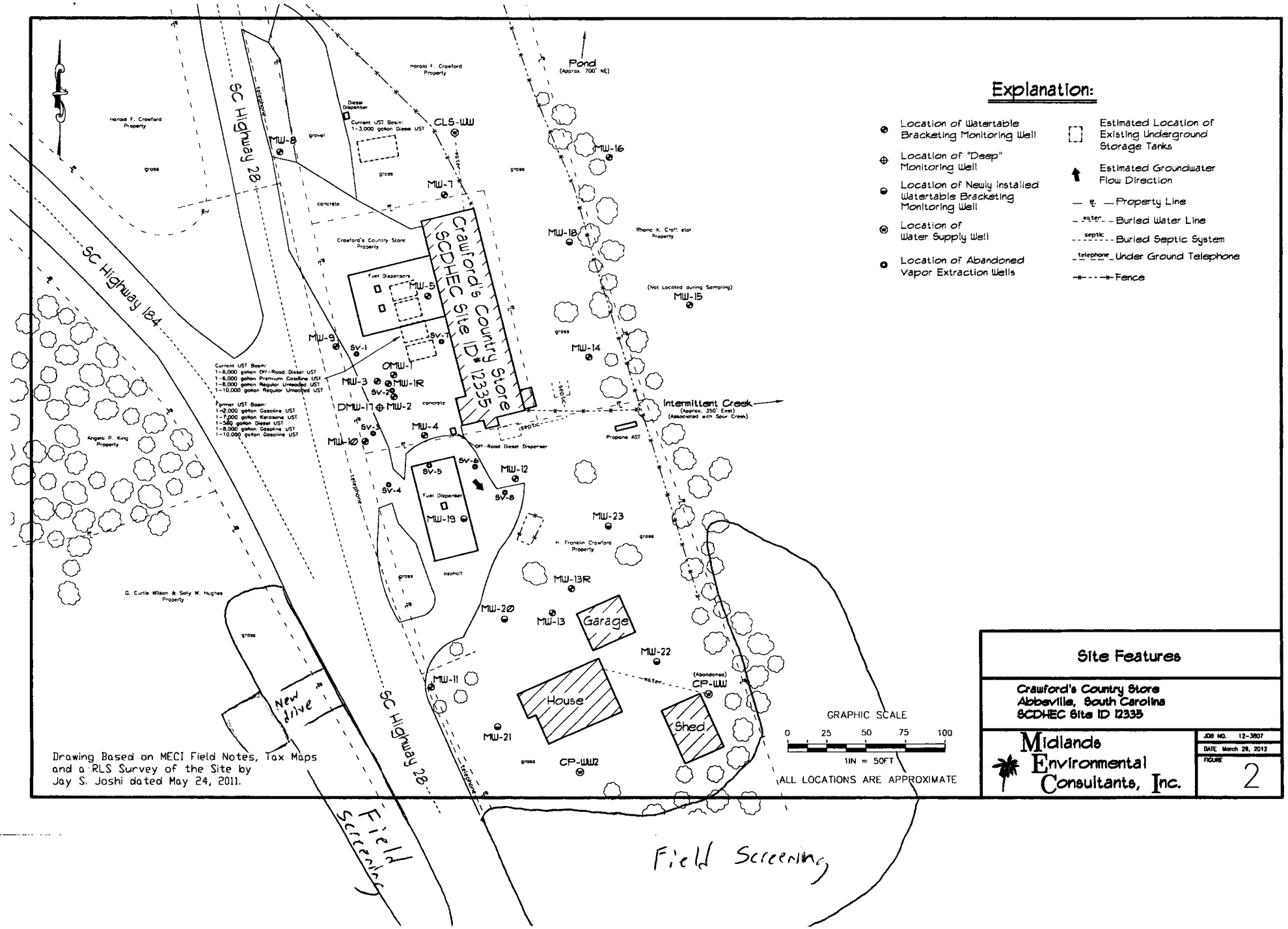
On all correspondence concerning this site, please reference UST Permit # 12335. If there are any questions, feel free to contact me by telephone at (803) 898-0607, by fax at (803) 898-0673, or by e-mail at ShullSS@dhec.sc.gov.

Sincerely,

Shane S. Shull, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Site Map with Proposed Field Screening

cc: Midlands Environmental Consultants, Inc., PO Box 854, Lexington, SC 29071 (w/ enc)
Technical File (w/ enc)


Explanation:
Location of Watertable Bracketing Monitoring Well
Location of "Deep" Monitoring Well
Location of Newly Installed Watertable Bracketing Monitoring Well
Location of Water Supply Well
Location of Abandoned Vapor Extraction Wells
Estimated Location of Existing Underground Storage Tanks
Estimated Groundwater Flow Direction
Property Line
Buried Water Line
Buried Septic System
Under Ground Telephone
Fence
SC Highway 28
SC Highway 184
Crawford's Country Store SCDHEC Site ID# 12335
Pond
(Approx. 700' NE)
Intermittent Creek
(Approx. 350' East)
(Associated with Sour Creek)
Garage
House
Shed
New drive
Field Screening
Fuel Dispenser
Off-Road Diesel Dispenser
Propane AST
(Not Located during Sampling)
GRAPHIC SCALE
0 25 50 75 100
1IN = 50FT
ALL LOCATIONS ARE APPROXIMATE
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated May 24, 2011.
Site Features
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID 12335
Midlands Environmental Consultants, Inc.
JOB NO. 12-3807
DATE March 29, 2012
FIGURE 2

RECEIVED
OCT 0 1 2007
UNDERGROUND STORAGE
TANK PROGRAM

September 27, 2007

Mr. Kent Coleman, P.G., Director
Assessment and Corrective Action Division
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: Remediation System Removal/Well Abandonment
Various Pay-For Performance Sites

Dear Mr. Coleman:

Per a SCDHEC request in a correspondence dated March 2, 2007, $H_2O$ Environmental, Inc. personnel removed the remediation systems from the following referenced sites and disconnected the power sources. A copy of the SCDHEC letter is provided as Attachment 1. Any remaining remediation system equipment and piping were dismantled, removed, and/or abandoned.

| UST Permit # | Site Name | Referenced Attachment # |
|---|---|---|
| 04102 | City of Greenville | 2 |
| 00781 | SCDOT Bamberg Maintenance | 3 |
| 02382 | Black's 66 | 4 |
| 06851 | Spinx | 5 |
| 09413 | Gaulden's Grocery | 6 |
| 15971 | Nesmith Well Contamination | No Attachments |
| 16090 | Former Ellison's ( Owens Well) | 7 |
| 12335 | Crawford's Store | 8 |

In addition, all site monitoring wells were abandoned at the following site:

| | |
|---|---|
| 04102 | City of Greenville |
| 02382 | Black's 66 |
| 09413 | Gaulden Grocery |

All piping, monitoring wells, sparge wells, and vapor wells were abandoned by a certified well driller. A copy of the Water Well Records detailing abandonment of monitoring wells and/or sparge wells and vapor wells are attached for each of the reference sites. Upon your final inspection, please return the performance bonds issued for each site.

If you have any questions or comments, please do not hesitate to contact Craig Hurst at 954-565-7650 or me at (803) 749-4080.

**$H_2O$ Environmental, Inc.**

Richard Gillespie
Acting Agent

Attachments

UST PROGRAM
DOCKETING # _____

# Attachment 1

# SCDHEC Correspondence

D H E C
PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

*Promoting and protecting the health of the public and the environment.*

MR CRAIG HURST
GROUNDWATER & ENVIRONMENTAL SERVICES
380 NORTHLAKE BLVD
ALTAMONTE SPRINGS, FL 32701

Re: Pay for Performance Projects
$H_2O$ Environmental, Inc.

Dear Mr. Hurst:

The pay-for-performance corrective action projects listed in the table below were awarded to $H_2O$ Environmental, Inc. ($H_2O$) between the dates of May 1997 and January 2000.

| Permit # | Site Name | Remove and Abandon Treatment System | Abandon Monitoring Wells |
|---|---|---|---|
| 04102 | City of Greenville | X | X |
| 00781 | SCDOT Bamberg Maintenance | X | |
| 02382 | Black's 66 | X* | X |
| 06851 | Spinx | X | |
| 09413 | Gaulden's Grocery | X | X |
| 15971 | Nesmith Well Contamination | X | |
| 16090 | Fmr Ellison's (Owens Well) | X | |
| 12335 | Crawford's Store | X | |

* Contact Mr. Tommy Keels at G&K Tank Services (803-799-0054) to pick up this trailer.

In the time since Groundwater & Environmental Services (GES) acquired $H_2O$, little work has been done to advance these projects toward completion. It has been determined that it is in the best interests of the UST Program to release GES/$H_2O$ from the listed contracts.

The release of GES/ $H_2O$ from these contracts is unconditional and will not prejudice any current or future work by your company. In accordance with the terms and conditions of the PfP contracts, you are to remove your equipment from the listed facilities, abandon the remediation wells, piping, electrical service, etc., and restore the sites to the conditions prior to corrective action (e.g., asphalt paved areas will be repaved with asphalt, concrete areas will be replaced with concrete, grass areas will have soil replaced to the original grade and reseeded or sodded with grass, etc.). The monitoring wells are to be abandoned only at the facilities indicated in the table above. The Department will make no further payments from the SUPERB Account. Your performance bonds will be returned as soon as completion of these activities has been verified by DHEC staff.

Please feel free to contact me at (803) 896-6249 if you have any questions or need additional information.

Sincerely,

Kent M. Coleman, P.G., Director
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management

cc: Technical Files
Matt Winslow, Bureau of Business Management

DHEC/UST/030207

# Attachment 2

# City of Greenville

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 20 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-2 abandonded to 20'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-5-07
_____ ft. Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 20' ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) Level: A B C D (circle one)
1949 Lk. Cunningham,Greer, SC 29651 ☐ ☑ ☐ ☐
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood (Well Driller) Date: 6-19-07

If D Level Driller, provide supervising driller's name:

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 20 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-3 abandonded to 20'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-5-07
_____ ft. Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 20' ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) Level: A B C D (circle one) ☐ ☑ ☐ ☐
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 20 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-4 abandonded to 20'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) ____ ft. Date Started: 6-5-07 Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 20 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) Level: A B C D (circle one) ☐ ☑ ☐ ☐
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 20 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-5 abandonded to 20'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-5-07
_____ ft. Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 20 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) Level: A B C D (circle one) ☐ ☑ ☐ ☐
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 14 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-6 abandonded to 14'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) ____ ft. Date Started: 6-5-07 Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 14 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from _____ ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| | | |
| **Well was filled with dirt to the | | |
| surface. Cleaned well out 1 to 2 feet | | |
| and grouted up to surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-7 (see note above)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) _____ ft. Date Started: 6-5-07 Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 2' ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 14 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-8 abandonded to 14'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) ____ ft. Date Started: 6-5-07 Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 14 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) Level: A B C D (circle one) ☐ ☑ ☐ ☐
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL: - COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 14 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-9 abandonded to 14'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-5-07
____ ft. Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 14 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P.____ Volts____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) Level: A B C D (circle one)
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 20 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-10 abandonded to 20'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-5-07
_____ ft. Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 20 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 20 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-11 abandonded to 20'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-5-07
____ ft. Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 20 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 20 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-12 abandonded to 20'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) ____ ft. Date Started: 6-5-07 Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 20 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P.____ Volts____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) Level: A B C D (circle one) ☐ ☑ ☐ ☐
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 20 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-13 abandonded to 20'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-5-07
_____ ft. Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
**NOTE: MULTIPLE SCREENS USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 20 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) Level: A B C D (circle one) ☐ ☑ ☐ ☐
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 75 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-14 abandonded to 75'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-5-07
____ ft. Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 75 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P.____ Volts____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) Level: A ☐ B ☑ C ☐ D ☐ (circle one)
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 20 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-17 abandonded to 20'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-5-07
_____ ft. Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 20 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0503 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 14 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
BW-1 abandonded to 14'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-5-07
_____ ft. Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 14 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 25 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
S-1 abandonded to 25'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-5-07
_____ ft. Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 25 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 25 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
S-2 abandonded to 25'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-5-07
ft. Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.:
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
in. to ft. depth
in. to ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Diam.:
Slot/Gauge: Length:
Set Between: ft. and ft.
ft. and ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ft. to ft.
Effective size Uniformity Coefficient

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other
Depth: From 25 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ft. direction
Type
Well Disinfected ☐ Yes ☐ No Type: Amount:

**18. PUMP:** Date installed: Not installed ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) Level: A ☐ B ☑ C ☐ D ☐ (circle one)
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood (Well Driller) Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 25 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
S-3 abandonded to 25'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-5-07
_____ ft. Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 25 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print)
1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood (Well Driller) Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 19.5 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
S-4 abandonded to 19.5'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-5-07
_____ ft. Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
**NOTE: MULTIPLE SCREENS USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 19.5 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

DHEC
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 25 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
S-5 abandonded to 25'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-5-07
_____ ft. Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 25 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) Level: A ☐ B ☑ C ☐ D ☐ (circle one)
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC. Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 10 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
PZ- 2 abandonded to 10'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-5-07
10' ft. Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.:
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
in. to ft. depth
in. to ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Diam.:
Slot/Gauge: Length:
Set Between: ft. and ft.
ft. and ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ft. to ft.
Effective size Uniformity Coefficient

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other
Depth: From ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ft. direction
Type
Well Disinfected ☐ Yes ☐ No Type: Amount:

**18. PUMP:** Date installed: Not installed ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward (Well Driller) Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 12' ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
PZ- 3 abandonded to 12'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 12' ft. Date Started: 6-5-07 Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
Sieve Analysis ☐ Yes (please enclose) ☐ No
**NOTE: MULTIPLE SCREENS USE SECOND SHEET**

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From ____ ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 12' ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
PZ- 4 abandonded to 12'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 12' ft. Date Started: 6-5-07 Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.:
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
in. to ft. depth
in. to ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Diam.:
Slot/Gauge: Length:
Set Between: ft. and ft.
ft. and ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ft. to ft.
Effective size Uniformity Coefficient

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other
Depth: From ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ft. direction
Type
Well Disinfected ☐ Yes ☐ No Type: Amount:

**18. PUMP:** Date installed: ☐ Not installed
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) Level: A ☐ B ☑ C ☐ D ☐ (circle one)
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: City of Greenville (last) (first)
Address: 348 S. Hudson Street
City: Greenville State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Greenville
Name: City Of Greenville
Street Address: 348 S. Hudson St.
City: Greenville, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** City of Greenville **PUBLIC SYSTEM NUMBER:** DHE-04102

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 14' ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Abandonded from bottom | | |
| of Well to surface using Bentonite | | |
| and Neat Cement. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
PZ- 6 abandonded to 14'

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 04102

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 14 ft. Date Started: 6-5-07 Date Completed: 6-6-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From ____ ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham, Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

# Attachment 3

# SCDOT Bamberg Maintenance

DHEC
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Bamberg (SCDOT) (last) (first)
Address: 463 South Main Street
City: Bamberg State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Bamberg
Name: Bamberg (SCDOT)
Street Address: 463 South Main Street
City: Bamberg, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Bamberg (SCDOT) **PUBLIC SYSTEM NUMBER:** # 00781

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 22 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (S-2)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 00781

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-26-07
_____ ft. Date Completed: 6-26-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 22 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A B C D (circle one) ☐ ☑ ☐ ☐
Telephone No.: 803-917-0505 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 7-1-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Bamberg (SCDOT) (last) (first)
Address: 463 South Main Street
City: Bamberg State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Bamberg
Name: Bamberg (SCDOT)
Street Address: 463 South Main Street
City: Bamberg, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Bamberg (SCDOT) **PUBLIC SYSTEM NUMBER:** # 00781

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 22 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** (S-3) | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 00781

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-26-07
_____ ft. Date Completed: 6-26-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 22 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0503 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood (Well Driller) Date: 7-1-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Bamberg (SCDOT) (last) (first)
Address: 463 South Main Street
City: Bamberg State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Bamberg
Name: Bamberg (SCDOT)
Street Address: 463 South Main Street
City: Bamberg, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Bamberg (SCDOT) **PUBLIC SYSTEM NUMBER:** # 00781

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 22 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** (S-4) | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 00781

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-26-07
_____ ft. Date Completed: 6-26-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 22 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 7-1-07
Well Driller

If D Level Driller, provide supervising driller's name:

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Bamberg (SCDOT) (last) (first)
Address: 463 South Main Street
City: Bamberg State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Bamberg
Name: Bamberg (SCDOT)
Street Address: 463 South Main Street
City: Bamberg, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Bamberg (SCDOT) **PUBLIC SYSTEM NUMBER:** # 00781

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 22 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (S-5)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 00781

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-26-07
____ ft. Date Completed: 6-26-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 22 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Well Driller Date: 7-1-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Bamberg (SCDOT) (last) (first)
Address: 463 South Main Street
City: Bamberg State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Bamberg
Name: Bamberg (SCDOT)
Street Address: 463 South Main Street
City: Bamberg, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Bamberg (SCDOT) **PUBLIC SYSTEM NUMBER:** # 00781

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 22 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** (S-6) | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 00781

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-26-07
_____ ft. Date Completed: 6-26-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 22 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Date: 7-1-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Bamberg (SCDOT) (last) (first)
Address: 463 South Main Street
City: Bamberg State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Bamberg
Name: Bamberg (SCDOT)
Street Address: 463 South Main Street
City: Bamberg, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Bamberg (SCDOT) **PUBLIC SYSTEM NUMBER:** # 00781

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 22 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** (S-8) | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 00781

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-26-07
_____ ft. Date Completed: 6-26-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 22 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 7-1-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Bamberg (SCDOT) (last) (first)
Address: 463 South Main Street
City: Bamberg State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Bamberg
Name: Bamberg (SCDOT)
Street Address: 463 South Main Street
City: Bamberg, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Bamberg (SCDOT) **PUBLIC SYSTEM NUMBER:** # 00781

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 15 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (V-3)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 00781

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-26-07
____ ft. Date Completed: 6-26-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 15 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P.____ Volts____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M - Wood (Well Driller) Date: 7-1-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

**Attachment 4**

**Black's 66**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Black's 66 (last) (first)
Address: SC 261 and Sammy Swamp Road
City: Pinewood State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Sumter
Name: Black's 66
Street Address: SC 261 and Sammy Swamp Road
City: Pinewood, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Black's 66 **PUBLIC SYSTEM NUMBER:** # 02382

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 19.5 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
(MW-2)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 02382

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-27-07
_____ ft. Date Completed: 6-27-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 19.5 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) Level: A ☐ B ☑ C ☐ D ☐ (circle one)
1949 Lake Cunningham Road
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 7-1-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Black's 66 (last) (first)
Address: SC 261 and Sammy Swamp Road
City: Pinewood State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Sumter
Name: Black's 66
Street Address: SC 261 and Sammy Swamp Road
City: Pinewood, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Black's 66 **PUBLIC SYSTEM NUMBER:** # 02382

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 19 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** (MW-3) | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 02382

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-27-07
_____ ft. Date Completed: 6-27-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 19 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A B C D (circle one) ☐ ☑ ☐ ☐
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 7-1-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

DHEC
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Black's 66 (last) (first)
Address: SC 261 and Sammy Swamp Road
City: Pinewood State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Sumter
Name: Black's 66
Street Address: SC 261 and Sammy Swamp Road
City: Pinewood, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Black's 66 **PUBLIC SYSTEM NUMBER:** # 02382

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 19 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (MW-4)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 02382

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-27-07
____ ft. Date Completed: 6-27-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 19 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P.____ Volts____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) Level: A B C D (circle one) ☐ ☑ ☐ ☐
1949 Lake Cunningham Road
Telephone No.: 803-917-0505 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M Woodward Date: 7-1-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

DHEC
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Black's 66 (last) (first)
Address: SC 261 and Sammy Swamp Road
City: Pinewood State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Sumter
Name: Black's 66
Street Address: SC 261 and Sammy Swamp Road
City: Pinewood, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Black's 66 **PUBLIC SYSTEM NUMBER:** # 02382

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 13 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (MW-5)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 02382

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-27-07
_____ ft. Date Completed: 6-27-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 13 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A B C D (circle one) ☐ ☑ ☐ ☐
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 7-1-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Black's 66 (last) (first)
Address: SC 261 and Sammy Swamp Road
City: Pinewood State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Sumter
Name: Black's 66
Street Address: SC 261 and Sammy Swamp Road
City: Pinewood, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Black's 66 **PUBLIC SYSTEM NUMBER:** # 02382

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 13.5 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (MW-6)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 02382

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-27-07
_____ ft. Date Completed: 6-27-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 13.5 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 7-1-07

If D Level Driller, provide supervising driller's name:

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Black's 66 (last) (first)
Address: SC 261 and Sammy Swamp Road
City: Pinewood State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Sumter
Name: Black's 66
Street Address: SC 261 and Sammy Swamp Road
City: Pinewood, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Black's 66 **PUBLIC SYSTEM NUMBER:** # 02382

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 14 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** (MW-10) | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 02382

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-27-07
_____ ft. Date Completed: 6-27-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 14 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A B C D (circle one) ☐ ☑ ☐ ☐
Telephone No.: 803-917-0505 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Date: 7-1-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Black's 66 (last) (first)
Address: SC 261 and Sammy Swamp Road
City: Pinewood State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Sumter
Name: Black's 66
Street Address: SC 261 and Sammy Swamp Road
City: Pinewood, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Black's 66 **PUBLIC SYSTEM NUMBER:** # 02382

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 13 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (MW-11)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 02382

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-27-07
____ ft. Date Completed: 6-27-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. **NOTE: MULTIPLE SCREENS**
____ ft. and ____ ft. **USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 13 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P.____ Volts____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) Level: A B C D (circle one) ☐ ☑ ☐ ☐
1949 Lake Cunningham Road
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 7-1-07
Well Driller

If D Level Driller, provide supervising driller's name:

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Black's 66 (last) (first)
Address: SC 261 and Sammy Swamp Road
City: Pinewood State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Sumter
Name: Black's 66
Street Address: SC 261 and Sammy Swamp Road
City: Pinewood, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Black's 66 **PUBLIC SYSTEM NUMBER:** # 02382

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 40 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (MW-1D/ S-1)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 02382

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-27-07
_____ ft. Date Completed: 6-27-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 40 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) Level: A B C D (circle one) ☐ ☑ ☐ ☐
1949 Lake Cunningham Road
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 7-1-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Black's 66 (last) (first)
Address: SC 261 and Sammy Swamp Road
City: Pinewood State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Sumter
Name: Black's 66
Street Address: SC 261 and Sammy Swamp Road
City: Pinewood, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Black's 66 **PUBLIC SYSTEM NUMBER:** # 02382

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 17 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** (S-2) | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 02382

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-27-07
_____ ft. Date Completed: 6-27-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 17 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) Level: A B C D (circle one) ☐ ☑ ☐ ☐
1949 Lake Cunningham Road
Telephone No.: 803-917-0505 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Date: 7-1-07
Well Driller

If D Level Driller, provide supervising driller's name:

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Black's 66 (last) (first)
Address: SC 261 and Sammy Swamp Road
City: Pinewood State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Sumter
Name: Black's 66
Street Address: SC 261 and Sammy Swamp Road
City: Pinewood, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Black's 66 **PUBLIC SYSTEM NUMBER:** # 02382

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 14 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** (MW-7/ S-3) | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 02382

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-27-07
_____ ft. Date Completed: 6-27-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 14 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A B C D (circle one) ☐ ☑ ☐ ☐
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 7-1-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Black's 66 (last) (first)
Address: SC 261 and Sammy Swamp Road
City: Pinewood State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Sumter
Name: Black's 66
Street Address: SC 261 and Sammy Swamp Road
City: Pinewood, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Black's 66 **PUBLIC SYSTEM NUMBER:** # 02382

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 40 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (MW-2D)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 02382

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-27-07
_____ ft. Date Completed: 6-27-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 40 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A B C D (circle one) ☐ ☑ ☐ ☐
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Date: 7-1-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

# Attachment 5

# Spinx

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Spinx # 448 (last) (first)
Address: 116 Whittaker Parkway
City: Orangeburg State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Orangeburg
Name: Spinx #448
Street Address: 116 Whittaker Parkway
City: Orangeburg, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Spinx # 448 **PUBLIC SYSTEM NUMBER:** # 06851

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 22 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** (S-1) | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 06851

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-29-07
_____ ft. Date Completed: 6-29-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 22 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A B C D (circle one) ☐ ☑ ☐ ☐
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 7-1-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Spinx # 448 (last) (first)
Address: 116 Whittaker Parkway
City: Orangeburg State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Orangeburg
Name: Spinx #448
Street Address: 116 Whittaker Parkway
City: Orangeburg, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Spinx # 448 **PUBLIC SYSTEM NUMBER:** # 06851

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 22 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (S-2)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 06851

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-29-07
_____ ft. Date Completed: 6-29-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 22 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A B C D (circle one) ☐ ☑ ☐ ☐
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 7-1-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Spinx # 448 (last) (first)
Address: 116 Whittaker Parkway
City: Orangeburg State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Orangeburg
Name: Spinx #448
Street Address: 116 Whittaker Parkway
City: Orangeburg, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Spinx # 448 **PUBLIC SYSTEM NUMBER:** # 06851

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 22 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (S-3)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 06851

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-29-07
_____ ft. Date Completed: 6-29-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 22 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 7-1-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Spinx # 448 (last) (first)
Address: 116 Whittaker Parkway
City: Orangeburg State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Orangeburg
Name: Spinx #448
Street Address: 116 Whittaker Parkway
City: Orangeburg, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Spinx # 448 **PUBLIC SYSTEM NUMBER:** # 06851

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 22 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (S-4)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 06851

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-29-07
_____ ft. Date Completed: 6-29-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 22 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A B C D (circle one) ☐ ☑ ☐ ☐
Telephone No.: 803-917-0503 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 7-1-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Spinx # 448 (last) (first)
Address: 116 Whittaker Parkway
City: Orangeburg State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Orangeburg
Name: Spinx #448
Street Address: 116 Whittaker Parkway
City: Orangeburg, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Spinx # 448 **PUBLIC SYSTEM NUMBER:** # 06851

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 22 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** (S-5) | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 06851

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-29-07
_____ ft. Date Completed: 6-29-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft. NOTE: MULTIPLE SCREENS
_____ ft. and _____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 22 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A B C D (circle one) ☐ ☑ ☐ ☐
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 7-1-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Spinx # 448 (last) (first)
Address: 116 Whittaker Parkway
City: Orangeburg State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Orangeburg
Name: Spinx #448
Street Address: 116 Whittaker Parkway
City: Orangeburg, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Spinx # 448 **PUBLIC SYSTEM NUMBER:** # 06851

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 22 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (S-6)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 06851

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-29-07
_____ ft. Date Completed: 6-29-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft. NOTE: MULTIPLE SCREENS
_____ ft. and _____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 22 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0503 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood (Well Driller) Date: 7-1-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Spinx # 448 (last) (first)
Address: 116 Whittaker Parkway
City: Orangeburg State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** Orangeburg
Name: Spinx #448
Street Address: 116 Whittaker Parkway
City: Orangeburg, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Spinx # 448 **PUBLIC SYSTEM NUMBER:** # 06851

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 22 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells were abandonded by | | |
| using Neat Cement/Bentonite | | |
| mixture from bottom of well to the | | |
| surface. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** (S-7) | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 06851

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-29-07
_____ ft. Date Completed: 6-29-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 22 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368
Address: (Print) 1949 Lake Cunningham Road
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 7-1-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

# Attachment 6

# Gaulden's Grocery

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: Gaulden Grocery (last) (first)
Address: 4939 Mt Gallant Rd.
City: Rock Hill State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: York
Name: Gaulden Grocery
Street Address: 4939 Mt. Gallant Road
City: Rock Hill, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Gaulden Grocery **PUBLIC SYSTEM NUMBER:** DHE-# 09413

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 40 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** ( MW-1)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 09413

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-15-07
ft. Date Completed: 6-15-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.:
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
in. to ft. depth
in. to ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Diam.:
Slot/Gauge: Length:
Set Between: ft. and ft.
ft. and ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ft. to ft.
Effective size Uniformity Coefficient

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other
Depth: From 40 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ft. direction
Type
Well Disinfected ☐ Yes ☐ No Type: Amount:

**18. PUMP:** Date installed: ☐ Not installed
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward CERT. NO.: 1368-B
Address: (Print) Level: A ☐ B ☑ C ☐ D ☐ (circle one)
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Gaulden Grocery (last) (first)
Address: 4939 Mt Gallant Rd.
City: Rock Hill State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: York
Name: Gaulden Grocery
Street Address: 4939 Mt. Gallant Road
City: Rock Hill, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Gaulden Grocery **PUBLIC SYSTEM NUMBER:** DHE-# 09413

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 45 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** ( MW-1R) | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 09413

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-15-07
____ ft. Date Completed: 6-15-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 45 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P.____ Volts____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward CERT. NO.: 1368-B
Address: (Print) Level: A B C D (circle one) ☐ ☑ ☐ ☐
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood (Well Driller) Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Gaulden Grocery (last) (first)
Address: 4939 Mt Gallant Rd.
City: Rock Hill State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** York
Name: Gaulden Grocery
Street Address: 4939 Mt. Gallant Road
City: Rock Hill, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Gaulden Grocery **PUBLIC SYSTEM NUMBER:** DHE-# 09413

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 35 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
( MW-2)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 09413

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-15-07
_____ ft. Date Completed: 6-15-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 35 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) Level: A ☐ B ☑ C ☐ D ☐ (circle one)
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Gaulden Grocery (last) (first)
Address: 4939 Mt Gallant Rd.
City: Rock Hill State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: York
Name: Gaulden Grocery
Street Address: 4939 Mt. Gallant Road
City: Rock Hill, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Gaulden Grocery **PUBLIC SYSTEM NUMBER:** DHE-# 09413

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 40 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** ( MW-2R)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 09413

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-15-07
ft. Date Completed: 6-15-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.:
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
in. to ft. depth
in. to ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Diam.:
Slot/Gauge: Length:
Set Between: ft. and ft.
ft. and ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ft. to ft.
Effective size Uniformity Coefficient

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other
Depth: From 40 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ft. direction
Type
Well Disinfected ☐ Yes ☐ No Type: Amount:

**18. PUMP:** Date installed: Not installed ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward CERT. NO.: 1368-B
Address: (Print) Level: A B C D (circle one)
☐ ☑ ☐ ☐
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: Gaulden Grocery (last) (first)
Address: 4939 Mt Gallant Rd.
City: Rock Hill State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** **COUNTY:** York
Name: Gaulden Grocery
Street Address: 4939 Mt. Gallant Road
City: Rock Hill, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Gaulden Grocery **PUBLIC SYSTEM NUMBER:** DHE-# 09413

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 30 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** ( MW-3)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 09413

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) ____ ft. Date Started: 6-15-07 Date Completed: 6-15-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slo./Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 30 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: Gaulden Grocery (last) (first)
Address: 4939 Mt Gallant Rd.
City: Rock Hill State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: York
Name: Gaulden Grocery
Street Address: 4939 Mt. Gallant Road
City: Rock Hill, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Gaulden Grocery **PUBLIC SYSTEM NUMBER:** DHE-# 09413

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 40 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
( MW-4)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 09413

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-15-07
ft. Date Completed: 6-15-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.:
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
in. to ft. depth
in. to ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Diam.:
Slot/Gauge: Length:
Set Between: ft. and ft.
ft. and ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ft. to ft.
Effective size Uniformity Coefficient

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other
Depth: From 40 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ft. direction
Type
Well Disinfected ☐ Yes ☐ No Type: Amount:

**18. PUMP:** Date installed: Not installed ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward CERT. NO.: 1368-B
Address: (Print) Level: A B C D (circle one) ☐ ☑ ☐ ☐
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: Gaulden Grocery (last) (first)
Address: 4939 Mt Gallant Rd.
City: Rock Hill State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: York
Name: Gaulden Grocery
Street Address: 4939 Mt. Gallant Road
City: Rock Hill, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Gaulden Grocery **PUBLIC SYSTEM NUMBER:** DHE-# 09413

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 45 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** ( MW-4R) | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 09413

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-15-07
ft. Date Completed: 6-15-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 45 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward CERT. NO.: 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE. PROTECT. PROSPER.

**1. WELL OWNER INFORMATION:**
Name: Gaulden Grocery (last) (first)
Address: 4939 Mt Gallant Rd.
City: Rock Hill State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: York
Name: Gaulden Grocery
Street Address: 4939 Mt. Gallant Road
City: Rock Hill, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Gaulden Grocery **PUBLIC SYSTEM NUMBER:** DHE-# 09413

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 40 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
( MW-8)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 09413

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-15-07
_____ ft. Date Completed: 6-15-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 40 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward CERT. NO.: 1368-B
Address: (Print) Level: A ☐ B ☑ C ☐ D ☐ (circle one)
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Gaulden Grocery (last) (first)
Address: 4939 Mt Gallant Rd.
City: Rock Hill State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: York
Name: Gaulden Grocery
Street Address: 4939 Mt. Gallant Road
City: Rock Hill, SC Zip:
Latitude: - Longitude:

**3. PUBLIC SYSTEM NAME:** Gaulden Grocery **PUBLIC SYSTEM NUMBER:** DHE-# 09413

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 45 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
( MW-8R)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 09413

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-15-07
_____ ft. Date Completed: 6-15-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 45 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward CERT. NO.: 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: Gaulden Grocery (last) (first)
Address: 4939 Mt Gallant Rd.
City: Rock Hill State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: York
Name: Gaulden Grocery
Street Address: 4939 Mt. Gallant Road
City: Rock Hill, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Gaulden Grocery **PUBLIC SYSTEM NUMBER:** DHE-# 09413

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 35 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** ( MW-9)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 09413

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-15-07
____ ft. Date Completed: 6-15-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 35 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Gaulden Grocery (last) (first)
Address: 4939 Mt Gallant Rd.
City: Rock Hill State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: York
Name: Gaulden Grocery
Street Address: 4939 Mt. Gallant Road
City: Rock Hill, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Gaulden Grocery **PUBLIC SYSTEM NUMBER:** DHE-# 09413

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 30 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
( MW-10)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 09413

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-15-07
_____ ft. Date Completed: 6-15-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 30 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward CERT. NO.: 1368-B
Address: (Print) Level: A B C D (circle one) ☐ ☑ ☐ ☐
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Gaulden Grocery (last) (first)
Address: 4939 Mt Gallant Rd.
City: Rock Hill State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: York
Name: Gaulden Grocery
Street Address: 4939 Mt. Gallant Road
City: Rock Hill, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Gaulden Grocery **PUBLIC SYSTEM NUMBER:** DHE-# 09413

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 48 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
( DW-1/ S-3)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 09413

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-15-07
_____ ft. Date Completed: 6-15-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 48 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward CERT. NO.: 1368-B
Address: (Print) Level: A B C D (circle one)
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

DHEC
PROMOTE. PROTECT. PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Gaulden Grocery (last) (first)
Address: 4939 Mt Gallant Rd.
City: Rock Hill State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: York
Name: Gaulden Grocery
Street Address: 4939 Mt. Gallant Road
City: Rock Hill, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Gaulden Grocery **PUBLIC SYSTEM NUMBER:** DHE-# 09413

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 40 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** ( S-5) next to MW-9

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 09413

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-15-07
____ ft. Date Completed: 6-15-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. NOTE: MULTIPLE SCREENS
____ ft. and ____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 40 ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) Level: A ☐ B ☑ C ☐ D ☐ (circle one)
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

# Attachment 7

# Former Ellison's (Owens Well)

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Owens Well Site (Former Ellison Grocery) (last) (first)
Address: Beech Springs Church & Cooley Bridge Rds.
City: Ware Shoals State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: Greenwood
Name: Owens Well Site (Former Ellison Grocery)
Street Address: Beech Springs Church & Cooley Bridge
City: Ware Shoals, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Owens Well Site
**PUBLIC SYSTEM NUMBER:** DHE-# 16090

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 15 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (V-1)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 16090

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 15 ft. Date Started: 6-13-07 Date Completed: 6-13-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 15' ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: Owens Well Site (Former Ellison Grocery) (last) (first)
Address: Beech Springs Church & Cooley Bridge Rds.
City: Ware Shoals State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: Greenwood
Name: Owens Well Site (Former Ellison Grocery)
Street Address: Beech Springs Church & Cooley Bridge
City: Ware Shoals, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Owens Well Site **PUBLIC SYSTEM NUMBER:** DHE-# 16090

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 15 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (V-2)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 16090

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 15 ft. Date Started: 6-13-07 Date Completed: 6-13-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 15' ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward CERT. NO.: 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood (Well Driller) Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: Owens Well Site (Former Ellison Grocery) (last) (first)
Address: Beech Springs Church & Cooley Bridge Rds.
City: Ware Shoals State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: Greenwood
Name: Owens Well Site (Former Ellison Grocery)
Street Address: Beech Springs Church & Cooley Bridge
City: Ware Shoals, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Owens Well Site **PUBLIC SYSTEM NUMBER:** DHE-# 16090

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 15 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (V-3)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 16090

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 15 ft. Date Started: 6-13-07 Date Completed: 6-13-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. NOTE: MULTIPLE SCREENS
____ ft. and ____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 15' ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood (Well Driller) Date: 6-19-07

If D Level Driller, provide supervising driller's name:

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Owens Well Site (Former Ellison Grocery) (last) (first)
Address: Beech Springs Church & Cooley Bridge Rds.
City: Ware Shoals State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: Greenwood
Name: Owens Well Site (Former Ellison Grocery)
Street Address: Beech Springs Church & Cooley Bridge
City: Ware Shoals, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Owens Well Site **PUBLIC SYSTEM NUMBER:** DHE-# 16090

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 15 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (V-4)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 16090

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 15 ft. Date Started: 6-13-07 Date Completed: 6-13-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. **NOTE: MULTIPLE SCREENS**
____ ft. and ____ ft. **USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 15' ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: Owens Well Site (Former Ellison Grocery) (last) (first)
Address: Beech Springs Church & Cooley Bridge Rds.
City: Ware Shoals State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: Greenwood
Name: Owens Well Site (Former Ellison Grocery)
Street Address: Beech Springs Church & Cooley Bridge
City: Ware Shoals, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Owens Well Site **PUBLIC SYSTEM NUMBER:** DHE-# 16090

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 15 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (V-5)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 16090

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 15 ft. Date Started: 6-13-07 Date Completed: 6-13-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 15' ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Owens Well Site (Former Ellison Grocery) (last) (first)
Address: Beech Springs Church & Cooley Bridge Rds.
City: Ware Shoals State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: Greenwood
Name: Owens Well Site (Former Ellison Grocery)
Street Address: Beech Springs Church & Cooley Bridge
City: Ware Shoals, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Owens Well Site
**PUBLIC SYSTEM NUMBER:** DHE-# 16090

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 15 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (V-6)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 16090

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 15 ft. Date Started: 6-13-07 Date Completed: 6-13-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 15' ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M Woodward Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: Owens Well Site (Former Ellison Grocery) (last) (first)
Address: Beech Springs Church & Cooley Bridge Rds.
City: Ware Shoals State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: Greenwood
Name: Owens Well Site (Former Ellison Grocery)
Street Address: Beech Springs Church & Cooley Bridge
City: Ware Shoals, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Owens Well Site **PUBLIC SYSTEM NUMBER:** DHE-# 16090

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 35 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** (S-4) | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 16090

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-13-07
_____ ft. Date Completed: 6-13-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 35' ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: Owens Well Site (Former Ellison Grocery) (last) (first)
Address: Beech Springs Church & Cooley Bridge Rds.
City: Ware Shoals State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: Greenwood
Name: Owens Well Site (Former Ellison Grocery)
Street Address: Beech Springs Church & Cooley Bridge
City: Ware Shoals, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Owens Well Site **PUBLIC SYSTEM NUMBER:** DHE-# 16090

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 35 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
| | | |
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| | | |
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| | | |
| | | |
| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (S-5)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 16090

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-13-07
____ ft. Date Completed: 6-13-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 35' ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) Level: A ☐ B ☑ C ☐ D ☐ (circle one)
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: Owens Well Site (Former Ellison Grocery) (last) (first)
Address: Beech Springs Church & Cooley Bridge Rds.
City: Ware Shoals State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: Greenwood
Name: Owens Well Site (Former Ellison Grocery)
Street Address: Beech Springs Church & Cooley Bridge
City: Ware Shoals, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Owens Well Site **PUBLIC SYSTEM NUMBER:** DHE-# 16090

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 40 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| | | |
| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (S-6)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 16090

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-13-07
ft. Date Completed: 6-13-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.:
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
in. to ft. depth
in. to ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Diam.:
Slot/Gauge: Length:
Set Between: ft. and ft.
ft. and ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ft. to ft.
Effective size Uniformity Coefficient

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other
Depth: From 40' ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ft. direction
Type
Well Disinfected ☐ Yes ☐ No Type: Amount:

**18. PUMP:** Date installed: Not installed ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) Level: A ☐ B ☑ C ☐ D ☐ (circle one)
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: Owens Well Site (Former Ellison Grocery) (last) (first)
Address: Beech Springs Church & Cooley Bridge Rds.
City: Ware Shoals State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: Greenwood
Name: Owens Well Site (Former Ellison Grocery)
Street Address: Beech Springs Church & Cooley Bridge
City: Ware Shoals, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Owens Well Site **PUBLIC SYSTEM NUMBER:** DHE-# 16090

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 40 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
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| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (S-7)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 16090

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) ____ ft. Date Started: 6-13-07 Date Completed: 6-13-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 40' ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: Owens Well Site (Former Ellison Grocery) (last) (first)
Address: Beech Springs Church & Cooley Bridge Rds.
City: Ware Shoals State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: Greenwood
Name: Owens Well Site (Former Ellison Grocery)
Street Address: Beech Springs Church & Cooley Bridge
City: Ware Shoals, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Owens Well Site **PUBLIC SYSTEM NUMBER:** DHE-# 16090

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 40 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
| | | |
| | | |
| | | |
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| | | |
| | | |
| | | |
| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** (S-8)

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 16090

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-13-07
_____ ft. Date Completed: 6-13-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 40' ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) Level: A ☐ B ☑ C ☐ D ☐ (circle one)
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood (Well Driller) Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Owens Well Site (Former Ellison Grocery) (last) (first)
Address: Beech Springs Church & Cooley Bridge Rds.
City: Ware Shoals State: SC Zip:
Telephone: Work: Home:

**2. LOCATION OF WELL:** COUNTY: Greenwood
Name: Owens Well Site (Former Ellison Grocery)
Street Address: Beech Springs Church & Cooley Bridge
City: Ware Shoals, SC Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Owens Well Site **PUBLIC SYSTEM NUMBER:** DHE-# 16090

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 17 ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Well was abandonded from the | | |
| bottom of well to the surface | | |
| using a Bentonite/ Neat Cement | | |
| mixture. | | |
| | | |
| | | |
| ****Well was destroyed, so it was | | |
| abandonded from maybe 17 feet? | | |
| It was too hard to get accurate depth | | |
| because of material in well. | | |
| | | |
| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** (S-1/MW-3) | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** # 16090

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-13-07
____ ft. Date Completed: 6-13-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
**NOTE: MULTIPLE SCREENS USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 17' ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) Level: A B C D (circle one) ☐ ☑ ☐ ☐
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

# Attachment 8

# Crawford's Store

DHEC
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Crawford's Country Store (last) (first)
Address: 5870 Hwy 28 North
City: Abbeville State: SC Zip:
Telephone: Work: (864) 348-7442 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Hwy 28 North
City: Abbeville, SC 29620 Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Crawford's **PUBLIC SYSTEM NUMBER:** DHE-12335

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 30 ft/15 ft ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Grouted to Surface. | | |
| "SV" Wells have 2 wells in same | | |
| hole. There is a 2 inch well to a | | |
| depth of 15 feet used for vapor. | | |
| The 1 inch well was used for sparge | | |
| and the depth is 30 feet. | | |
| All the SV Wells are abandonded | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
SV-1= (2" to 15) (1" to 30')

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** #12335

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) ____ ft. Date Started: 6-8-07 Date Completed: 6-8-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 30 ft/15 ft ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) Level: A B C D (circle one) ☐ ☑ ☐ ☐
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Crawford's Country Store (last) (first)
Address: 5870 Hwy 28 North
City: Abbeville State: SC Zip:
Telephone: Work: (864) 348-7442 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Hwy 28 North
City: Abbeville, SC 29620 Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Crawford's **PUBLIC SYSTEM NUMBER:** DHE-12335

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 30 ft/15 ft ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Grouted to Surface. | | |
| "SV" Wells have 2 wells in same | | |
| hole. There is a 2 inch well to a | | |
| depth of 15 feet used for vapor. | | |
| The 1 inch well was used for sparge | | |
| and the depth is 30 feet. | | |
| All the SV Wells are abandonded | | |
| | | |
| | | |
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| | | |
| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
SV-2= (2" to 15) (1" to 30')

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** #12335

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) ____ ft. Date Started: 6-8-07 Date Completed: 6-8-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 30 ft/15 ft ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood (Well Driller) Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Crawford's Country Store (last) (first)
Address: 5870 Hwy 28 North
City: Abbeville State: SC Zip:
Telephone: Work: (864) 348-7442 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Hwy 28 North
City: Abbeville, SC 29620 Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Crawford's **PUBLIC SYSTEM NUMBER:** DHE-12335

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 30 ft/15 ft ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Grouted to Surface. | | |
| "SV" Wells have 2 wells in same | | |
| hole. There is a 2 inch well to a | | |
| depth of 15 feet used for vapor. | | |
| The 1 inch well was used for sparge | | |
| and the depth is 30 feet. | | |
| All the SV Wells are abandonded | | |
| | | |
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| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
SV-3= (2" to 15) (1" to 30')

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** #12335

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-8-07
_____ ft. Date Completed: 6-8-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 30 ft/15 ft ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward CERT. NO.: 1368-B
Address: (Print) Level: A B C D (circle one)
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Crawford's Country Store (last) (first)
Address: 5870 Hwy 28 North
City: Abbeville State: SC Zip:
Telephone: Work: (864) 348-7442 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Hwy 28 North
City: Abbeville, SC 29620 Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Crawford's **PUBLIC SYSTEM NUMBER:** DHE-12335

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 30 ft/15 ft ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Grouted to Surface. | | |
| "SV" Wells have 2 wells in same | | |
| hole. There is a 2 inch well to a | | |
| depth of 15 feet used for vapor. | | |
| The 1 inch well was used for sparge | | |
| and the depth is 30 feet. | | |
| All the SV Wells are abandonded | | |
| | | |
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| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
SV-4= (2" to 15) (1" to 30')

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** #12335

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) ____ ft. Date Started: 6-8-07 Date Completed: 6-8-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 30 ft/15 ft ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward CERT. NO.: 1368-B
Address: (Print) Level: A ☐ B ☑ C ☐ D ☐ (circle one)
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Crawford's Country Store (last) (first)
Address: 5870 Hwy 28 North
City: Abbeville State: SC Zip:
Telephone: Work: (864) 348-7442 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Hwy 28 North
City: Abbeville, SC 29620 Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Crawford's **PUBLIC SYSTEM NUMBER:** DHE-12335

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 30 ft/15 ft ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Grouted to Surface. | | |
| "SV" Wells have 2 wells in same | | |
| hole. There is a 2 inch well to a | | |
| depth of 15 feet used for vapor. | | |
| The 1 inch well was used for sparge | | |
| and the depth is 30 feet. | | |
| All the SV Wells are abandonded | | |
| | | |
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| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
SV-5= (2" to 15) (1" to 30')

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** #12335

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) ____ ft. Date Started: 6-8-07 Date Completed: 6-8-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 30 ft/15 ft ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ ☐ Not installed
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: Crawford's Country Store (last) (first)
Address: 5870 Hwy 28 North
City: Abbeville State: SC Zip:
Telephone: Work: (864) 348-7442 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Hwy 28 North
City: Abbeville, SC 29620 Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Crawford's **PUBLIC SYSTEM NUMBER:** DHE-12335

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 30 ft/15 ft ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Grouted to Surface. | | |
| "SV" Wells have 2 wells in same | | |
| hole. There is a 2 inch well to a | | |
| depth of 15 feet used for vapor. | | |
| The 1 inch well was used for sparge | | |
| and the depth is 30 feet. | | |
| All the SV Wells are abandonded | | |
| | | |
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| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
SV-6= (2" to 15) (1" to 30')

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** #12335

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) ____ ft. Date Started: 6-8-07 Date Completed: 6-8-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 30 ft/15 ft ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward CERT. NO.: 1368-B
Address: (Print) 1949 Lk. Cunningham, Greer, SC 29651
Level: A B C D (circle one) ☐ ☑ ☐ ☐
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: Crawford's Country Store (last) (first)
Address: 5870 Hwy 28 North
City: Abbeville State: SC Zip:
Telephone: Work: (864) 348-7442 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Hwy 28 North
City: Abbeville, SC 29620 Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Crawford's **PUBLIC SYSTEM NUMBER:** DHE-12335

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 30 ft/15 ft ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Grouted to Surface. | | |
| "SV" Wells have 2 wells in same | | |
| hole. There is a 2 inch well to a | | |
| depth of 15 feet used for vapor. | | |
| The 1 inch well was used for sparge | | |
| and the depth is 30 feet. | | |
| All the SV Wells are abandonded | | |
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| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
SV-7= (2" to 15) (1" to 30')

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** #12335

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-8-07
_____ ft. Date Completed: 6-8-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 30 ft/15 ft ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward CERT. NO.: 1368-B
Address: (Print) Level: A ☐ B ☑ C ☐ D ☐ (circle one)
1949 Lk. Cunningham,Greer, SC 29651
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Date: 6-19-07
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: Crawford's Country Store (last) (first)
Address: 5870 Hwy 28 North
City: Abbeville State: SC Zip:
Telephone: Work: (864) 348-7442 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Hwy 28 North
City: Abbeville, SC 29620 Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Crawford's **PUBLIC SYSTEM NUMBER:** DHE-12335

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 30 ft/15 ft ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Grouted to Surface. | | |
| "SV" Wells have 2 wells in same | | |
| hole. There is a 2 inch well to a | | |
| depth of 15 feet used for vapor. | | |
| The 1 inch well was used for sparge | | |
| and the depth is 30 feet. | | |
| All the SV Wells are abandonded | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
SV-8= (2" to 15) (1" to 30')

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** #12335

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) ____ ft. Date Started: 6-8-07 Date Completed: 6-8-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 30 ft/15 ft ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A B C D (circle one) ☐ ☑ ☐ ☐
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Wood (Well Driller) Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: Crawford's Country Store (last) (first)
Address: 5870 Hwy 28 North
City: Abbeville State: SC Zip:
Telephone: Work: (864) 348-7442 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Hwy 28 North
City: Abbeville, SC 29620 Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Crawford's **PUBLIC SYSTEM NUMBER:** DHE-12335

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 30 ft/15 ft ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Grouted to Surface. | | |
| "SV" Wells have 2 wells in same | | |
| hole. There is a 2 inch well to a | | |
| depth of 15 feet used for vapor. | | |
| The 1 inch well was used for sparge | | |
| and the depth is 30 feet. | | |
| All the SV Wells are abandonded | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
SV-9= (2" to 15) (1" to 30')

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** #12335

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) ____ ft. Date Started: 6-8-07 Date Completed: 6-8-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 30 ft/15 ft ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward (Well Driller) Date: 6-19-07

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: Crawford's Country Store (last) (first)
Address: 5870 Hwy 28 North
City: Abbeville State: SC Zip:
Telephone: Work: (864) 348-7442 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Hwy 28 North
City: Abbeville, SC 29620 Zip:
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** Crawford's **PUBLIC SYSTEM NUMBER:** DHE-12335

**4. ABANDONMENT:** ☑ Yes ☐ No
Grouted Depth: from 30 ft/15 ft ft. to Surface ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| All Wells Grouted to Surface. | | |
| "SV" Wells have 2 wells in same | | |
| hole. There is a 2 inch well to a | | |
| depth of 15 feet used for vapor. | | |
| The 1 inch well was used for sparge | | |
| and the depth is 30 feet. | | |
| All the SV Wells are abandonded | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
SV-10= (2" to 15) (1" to 30')

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. PERMIT NUMBER:** #12335

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☑ Test Well ☐ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 6-8-07
_____ ft. Date Completed: 6-8-07

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface Flush Mount ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 30 ft/15 ft ft. to Surface ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Mike Woodward **CERT. NO.:** 1368-B
Address: (Print) 1949 Lk. Cunningham,Greer, SC 29651
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 803-917-0303 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: M. Woodward Well Driller Date: 6-19-07

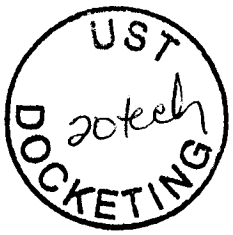
If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) **COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)**

# Midlands Environmental Consultants, Inc.

October 16, 2013

Mr. Shane Shull, Hydrogeologist
Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201




Subject: QAPP Contractor Addendum – Revision 0
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID Number 12335
MECI Project Number 13-4650
Certified Site Rehabilitation Contractor UCC-0009

Dear Mr. Rivers,

On behalf of Mr. Frank Crawford, Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached QAPP Contractor Addendum for the referenced site.

On October 15, 2013, MECI personnel performed a site visit to the subject site to evaluate site conditions, attempt to locate monitoring wells and identify potential problems for future assessment activities.

If you have any question or comments please feel free to contact us at 803-808-2043.

Sincerely,
**Midlands Environmental Consultants, Inc.**

Kyle V. Pudney
Staff Biologist

Jeff L. Coleman
Senior Scientist

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

## Section A: Project Management

### A1 Title and Approval Page

Quality Assurance Project Plan
Addendum to the SC DHEC UST Programmatic QAPP
For
Crawford's Country Store, SCDHEC Site ID# 12982

5870 Highway 28 North, Abbeville, South Carolina

*Prepared by:*
*Kyle V. Pudney*
*Staff Biologist*
Midlands Environmental Consultants, Inc.
(Certified Site Rehabilitation Contractor UCC-0009)
235-B Dooley Road
Lexington, SC 29073
(803)808-2043

Date: October 16, 2013

Approvals

| | | |
|---|---|---|
| Shane S. Shull<br>SC DHEC Project Manager | _____<br>Signature | Date_____ |
| Jeff L. Coleman<br>Contractor QA Manager | _____<br>Signature | Date 10/16/13 |
| Bryan T. Shane, P.G.<br>Site Rehabilitation Contractor | _____<br>Signature | Date 10-16-13 |
| Daniel J. Wright<br>Laboratory Director | _____<br>Signature | Date 10/16/2013 |

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## A3 Distribution List

| Name | Title | Organization/Address | Telephone Number | Fax Number | Email Address |
|---|---|---|---|---|---|
| Shane S. Shull | SC DHEC Technical Project Manager | SCDHEC, UST Management Division, 2600 Bull St., Columbia, SC, 29201 | 803-898-0607 | 803-898-0673 | shullss@dhec.sc.gov |
| Bryan T. Shane, P.G. | Site Rehabilitation Contractor | Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073 | 803-808-2043 | 803-808-2048 | bts@meci.net |
| Jeff L. Coleman | Quality Assurance Officer | Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073 | 803-808-2043 | 803-808-2048 | jlc@meci.net |
| Kyle V. Pudney | Field Manager | Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073 | 803-808-2043 | 803-808-2048 | kvp@meci.net |
| Jeff L. Coleman or Ryan Ariail | Project Verifier | Midlands Environmental Consultants, Inc. 235-B Dooley Road Lexington, SC 29073 | 803-808-2043 | 803-808-2048 | jlc@meci.net |
| Daniel J. Wright | Laboratory Director | Shealy Environmental Services,Inc. 106 Vantage Point Dr. West Columbia, SC 29172 | 803-791-9700 | 803-791-9111 | dwright@shealylab.com |
| Tommy Bolyard | Well Services/Driller | Environmental Probing and Drilling Services 17538 Greenhill Road Charlotte, NC 28278 | 704-607-7529 | 803-548-2233 | EDPS@comporium.net |

**Table 1A Addendum Distribution List**

## A4 Problem Definition/Background

***Discuss the background (as much as is known) of the site and appropriate historical information, and why this site is being assessed.***

The subject site (Crawford's Country Store) is located at 5870 S.C. Highway 28 North in Abbeville, Abbeville County, South Carolina (see Figure 1). The subject site is currently an active gasoline service station and convenience store. Previously, the subject site maintained one 2,000 gallon gasoline underground storage tank (UST), one 1,000 gallon kerosene UST, one 560 gallon diesel UST, one 8,000 gallon gasoline UST, and one 10,000 gallon gasoline UST. The former UST's were removed from the ground in October of 1991. The South Carolina Department of Health and Environmental Control (SCDHEC) reported a release of petroleum product in December of 1991 and confirmed the release in March of 1993. Currently, the subject site maintains one 3,000 gallon diesel UST, one 6,000 gallon off-road diesel UST, one 6,000 gallon premium gasoline UST, one regular unleaded gasoline UST, and one 10,000 gallon regular unleaded gasoline UST. This assessment included direct push field screening, installation of monitoring wells based on the results of the field screening, and a comprehensive sampling of the site.

***Please answer the following: Does this project fall under UST or Brownfields area?***

Underground Storage Tank Division

## A5 Project/Task Description

1. ***Summarize what is known about the work to be done. This can be a short sentence indicating what the Scope of this project is (see Master QAPP Section A6).***

The scope of this assessment is to conduct field screening on the properties south and southwest of the subject site (Crawford's Country Store) and use the field screening results to determine where additional monitoring wells are needed in order to properly define the plume. Following field screening activities, MECI will propose locations of additional permanent monitoring wells for approval from the SCDHEC project Manager. In addition, during the initial site visit, it was documented that monitoring well MW-12 and MW-13R have been either destroyed or covered. MECI will propose the replacement of these monitoring wells as well. Following monitoring well installation, all newly installed wells, entire monitoring well network, and area water supply wells will be sampled for BTEXMN, 1,2DCA, 8-Oxygenates, and EDB.

Following the well installation a subsequent survey will be conducted by MECI Personnel to locate the vertical and horizontal positions of the newly installed wells and existing wells.

2. ***The work will begin within*** fourteen (14) days of receipt of approved QAPP contractors addendum ***after cost approval and the scope of work should be complete by*** sixty (60) days of receipt of approved QAPP contractors addendum.

3. ***Are there are time or resource constraints? Include those factors that may interfere with the tentative schedule.***

Factors that may prevent schedule work will be, but not limited to, inclement weather, equipment malfunction, and machine failure.

## A6 Data Quality Objectives (DQOs) and Data Quality Indicators (DQIs)

The subject site (Crawford's Country Store) is located at 5870 S.C. Highway 28 North in Abbeville, Abbeville County, South Carolina (see Figure 1).

The proposed work will be conducted on the properties located at 3 Highway 184 North (Abbeville County Tax Map Number 046-00-00-048), 5773 Highway 28 North (Abbeville County Tax Map Number 046-00-00-050) and 5804 Highway 28 North (Abbeville County Tax Map Number).

## A7 Certification

**The Following Laboratory(ies) will be used for this Project:**

## Commercial Lab(s)

**Full Name of the Laboratory___Shealy Environmental Services, Inc.____**
**Name of Lab Director_____Daniel J. Wright_____**
**SC DHEC Certification Number_____32010_____**
**Parameters this Lab will analyze for this project:**

Groundwater collected from the monitoring wells will be analyzed for BTEX, Naphthalene, MTBE, 1,2 DCA, 8-Oxygenates (EPA Method 8260B), and EDB (EPA Method 8011).

## A8 Documents and Records

***Personnel will receive the most current version of the QAPP Addendum via: (Check all that apply)***

____US Mail ____Courier _X_ Hand delivered

Other (please specify):_____E-mailed electronic copies___

| Record | Produced By | Hardcopy/ Electronic | Storage Location For how long? | Archival |
|---|---|---|---|---|
| Instrument Raw Data | Target, Thermospec, or Iteva software | Hardcopy and Electronic | Hardcopy: Offsite storage for 7 yrs Electronic: Two external storage device backups – one offsite, one onsite storage for 10 yrs | Yes |
| Final Reports | LIMS | Electronic | Electronic: Two external storage device backups – one offsite, one onsite storage for 10 years | Yes |
| Field Work | Field Staff | Hardcopy | MECI office: 235B Dooley Road / Min. 5 years | Yes |
| Chain of Custody | Field Staff | Hardcopy | MECI office: 235B Dooley Road / Min. 5 years | Yes |
| QAPP Addendum | Jeff L. Coleman | Hardcopy & Electronic | MECI office: 235B Dooley Road / Min. 5 years | Yes |
| Internal QC record | Jeff L. Coleman | Hardcopy | MECI office: 235B Dooley Road / Min. 5 years | Yes |
| Sampling Report | Jeff L. Coleman | Hardcopy & Electronic | MECI office: 235B Dooley Road / Min. 5 years | Yes |
| 1903 Water Well Record Form | EDPS | Hardcopy | MECI office: 235B Dooley Road / Min. 5 years | Yes |
| | | | | |

**Table 2A Record Identification, Storage, and Disposal**

# Section B Measurement/Data Acquisition

## B1 Sampling Process/Experimental Design

| Item | Start Date | End Date | Comments |
|---|---|---|---|
| Site Reconnaissance | 10/15/13 | 10/15/13 | Already Completed |
| QAPP preparation | 10/16/13 | 10/16/13 | In progress |
| QAPP approval | 10/17/13 | 11/07/13 | Assuming three week turnaround |
| PUPs Request | 11/08/13 | 11/11/13 | Give 72 hours until PUPs ticket active |
| Monitoring Well Installation | 11/12/13 | 11/26/13 | 2 Weeks to mobilize Drill Rig. |
| Monitoring well Sampling | 11/27/13 | 12/10/13 | 2 Weeks to mobilize sampling crew. Standard 5 Day Turn Around Time on analytical (2 Weeks) |
| Report Preparation | 12/11/13 | 1/1/14 | Three weeks to prepare/submit report |
| | | | |
| | | | |
| | | | |

**Table 3A Sampling Activities**

## B2 Sampling Methods

Please note: The contractor must follow sampling protocols as given in the UST QAPP.

***Estimate* the number of samples of each matrix that are expected to be collected:**

Soil _____

Ground Water from Monitoring Wells _____32____

From Drinking/Irrigation water wells _____ 2____

Field Duplicate Collection _____2____

Field Blank Collection _____1____

Trip Blank _____1____

From surface water features _____

Total number of samples _____38____

Notes:

-During the October 15, 2013 site visit, twenty-two (22) monitoring wells and two (2) water supply wells were located. Monitoring wells MW-12 and MW-13R were not located during QAPP prep activities and are believed to have been destroyed or covered. In addition, it was noted that the pads and vaults on monitoring wells MW-8 and MW-15 are damaged and in need of replacing.

-It is anticipated that eight additional monitoring wells will be installed following field screening activities; however the amount of additional monitoring wells will be determined following the completion of field screening activities. In addition, MECI proposes replacing monitoring wells MW-12 and MW-13R.

-It is anticipated that two (2) field duplicate will be sampled. Two duplicate will be collected during the monitoring well sampling event.

-It is anticipated that two (2) field blank will be collected. Two field blank will be collected during the monitoring well sampling event.

- It is anticipated that two (2) trip blank will be analyzed.

Environmental Drilling and Probing Services (EDPS) will mobilize a drilling rig to the subject site. All drilling activities will be performed under the supervision of a South Carolina Certified Well Driller and MECI field personnel (Tommy Bolyard, #B 01846).

Wells will be installed according to MECI Standard Operating Procedures (4.1.1, 4.1.5, 4.2.1, 4.2.2, & 4.2.4) and in accordance with South Carolina Well Standards, R.61-71.

Monitoring wells will be purged/sampled in accordance with MECI SOP # 4.3.1 through 4.3.5.

***For the sample matrices indicated above, please describe how samples will be collected and the equipment needed.***

## Monitoring Well Sampling

### Water Level Measurement:

-MECI personnel utilize Electronic Water Level Indicators for Water Level Measurements. Each sampling crew carries an electronic water level indicator for use on downgradient monitoring wells and an Oil/Water Interface probe for use on source area wells or wells that have historically contained measurable free phase petroleum product.

-Prior to usage, the indicator is decontaminated with isopropanol applied by a Teflon squeeze bottle and rinsed with analyte free water. This rinse water is collected and run through a portable GAC (granulated activated carbon) unit.

-The indicator is slowly lowered into the water table, and the water level is recorded to the nearest 0.01 feet.

-When free phase petroleum product is encountered, the Oil-Water Interface probe is slowly lowered into the monitoring well until product is encountered; this measurement is recorded to the nearest 0.01 feet. The meter is then lowered through the product until water is encountered. The probe is then pulled back up through the well until product is encountered again; this measurement is recorded to the nearest 0.01 feet.

-If the total depth of a monitoring well is required, after a groundwater level is recorded, the indicator probe is lowered until the bottom of the monitoring well is encountered. This depth is recorded to the nearest 0.01

feet. Following a total depth measurement, the entire length of probe tape is decontaminated with isopropanol and rinsed with analyte free water.

-All measurements will be taken from the top of the well casing.

**Monitoring Well Purging:**

-Where necessary, monitoring wells will be purged prior to sampling if: the well screen does not bracket the watertable, if a screened interval is not known, purging is specifically asked for by the SCDHEC project manager, or a monitoring well has not previously been sampled.

-Purging will be completed utilizing a prepackaged, clear, disposable polyethylene bailer and nylon rope. Following purging/sampling of a well, the bailer and rope will be properly disposed. -A new set of Nitrile gloves will be worn at each monitoring well, and at any time samples are handled.

-Prior to purging, the water level of the well will be determined using an electronic water level indicator. The water level, total well depth and well diameter will be used to determine the amount of water standing in the water column. The following table presents gallons of water per foot of water column in selected diameters of wells:

| ***Well Diameter (inches)*** | ***Gallons of Water/Foot*** | ***Well Diameter (inches)*** | ***Gallons of Water/Foot*** |
|---|---|---|---|
| 1 | 0.047 | 8 | 2.611 |
| 2 | 0.163 | 10 | 4.08 |
| 4 | 0.653 | 12 | 5.875 |
| 6 | 1.469 | | |

-The length of the water column multiplied by the gallons of water per foot will provide the number of gallons in one well volume of water.

-Purging will continue until three well volumes of water are evacuated, or where field measurements of pH, Specific Conductivity (uS), Temperature (°C), and Turbidity (NTU) have stabilized to within 10% of previous values or until all accessible well water is evacuated (purged dry). Field measurements of these parameters will be taken and recorded in field notes, prior to purging and after each well volume of water has been purged.

-When purging a well with a diameter larger than 2", a submersible Redi-Flo2 pump can be used.

-Prior to usage, the pump assembly will be cleaned using a laboratory grade detergent and rinsed with analyte free water.

-The pump is lowered into the water column utilizing an attached nylon rope. DO NOT LOWER THE PUMP USING THE ELECTRICAL CORD OR HOSE.

-Once the pump has been lowered to the desired depth, the nylon rope is securely attached to an anchor at the ground surface (i.e. metal stake, truck bumper, etc). The power cord is attached to the speed controller which is attached to the generator.

-Slowly increase the speed of the controller until a desired flow rate is achieved. The pump should not be allowed to run dry.

-Purge water will be treated on-site utilizing a GAC unit.

**Monitoring Well No-Purge Sampling:**

-No-purge sampling will be conducted in previously sampled monitoring wells if: the water level is within the screened interval of the well or specifically asked for by the SCDHEC project manager.

-Immediately prior to sampling, laboratory provided labels will be placed on all sample vials and containers. These labels will include the site name, sample ID, analysis to be completed, date and time.
-Sampling will be conducted utilizing prepackaged, clear, disposable polyethylene bailers and nylon rope. Following sampling of a well, the bailer and rope will be properly disposed. A new set of Nitrile gloves will be worn at each monitoring well, and at any time samples are handled.

-The bailer is lowered into the well until it encounters the watertable, the bailer is then allowed to fill with water and is extracted from the well. Samples are placed in laboratory provided and approved sampling containers. Following sample collection, the samples are immediately placed in laboratory provided coolers, pre-filled with wet ice obtained from the MECI office.

-When requested by the SCDHEC project manager, passive diffusion bags (PDB) can be used to obtain no purge samples from discreet intervals within a water column or from wells were it is not possible to treat purge water on-site (i.e. DNAPL contamination).

-Prior to installation of a PDB, all equipment used should be washed with isopropanol and rinsed with analyte free water (weights, PDB clamps, etc.).

-Wearing Nitrile gloves, the PDB is filled with analyte free water, sealed with a PDB clamp according to the manufacturer and attached to a nylon rope. The PDB is then lowered into the well to a specified depth.

-After a minimum of two weeks in the well, the PDB is removed from the well and a sample taken using a disposable, prepackaged, sealed sampling straw to puncture the bag and fill sample vials.

**Quality Assurance:**

-Once the samples are taken, they are to be immediately placed in laboratory provided coolers, pre-filled with wet ice obtained from the MECI office.

-One field duplicate will be taken for every twenty (20) monitoring wells sampled at a site. This blank is a duplicate sample taken from a monitoring well near the source area, and is sampled in accordance with MECI Standard Operating Procedures.

-One field blank will be prepared for each day a site is sampled. A field blank is prepared using lab provided DI water placed into laboratory provided sample containers.

-One trip blank per cooler used in sampling will be used at each site. The trip blank is prepared by the laboratory.

-Once a sample has been taken, a sample time will be recorded in the field notes, along with any information about monitoring well condition that should be brought to the attention of the project manager.

**If decontamination procedures differ from Appendix H, please provide details.**

***Identify any equipment and support facilities needed. This may include such things as Fed-ex to ship the samples, a Geoprobe, field analysis done by another contractor (who must be certified), and electricity to run sampling equipment.***

Environmental Drilling and Probing Services (EDPS) will mobilize a drilling rig to the subject site. All drilling activities will be performed under the supervision of a South Carolina Certified Well Driller and MECI field personnel (Tommy Bolyard, #B 01846).

Wells will be installed according to MECI Standard Operating Procedures (4.2., 4.2.2, 4.2.3 & 4.2.4) and in accordance with South Carolina Well Standards, R.61-71.

Drill cuttings will be disposed of by MECI personnel at Waste Management Richland County Landfill in Elgin, SC.

***Address the actions to be taken when problems occur in the field, and the person responsible for taking corrective action and how the corrective action will be documented.***

| Failure | Response | Documentation | Individual Responsible |
|---|---|---|---|
| Unable to gain access to drilling location | Attempt to create path to well location through vegetation, Utilize plywood boards to cross soft ground, contact SCDHEC project manager to discuss a potential change to the well location. | Record on field sheets, notify SCDHEC and Office. | Field Staff, Field Manager |
| Hitting a Utility Line while Drilling | Contact PUPS (Palmetto Utilities Protection Service), contact appropriate utility (if | Record in field sheets, on PUPS ticket in office. Contact SCDHEC project manager to | Field Staff, Field Manager |

| | | | |
|---|---|---|---|
| | gas line is hit, notify fire department) | inform them of problem. | |
| Drilling rig breaks down | Attempt to correct problem. If the problem cannot be determined, or cannot be fixed, discontinue drilling for the day. Drilling can continue once drill rig has been fixed, or new drill rig is mobilized to the site | Record on field sheet, notify office staff. | Field Staff, Drill rig operator |
| Property Owner will not allow access onto property for drilling activities | Stop drilling. Attempt to discuss with property owner the need for the work. Inform SCDHEC project manager of the access issue. If no resolution can be made, discontinue drilling on the disputed property until access can be obtained or new well location is determined. | Document on field sheets (or QAPP, if access denied during QAPP site visit). Inform SCDHEC project manager immediately if any disputes arise. | Field Staff, Field Manager |
| | | | |

**Table 6A Field Corrective Action**

## B3 Sample Handling and Custody

1. ***How will the samples get from the Site to the Lab to ensure holding requirements are met?***

Following sample collection, the samples are immediately place in a laboratory provided cooler, pre-filled with wet ice obtained from the MECI office. Samples are transported to the MECI office once a sampling event is complete. A Chain of Custody (CoC) is filled out following the sampling event by the field staff. See attached CoC. If a lab provided courier is scheduled to visit the MECI offices the day following a sampling event, sampling coolers are repacked with wet ice, and left at the office for pick-up the following morning. If no courier is schedule to visit the MECI office the day following a sampling event, all sampling coolers are repacked with ice and are dropped off at a lab approved shipping company for overnight delivery to the lab.

2. ***If sample preservation procedures differ from the UST Programmatic QAPP, please provide details.***

3. ***If chain of custody procedures differ from the UST Programmatic QAPP, please provide details.***

## B4 Analytical Methods

1. ***Identify the SOPs which will be used to analyze the samples, the method which the SOP references and the equipment or instrumentation that is needed:***

| Parameter | SOP ID* | Method | Equipment | Comments |
|---|---|---|---|---|

| | | Referenced | | |
|---|---|---|---|---|
| BTEX+Naph+MTBE+Oxygentaes | S-VO-002 | 8260B | GC/MS | |
| PAH's | S-SV-021 | 8270D | GC/MS | |
| EDB | S-SV-012 | 8011 | GC | |
| Lead,T. | S-IM-022 | 6010C | ICP | |
| Ferrous Iron | S-IN-009 | SM 3500-FED | Spectrophotometer | |
| Nitrate | S-IN-042 | 353.2 | Auto-analyzer/Lachate | |
| Sulfate | S-IN-010 | 300.0 | Ion Chromatograph | |
| Methane | S-VO-004 | RSK-175 | GC | |
| TOC | S-IN-030 | Walkley-Black | N/A | |
| DRO - TPH | S-SV-001 | 8015C | GC | |
| Mercury | S-IM-006 | 7470A/7471B | Hydra AA Analyzer | |
| RCRA Metals | S-IM-014 | 6020A | ICP-MS | |
| pH | Standard | MECI SOP 4.3.6 | YSI 63 | Place probe in sample and allow to equilibrate before recording reading |
| Conductivity | Standard | MECI SOP 4.3.6 | YSI 63 | |
| Dissolved Oxygen | Standard | MECI SOP 4.3.6 | YSI 550A | |
| Temperature | Standard | MECI SOP 4.3.6 | YSI 550A | |
| PID reading | MECI SOP 4.2.2 | | | Use MiniRae PID to obtain reading. Place probe into soil sample bag and record the highest reading. |

**Table 5A Analytical SOPs and Referenced Methods**

- **This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.**

2. Provide SOPs for the Kerr Method or the Ferrous Iron Method if these are parameters for this study. This can be attached or written here. If attached please note that it is an attachment and where it is located (if applicable).

## B5 Quality Control Requirements:

All QC will follow the requirements laid out in Section B5 of the UST Programmatic QAPP.

## B6 Field Instrument and Equipment Testing, Inspection and Maintenance

1. Identify all field and laboratory equipment needing periodic maintenance, the schedule for this, and the person responsible. Note the availability and location of spare parts.

| Instrument | Serial Number | Type of Maintenance | Frequency | Parts needed/Location | Person responsible |
|---|---|---|---|---|---|
| YSI 63 | 09C 101302, 10K 101895, 07M 100905 | Replace probe tip | Yearly | Order from YSI | J. Coleman |
| YSI 63 | 09C 101302, 10K 101895, | Replace batteries | As Needed | In stock at office | Field Staff |

| | | | | | |
|---|---|---|---|---|---|
| | 07M 100905 | | | | |
| YSI 63 | 09C 101302, 10K 101895, 07M 100905 | General inspection for wear and tear on equipment | Daily | Major fixes will be done out of office | Field Staff |
| YSI 63 | 09C 101302, 10K 101895, 07M 100905 | Check buffer solutions for expiration | Weekly | In stock at office | J. Coleman |
| YSI 550A | 04L 2026AK, 08B 101407, 04A 0912AI | Replace membrane | 4 to 8 weeks | In stock at office | Field Staff |
| YSI 550A | 04L 2026AK, 08B 101407, 04A 0912AI | Replace batteries | As Needed | In stock at office | Field Staff |
| YSI 550A | 04L 2026AK, 08B 101407, 04A 0912AI | General inspection for wear and tear on equipment | Daily | Major fixes will be done out of office | Field Staff |
| Electronic Water Level Indicator | WLI-1, WLI-2, WLI-3 | Inspection | Weekly | N/A | Field Staff |
| Oil/Water Interface probe | PLI-1, PLI-2, PLI-3, PLI-4 | Inspection | Weely | N/A | Field Staff |
| Micro TPW/TPI Turbidimeter | 201301174 201301183 | General inspection for wear and tear on equiptment | Daily | N/A | Field Staff |
| MiniRae 3000 | 592-902491 | Cleaning | Weekly | N/A | Field Staff |
| MiniRae 3000 | 592-902491 | Parts Inspection | As Needed | In stock at office | Field Staff |

**Table 6A Instrument and Equipment Maintenance**

## B7 Instrument Calibration and Frequency

1. Identify equipment, tools, and instruments for field or lab work that should be calibrated and the frequency.
2. Describe how the calibrations should be performed and documented, indicating test criteria and standards or certified equipment.
3. Identify how deficiencies should be resolved and documented. Identify the person responsible for corrective action.

| Instrument | Calibration Procedure | Frequency of Calibration | Acceptance Criteria | Corrective Action (CA) | Person Responsible for CA | SOP Reference* |
|---|---|---|---|---|---|---|
| Volatiles Mass Spec | Minimum of 5 calibration standards for all compounds | When indicated by continuous calibration verification standard | Method Criteria | Detailed in SOP | MSV Analyst | S-VO-002 |
| Semi-volatile Mass Spec | Minimum of 5 calibration standards for all compounds | When indicated by calibration verification standard | Method Criteria | Detailed in SOP | MSSV Analyst | S-SV-021 |
| GC ECD | Minimum of 5 calibration | When indicated by calibration | Method Criteria | Detailed in SOP | GC Analyst | S-SV-012 |

| Instrument | Calibration Procedure | Frequency of Calibration | Acceptance Criteria | Corrective Action (CA) | Person Responsible for CA | SOP Reference* |
|---|---|---|---|---|---|---|
| | standards for all compounds | verification standard | | | | |
| Dionex IC | Minimum of 5 calibration standards for all compounds | When indicated by calibration verification standard | Method Criteria | Detailed in SOP | IC Analyst | S-IN-010 |
| ICP | Minimum of 3 calibration standards for all compounds | When indicated by calibration verification standard | Method Criteria | Detailed in SOP | ICP Analyst | S-IM-022 |
| Cetac Mercury Analyzer | Minimum of 5 calibration standards for all compounds | When indicated by calibration verification standard | Method Criteria | Detailed in SOP | Mercury Analyst | S-IM-006 |
| Lacaht QuickChem 8000 | Minimum of 5 calibration standards | Daily or when indicated by calibration verification standard | Method Criteria | Detailed in SOP | Nitrate Analyst | S-IN-042 |
| YSI 63 | pH Calibration | Daily | +/- 0.2 pH units | clean/replace probe tip, recalibrate | Field Staff | 4.3.6 |
| YSI 63 | Conductivity Calibration | As directed by manufacturer | +/- 10 uS | clean/replace probe tip, recalibrate | Field Staff | 4.3.6 |
| YSI 550A | DO calibration | Daily | +/- 0.25 mg/l | clean/replace probe tip, recalibrate | Field Staff | 4.3.6 |
| YSI 550A | Temperature Calibration | Daily | +/- 1 °C | clean/replace probe tip, recalibrate | Field Staff | 4.3.6 |
| MiniRae 3000 | PID Calibration | Weekly | +/- 5 ppm | clean, recalibrate | Field Staff | *** |
| Electronic Water Level Indicator | Checked vs. Standard | Monthly | +/- 0.01 foot per 10 foot length | Replace probe tape | Field Staff | *** |
| Oil/Water Interface probe | Checked vs. Standard | Monthly | +/- 0.01 foot per 10 foot length | Replace probe tape | Field Staff | *** |

**Table 7A Instrument Calibration Criteria and Corrective Action**

*** This can be a full name of a SOP, an abbreviation, or a number. In the latter two cases, the abbreviation or number must be associated with the full name of the SOP. See also Table 8A SOP Abbreviation Key.**

## B8 Inspection/Acceptance Requirements for Supplies and Consumables

1. If procedures for storage, handling or transport of supplies/consumables differ from the UST Programmatic QAPP, please provide details.

## B9 Data Acquisition Requirements (Non-Direct Measurements)

1. Identify data sources, for example, computer databases or literature files, or models that should be accessed or used.
2. Describe the intended use of this information and the rationale for their selection, i.e., its relevance to project.
3. Indicate the acceptance criteria for these data sources and/or models.

| Data Source | Used for | Justification for use in this project | Comments |
|---|---|---|---|
| Small scope assessment, sampling and monitoring well installation reports. | Historic groundwater and CoC concentration data. Lithology and well construction data from previous MWI's | Establish the type of drilling rig required, time for sampling and any other potential problems that may be encountered. | 1903 forms from previous monitoring well installations will be used to estimate depth of the newly installed monitoring wells installed in conjunction with the Tier II Assessment. |
| | | | |
| | | | |

**Table 8A Non-Direct Measurements**

4. Identify key resources/support facilities needed.

## B10 Data Management

1. Describe the data management scheme from field to final use and storage.

Following sample collection and chain of custody production, samples are shipped to the lab. Field work from the field staff is reviewed by the MECI project manager, and converted into digital form. All data entry is subsequently checked to validate the data entry. The original copies of the field work are stored in MECI files for a minimum of 5 years. Digital copies of the work are stored on the MECI server, which is backed up weekly, and stored for a minimum of 5 years. The digital copy of the field work is presented to SCDHEC with the final report.

2. How does the lab and field staff ensure that no unauthorized changes are made to the chain of custody, sampling notebooks, laboratory notebooks and computer records?

The laboratory maintains comprehensive Quality Control and Training Programs. All sample receipt data, sample log-in, and analytical data is peer reviewed, including review for inappropriate changes. Data management, review procedures and the Quality Systems Program are documented in the laboratory's Quality Manual and Standard Operating Procedures. The Quality Assurance Department oversees adherence to and review of these programs.

All MECI field work is produced using ink-pens. Any attempt to alter field data, after sampling is complete, can be readily identified. MECI keeps a carbon copy of the chain of custody after it is shipped to the lab.

This copy is kept with the field work. If any change to the CoC are suspected, this original carbon copy can be use to identify potential changes.

3. How does the lab ensure that there are no errors in samples records including times when sample information is compiled, data calculated and/or transmitted?

Sample data acquisition software is reviewed periodically. The LIMS database is backed up daily and is able to be restored in the event of a system failure. These procedures are documented in laboratory SOP S-AD-003, LIMS. The IT Manager is responsible for these systems and procedures."

4. How will the data be archived once the report is produced? How can it be retrieved? (This applies to both electronic and hard copies).

Laboratory Hardcopy data stored off site is logged, maintained and archived by the Quality Assurance Department. Laboratory Electronic Data Reports are maintained through IT back up under the responsibility of the IT Systems Manager.

MECI keeps all field work and paper copies of reports in its in-house filing system. All paper copies are stored for a minimum of 5 years. Any file can be retrieved easily by going to the correct filing cabinet/box.

All electronic copies of reports generated are kept on the MECI server. This server is backed-up on a weekly basis. Any file stored on the MECI server can be retrieved instantly, by accessing the server. All electronic files are stored for a minimum of 5 years on the server.

# Section C Assessment and Oversight

## C1 Assessment and Response Actions

1. *The Contractor is supposed to observe field personnel daily during sampling activities to ensure samples are collected and handled properly and report problems to DHEC within 24 hours. . Please state who is responsible for doing this and what observations will be made. Will this person have the authority to stop work if severe problems are seen?*

Field audits can be conducted on any field personnel at any time. MECI field audits can be conducted by the Field Manger, who will be responsible for ensuring that field personnel adhere to the QAPP. If during a random field audit, severe problems are found, work will be stopped by the field manager and the QA officer contacted to determine corrective action. All problems must be corrected prior to any additional work being performed. Should it be requested, an On-site Field Audit can be scheduled with the SCDHEC project manager.

2. *The SCDHEC UST QAPP states that the Lab will receive an Offsite Technical System Audit. For this project, what assessments will be done on the Commercial Lab(s) that are being used—other than their certification audit? When or how often are these done? Who will the results be given to and who has the ability to stop work if problems are severe?*

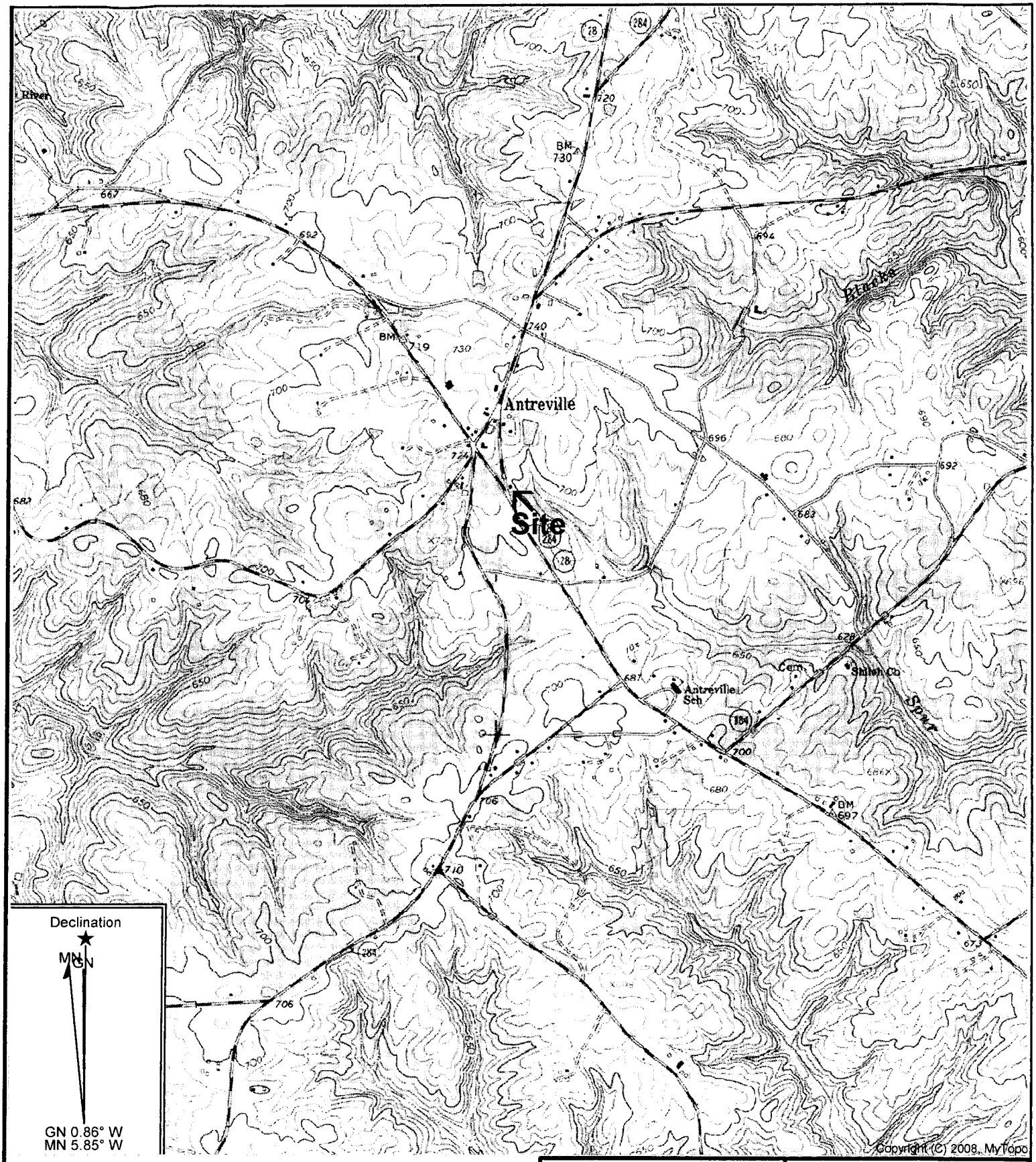
The laboratory participates in annual Proficiency Testing through an approved vendor, Wibby Environmental. Proficiency Testing results are provided to the Office of Environmental Laboratory Certification.

### C2 Reports to Management

See the SC DHEC UST Programmatic QAPP (UST Master QAPP).

## Section D Data Validation and Usability

All field and laboratory data will be checked and verified by the project verifier (Courtney Sanders) prior to submission to SCDHEC.



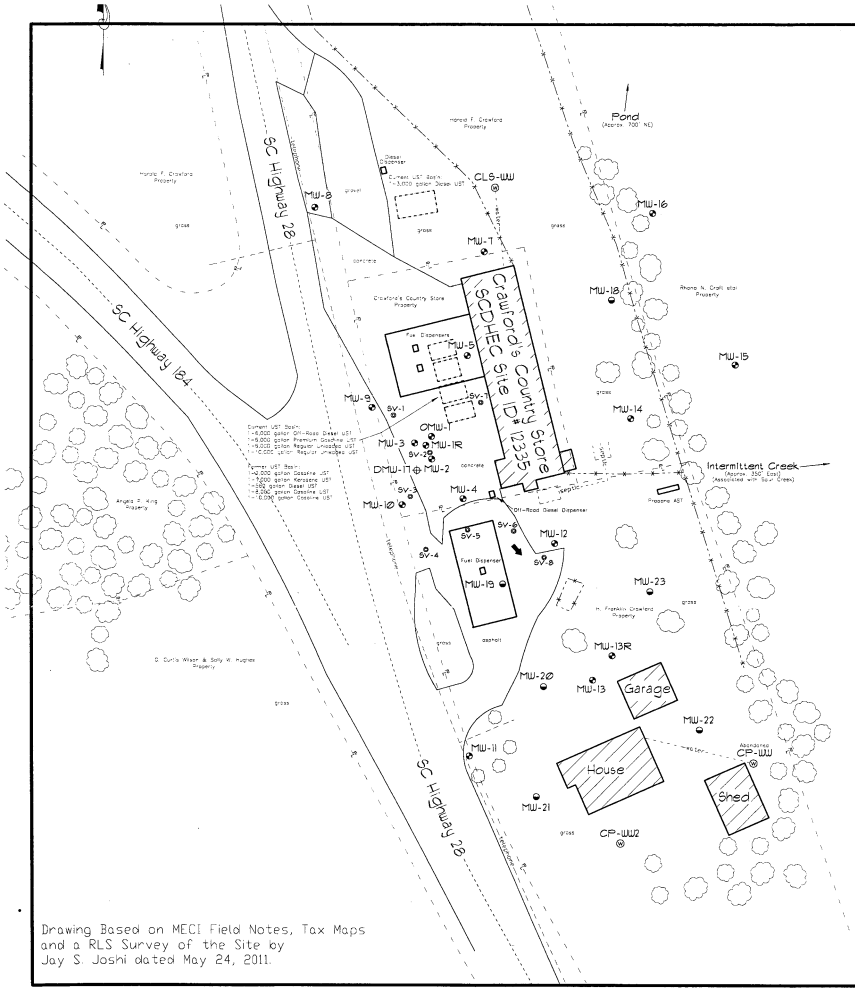

GRAPHIC SCALE

0 1000 2000 4000

1IN = 2000FT

Reference: Antreville, South Carolina
USGS 7.5 Min. Quad
Contour Interval – 10 Feet

| | |
|---|---|
| Midlands Environmental Consultants, Inc. | Site Location |
| Crawford's Country Store<br>5870 South Carolina 28 North, Abbeville, SC<br>SCDHEC Site ID# 12335 | |
| Figure 1 | MECI 11-3327 |




## Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of "Deep" Monitoring Well
- Location of Newly Installed Watertable Bracketing Monitoring Well
- Location of Water Supply Well
- Location of Abandoned Vapor Extraction Wells
- Estimated Location of Existing Underground Storage Tanks
- Estimated Groundwater Flow Direction
- Property Line
- water — Buried Water Line
- septic — Buried Septic System
- telephone — Under Ground Telephone
- Fence

GRAPHIC SCALE

0 30 60 90 120

1IN = 60FT

ALL LOCATIONS ARE APPROXIMATE

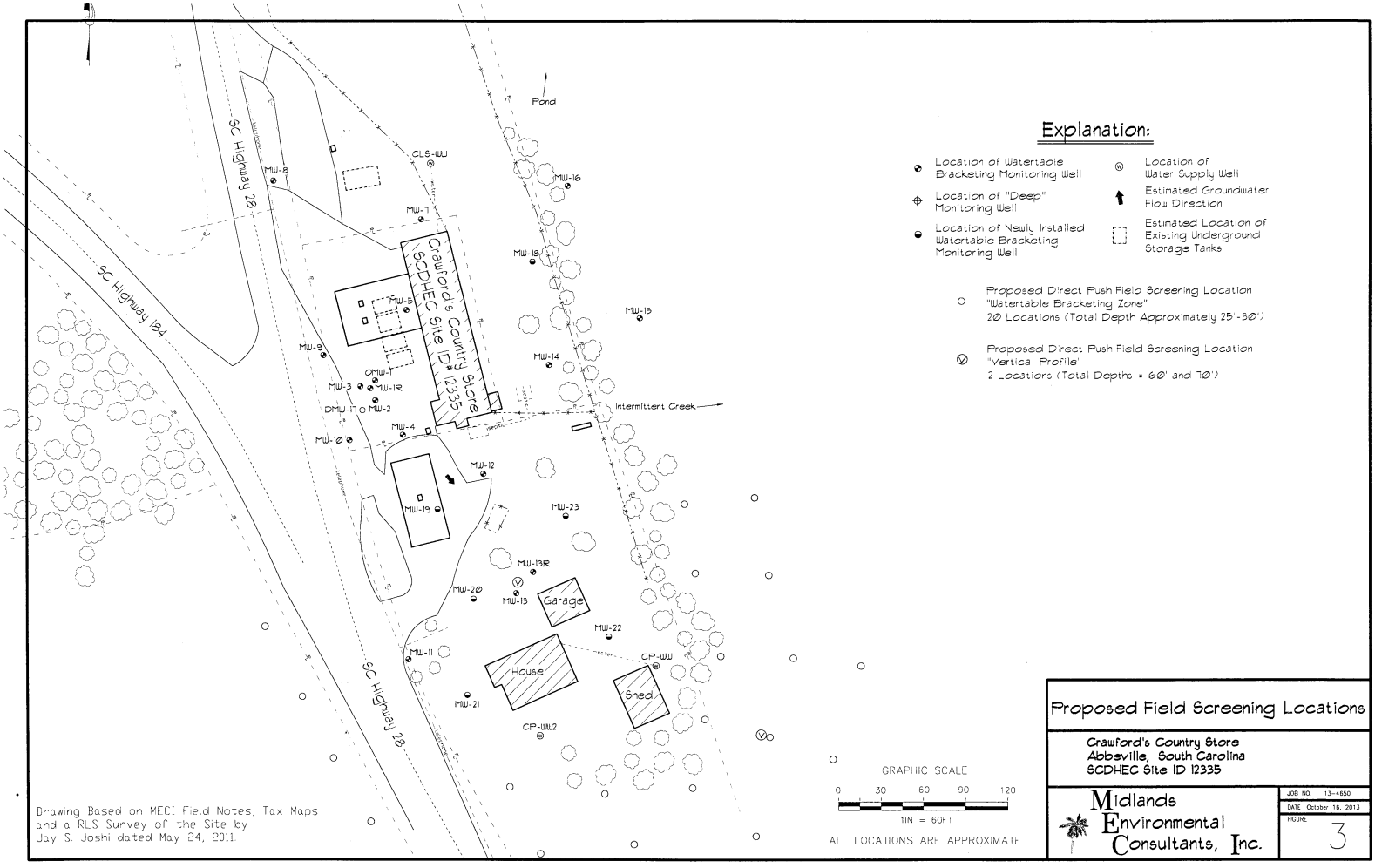
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated May 24, 2011.

# Site Features

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 13-4650
DATE October 16, 2013
FIGURE 2




Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated May 24, 2011.

## Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of "Deep" Monitoring Well
- Location of Newly Installed Watertable Bracketing Monitoring Well
- Location of Water Supply Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Proposed Direct Push Field Screening Location "Watertable Bracketing Zone" 20 Locations (Total Depth Approximately 25'-30')
- Proposed Direct Push Field Screening Location "Vertical Profile" 2 Locations (Total Depths = 60' and 70')

GRAPHIC SCALE
0 30 60 90 120
1IN = 60FT

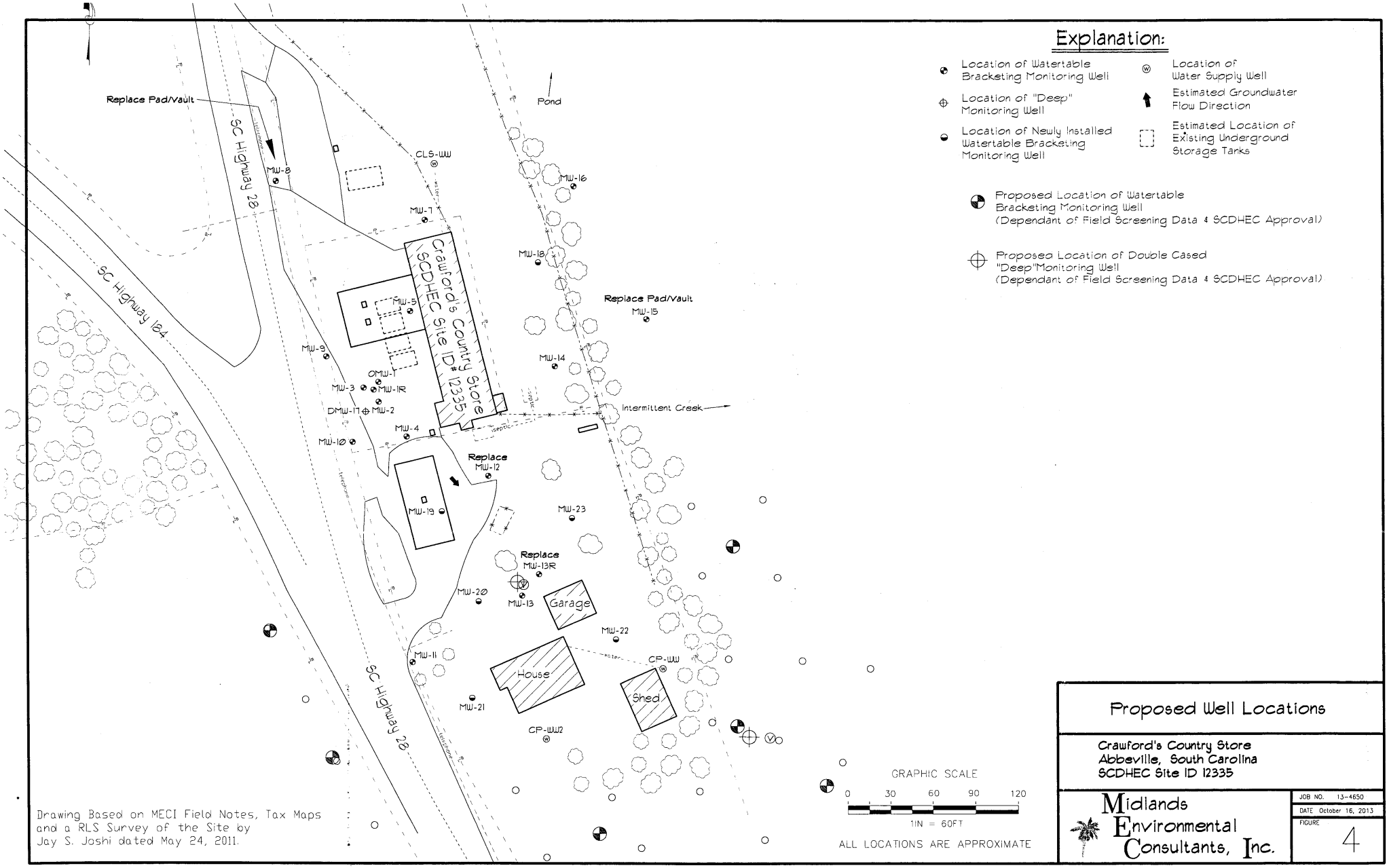
ALL LOCATIONS ARE APPROXIMATE

# Proposed Field Screening Locations

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 13-4650
DATE October 16, 2013
FIGURE 3




Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated May 24, 2011.

# Proposed Well Locations

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 13-4650
DATE October 16, 2013
FIGURE 4

D H E C

PROMOTE PROTECT PROSPER

South Carolina Department of Health and Environmental Control

**ASSESSMENT COMPONENT COST AGREEMENT**
**SOUTH CAROLINA**
Department of Health and Environmental Control
Underground Storage Tank Management Division
State Underground Petroleum Environmental Response Bank Account

**Facility Name:** Crawford's Country Store

**UST Permit #:** 12335 **Cost Agreement #:** Proposal

| ITEM | QUANTITY | UNIT | UNIT PRICE | TOTAL |
|---|---|---|---|---|
| 1. **Plan*** | | | | |
| B. Tax Map | | x | $50.00 | $0.00 |
| C. Tier II or Comp. Plan /QAPP Appendix B | 1 | x | $525.00 | $525.00 |
| 2. **Receptor Survey *** | | x | $500.00 | $0.00 |
| 3. **Survey (500 x 500 feet)** | | | | |
| A. Comprehensive Survey | | x | $1,000.00 | $0.00 |
| B. Subsurface Geophysical Survey | | | | |
| 1. < 10 meters below grade | | x | $2,750.00 | $0.00 |
| 2. > 10 meters below grade | | x | $3,250.00 | $0.00 |
| C. Geophysical UST or Drum Survey | | x | $1,125.00 | $0.00 |
| 4. **Mob/Demob (Each)** | | | | |
| A. Equipment | 2 | x | $575.00 | $1,150.00 |
| B. Personnel | 5 | x | $290.00 | $1,450.00 |
| C. Adverse Terrain Vehicle to install wells | | x | $575.00 | $0.00 |
| 5. **Soil Borings (hand auger)* (Feet)** | | feet x | $14.00 | $0.00 |
| 6. **Soil Borings (drilled) & Field Screening *** | | | | |
| Rate includes collection of water sample or soil sample, and lab or other analyses | | | | |
| A. Standard | 760 | feet x | $17.00 | $12,920.00 |
| C. Fractured Rock | | feet x | $27.50 | $0.00 |
| 7. **Soil Leachability Model (Each)** | | each x | $200.00 | $0.00 |
| 8. **Abandonment* (per foot)** | | | | |
| A. 2" diameter or less | 760 | feet x | $5.00 | $3,800.00 |
| B. Greater than 2" to 6" diameter | | feet x | $5.50 | $0.00 |
| C. Dug/Bored well (up to 6 foot diameter) | | feet x | $18.00 | $0.00 |
| 9. **Well Installation* (per foot)** | | | | |
| A. Water Table (hand augered) | | feet x | $20.00 | $0.00 |
| B. Water Table (drill rig) | 200 | feet x | $38.00 | $7,600.00 |
| C. Telescoping/ Pit Cased | 150 | feet x | $58.00 | $8,700.00 |
| D. Rock Drilling | | feet x | $58.00 | $0.00 |
| E. 2" Rock Coring | | feet x | $45.00 | $0.00 |
| G. Rock Multi-sampling ports/screens | | feet x | $47.20 | $0.00 |
| H. Recovery Well (4 inch diameter) | | each x | $45.00 | $0.00 |
| I. Pushed Pre-packed screen (1.25 diameter) | | each x | $18.50 | $0.00 |
| J. Rotosonic (2 inch diameter) | | each x | $45.00 | $0.00 |
| 10. **Groundwater Sample Collection / Gauge Depth to Water or Product (Each)** | | | | |
| A. Groundwater Purge | 32 | wells x | $55.00 | $1,760.00 |
| B. Air or Vapors | | samples x | $90.00 | $0.00 |
| C. Water Supply | 2 | samples x | $30.00 | $60.00 |
| D. Groundwater No Purge or Duplicate | 2 | samples x | $35.00 | $70.00 |
| E. Gauge Well only | | per well x | $20.00 | $0.00 |
| F. Sample Below Product | | wells x | $50.00 | $0.00 |
| G. Pasive Diffusion Bag | | each x | $40.00 | $0.00 |
| H. Field Blank | 1 | each x | $5.00 | $5.00 |

| | | | | | |
|---|---|---|---|---|---|
| **11. Laboratory Analyses-Groundwater (Each Sample)** | | | | | |
| A1. BTEX+Naphth.+ Oxyg's+ 1,2 DCA + Ethanol | 38 | samples x | $100.00 | | $3,800.00 |
| AA. Lead, Filtered | | samples x | $46.00 | | $0.00 |
| B1. Rush EPA Method 8260B (All of item A.) | | samples x | $143.00 | | $0.00 |
| C1. Trimethal, Butyl, and Isopropyl Benzenes | | samples x | $40.00 | | $0.00 |
| D. PAH's | | samples x | $120.00 | | $0.00 |
| E. Lead, Unfiltered | | samples x | $20.00 | | $0.00 |
| F. EDB by EPA 8011 | 37 | samples x | $55.00 | | $2,035.00 |
| FF. EDB by EPA Method 8011 Rush | | samples x | $75.00 | | $0.00 |
| G. 8 RCRA Metals | | samples x | $140.00 | | $0.00 |
| H. TPH (9070) | | samples x | $55.00 | | $0.00 |
| I. pH | | samples x | $10.00 | | $0.00 |
| J. BOD | | samples x | $40.00 | | $0.00 |
| P1. Ethanol | | samples x | $21.50 | | $0.00 |
| 11. **Analyses-Soil (Each Sample)** | | | | | |
| Q. BTEX + Naphth. | | samples x | $100.00 | | $0.00 |
| R. PAH's | | samples x | $120.00 | | $0.00 |
| S. 8 RCRA Metals | | samples x | $150.00 | | $0.00 |
| T. Oil & Grease (9071) | | samples x | $60.00 | | $0.00 |
| U. TPH-DRO (3550B/8015B) | | samples x | $65.00 | | $0.00 |
| V. TPH- GRO (5030B/8015B) | | samples x | $65.00 | | $0.00 |
| W. Grain size/hydrometer | | samples x | $99.00 | | $0.00 |
| X. Total Organic Carbon | | samples x | $35.00 | | $0.00 |
| 11. **Analyses-Air (Each Sample)** | | | | | |
| Y. BTEX + Naphthalene | | samples x | $247.50 | | $0.00 |
| 11. **Analyses-Free Phase Product (Each Sample)** | | | | | |
| Z. Hydrocarbon Fuel Identification | | samples x | $620.00 | | $0.00 |
| 12. **Aquifer Characterization*** | | | | | |
| A. Pumping Test | | hours x | $120.00 | | $0.00 |
| B. Slug Test* | | tests x | $150.00 | | $0.00 |
| C. Fractured Rock | | tests x | $500.00 | | $0.00 |
| 13. **Free Product Recovery Rate Test* (Each)** | | tests x | $120.00 | | $0.00 |
| 14. **Fate/Transport Modeling** | | | | | |
| A. Mathematical Model | | each x | $300.00 | | $0.00 |
| B. Computer Model | | each x | $500.00 | | $0.00 |
| 15. **Risk Evaluation** | | | | | |
| A. Tier I Risk Evaluation | | x | $300.00 | | $0.00 |
| B. Tier II Risk Evaluation | | x | $500.00 | | $0.00 |
| 16. **Subsequent Survey*** | | x | $300.00 | | $0.00 |
| 17. **Disposal* (gallons or tons)** | | | | | |
| A. Wastewater | 400 | gallons x | $0.80 | | $320.00 |
| B1. Free Product | | gallons x | $0.85 | | $0.00 |
| C. Soil Treatment/Disposal | 5 | tons x | $72.50 | | $362.50 |
| D. Drilling fluids | | gallons x | $0.80 | | $0.00 |
| 18. **Miscellaneous (attach receipts)** | | | | | |
| | | x | | | $0.00 |
| | | x | | | $0.00 |
| | | x | | | $0.00 |
| 20. **Tier I Assessment (Use DHEC 3665 form)** | | x | | | $0.00 |
| 21. **IGWA (Use DHEC 3666 form)** | | x | | | $0.00 |
| 22. **Corrective Action (Use DHEC 3667 form)** | | x | | | $0.00 |

| | | | | | |
|---|---|---|---|---|---|
| 23. **Aggressive Fluid & Vapor Recovery (AFVR)** | | | | | |
| A. 8-hour Event* | | each x | $3,000.00 | | $0.00 |
| B. AFVR per-hour Continuance | | per hour x | $204.00 | | $0.00 |
| C. Off-gas treatment per-hour Continuance | | per hour x | $35.00 | | $0.00 |
| 24. **Granulated Activated Carbon (GAC) filter system installation & service:** | | | | | |
| A. New GAC System Installation* | | each x | $2,500.00 | | $0.00 |
| B1. Refurbished GAC Sys. Install* | | each x | $1,180.00 | | $0.00 |
| C. Filter replacement/removal* | | each x | $450.00 | | $0.00 |
| D1. GAC System removal, cleaning, & refurbishment* | | each x | $720.00 | | $0.00 |
| E. GAC System housing | | each x | $450.00 | | $0.00 |
| F. In-line particulate filter | | each x | $150.00 | | $0.00 |
| G. Additional piping & fittings | | feet x | $4.00 | | $0.00 |
| 25. **Well Repair** | | | | | |
| A. Additional Copies of the Report Delivered | | each x | $32.50 | | $0.00 |
| B. Repair 2x2 MW pad | | each x | $100.00 | | $0.00 |
| C. Repair 4x4 MW pad | | each x | $150.00 | | $0.00 |
| D. Repair well vault | | each x | $225.00 | | $0.00 |
| F. Replace well cover bolts | | each x | $10.00 | | $0.00 |
| G. Replace locking well cap & lock | | each x | $15.00 | | $0.00 |
| H. Replace/Repair stick-up | | each x | $137.50 | | $0.00 |
| I. Convert Flush-mount to Stick-up | | each x | $175.00 | | $0.00 |
| J. Convert Stick-up to Flush-mount | | each x | $125.00 | | $0.00 |
| K. Replace missing/illegible well ID plate | | each x | $22.50 | | $0.00 |
| **Report Prep & Project Management** | 15% | x | $44,557.50 | | $6,683.63 |
| **TOTAL** | | | | | $51,241.13 |

*The appropriate mobilization cost can be added to complete these tasks, as necessary

CoC is shipped with the samples to the lab, and a copy is kept by MECI in the work folder.

4.3.5.2. A lab provided transport blank will be stored in each cooler for transport to the laboratory.

4.3.5.3. Samples will be transported to the laboratory by shipment with a lab provided courier or with a lab approved shipping company. If a courier is scheduled to visit the MECI offices the day following a sampling event, sampling coolers will be repacked with wet ice, and left at the office for pick-up. If no courier is scheduled to visit the MECI office the day following a sampling event, all sampling coolers are to be dropped off at the lab or at an approved shipping company for overnight delivery to the lab immediately following the sampling event.

### 4.3.6. Field Measurements and Instrument Calibration

4.3.6.1. Prior-to all sampling events equipment for field measurements should be calibrated. MECI utilizes YSI550A meters for DO (mg/L) and temperature readings ($^{o}$C) and YSI63 meters for pH and conductivity (uS) readings. These meters are calibrated according to the manufacturers instructions (please see attached calibration instructions)

4.3.6.2. Calibration readings will be recorded on field notes, and should be within +/- 1$^{o}$C for temperature, +/- 0.2 pH units of 7.00 buffer for pH and within 10% of 100 uS buffer for conductivity.

4.3.6.3. MECI utilizes a 60 cm calibrated turbidity tube for turbidity measurements. The tube is marked with a 60 cm tape that has been calibrated into Nephelometric Turbidity Units (NTU). Turbidity is measured by filling the Turbidity Tube with purge water. The water is drained from the bottom of the tube while the user looks towards the bottom of the tube. Once the Secchi disk pattern at the bottom of the tube is visible, the drain tube is closed, and a reading is taken according to the amount of purge water remaining in the tube.

4.3.6.4. Field Measurements are taken by fully submerging the probes from the YSI550A and YSI63 into water taken from the well. Readings are allowed to equilibrate, then the measurement is recorded.

4.3.6.5. Meters are to be stored in waterproof cases inside of the office when not in use, to prevent possible exposure damage.

## 4.4. Aquifer Characterization

Aquifer specific data will be collected using methods appropriate to the local geology of the facility. MECI will primarily utilize slug tests to obtain specific aquifer data. This data, combined with sieve analysis and hydrometer data will be utilized in aquifer calculations.

### 4.4.1. Slug Test

A normal characterization for a Tier II assessment will require slug tests on two watertable bracketing monitoring wells and one deep monitoring well. Other scopes of work will require a varying number of slug tests.

4.4.1.1. Slug tests will be completed utilizing prepackaged, clear, disposable polyethylene bailers, nylon rope, stop-watch and previously decontaminated electronic water level indicator.

4.4.1.2. Prior to starting the Slug test, a static groundwater measurement will be taken.

4.4.1.3. Water is removed from the well until the water level in the well has been reduced at least one foot.

4.4.1.4. The stopwatch is started as soon as the last bail of water is removed from the well.

4.4.1.5. The water level indicator is lowered into the well and groundwater elevation readings are taken at 15-second intervals for the first two minutes. This interval can be expanded as the test continues.

4.4.1.6. Water level measurements are taken until the water level in the well has returned to within 90 percent of the static level, or one hour has elapsed.

SHEALY

## *Chain of Custody Record*

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

**Number**

| Client | Report to Contact | Sampler (Printed Name) | Quote No. |
|---|---|---|---|
| Address | Telephone No. / Fax No. / Email | Waybill No. | Page ___ of ___ |
| City / State / Zip Code | Preservative: 1. Unpres. 4. HNO3 7. NaOH; 2. NaOH/ZnA 5. HCL; 3. H2SO4 6. Na Thio. | | |
| Project Name | | | |
| Project Number | P.O Number | | |

| Sample ID / Description (Containers for each sample may be combined on one line) | Date | Time | G=Grab C=Composite | Matrix: GW | DW | WW | S | Other | Analysis | Number of Containers | Bottle (See Instructions on back) | Preservative | Lot No. | Remarks / Cooler ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | |
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Turn Around Time Required (Prior lab approval required for expedited TA)
☐ Standard ☐ Rush (Please Specify)

Sample Disposal
☐ Return to Client ☐ Disposal by Lab

QC Requirements (Specify)

Possible Hazard Identification
☐Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison ☐Unknown

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished by / Sampler | | | 1. Received by | | |
| 2. Relinquished by | | | 2. Received by | | |
| 3. Relinquished by | | | 3. Received by | | |
| 4. Relinquished by | | | 4. Laboratory Received by | | |

**Note: All samples are retained for six weeks from receipt unless other arrangements are made.**

LAB USE ONLY
Received on Ice (Check) ☐ Yes ☐ No ☐ Ice Pack
Receipt Temp. _____ °C
Temp. Blank ☐ Y / ☐ N

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

*Promoting and protecting the health of the public and the environment*

**FRANK CRAWFORD**
**5870 HWY 28 N**
**ABBEVILLE SC 29620-3447**

**NOV 0 1 2013**

Re: **Assessment Directive**
Crawford's Country Store
5870 Hwy 28 North, Abbeville, SC 29620
UST Permit # 12335; CA # 46938; UMW # 25248
Release Reported December 3, 1991
QAPP Addendum Received October 16, 2013
Abbeville County

Dear Mr. Crawford:

The Underground Storage Tank (UST) Management Division (Division) of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the referenced Quality Assurance Program Plan (QAPP) addendum submitted on your behalf by Midlands Environmental Consultants, Inc. The previous assessment work for this release indicates that petroleum Chemicals of Concern (CoC) are present in the soil and groundwater at concentrations that exceed risk-based screening levels. In order to determine the extent of the CoC, additional assessment and sampling is necessary. All work should be conducted in accordance with the UST QAPP Revision 2.0, and must be conducted in compliance with all applicable regulations. A copy of the Agency Quality Assurance Program Plan (QAPP) Rev. 2.0 for the UST Management Division is available at http://www.scdhec.gov/environment/lwm/usthome/Qapp.htm.

Assessment activities at the site should begin immediately upon receipt of this letter. Cost agreement # 46938 has been approved for the amount shown on the enclosed cost agreement form for field screening, replacement of MW-12 and MW-13R, additional monitoring well installation, subsequent survey, and comprehensive groundwater sampling. The necessary monitoring well approval is enclosed. Field screening should be conducted in the locations described within the referenced QAPP. The final number of additional monitoring wells and their install locations will be determined upon review of field screening data. Groundwater analyses should be conducted for BTEX, Naphthalene, MTBE, Oxygenates, 1,2-DCA, Ethanol, and EDB. Analyses should be in accordance with Appendix E of the QAPP to include duplicate samples, field and trip blanks.

In accordance with the QAPP Rev. 2.0, if any quality assurance problems arise, you must contact the Agency project manager within 24 hours via phone or e-mail. In addition, a discussion of the problem(s) encountered, including quality assurance problems, the actions taken, and the results must be included in the final report submitted to the UST Management Division.

**The Assessment Report, contractor checklist (QAPP Appendix K), and invoice are due within 90 days from the date of this letter.** The report submitted at the completion of these activities should include the required information outlined in the QAPP. Please note that all applicable South Carolina certification requirements apply to the services and report preparation. All site rehabilitation activities must be performed and submitted by a South Carolina Certified Underground Storage Tank Site Rehabilitation Contractor.

You can submit an invoice for direct payment from State Underground Petroleum Environmental Response Bank (SUPERB) Account for pre-approved costs. By law, the SUPERB Account cannot compensate any costs that are not pre-approved. Please note that applicable South Carolina certification requirements regarding laboratory services, well installation, and report preparation must be satisfied. If the invoice is not submitted within 120 days from the date of this letter, monies allocated to pay this invoice will be uncommitted. This means that the invoice will not be processed for payment until all other committed funds are paid or monies become available.

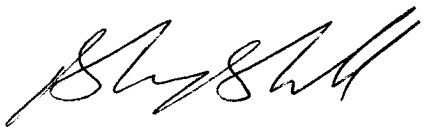
Please note that Sections 44-2-110(4) and 44-2-130 of the SUPERB Statute state that no costs will be allowed unless prior approval from the Agency is obtained. If for any reason additional tasks will be completed, these additional tasks and the associated cost must be pre-approved by the Division for the cost to be paid. The Agency reserves the authority to pay only for work properly performed and/or technically justified and will only pay rates in accordance with established criteria. Further, the Agency reserves the right to question and/or reject costs if deemed unreasonable and the right to audit project records at any time during the project or after completion of work.

Please note, if unnecessary dilutions are completed resulting in reporting limits of individual CoC in excess of Risk-Based Screening Levels (RBSLs), the data cannot be used. In those cases, the UST Division may deny payment for any non-detect analysis where the reporting limit exceeds the RBSL. The UST Management Division encourages the use of 'J' values as necessary so the appropriate action can be determined for a release.

The Agency grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. The transport and disposal must be conducted in accordance with the QAPP. If the CoC concentrations based on laboratory analysis are below RBSLs, please contact the project manager for approval to dispose of soil and/or groundwater on site. The SUPERB Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below RBSLs.

On all correspondence regarding this site, please reference UST Permit # 12335 and CA # 46938. If you have any questions regarding this correspondence, please contact me by telephone at (803) 898-0607, by fax at (803) 898-0673, or by e-mail at ShullSS@dhec.sc.gov.

Sincerely,



Shane S. Shull, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Approved Cost Agreement
Monitoring Well Approval UMW-25248
Signed Site Specific QAPP Contractor Addendum

cc: Midlands Environmental Consultants, Inc., PO Box 854, Lexington, SC 29071 (w/ enc)
Technical File (w/ enc)

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

*Promoting and protecting the health of the public and the environment*

# Monitoring Well Approval Form

| | |
|---|---|
| Approval is hereby granted to: | Midlands Environmental Consultants, Inc. |
| (on behalf of): | Frank Crawford |
| Facility: | Crawfords Country Store |
| UST Permit Number: | 12335 |
| County: | Abbeville |

This approval is for the installation of twenty-one (21) temporary field screening points, up to eight (8) shallow monitoring wells and up to two (2) deep monitoring wells. The monitoring wells are to be installed in the approved location. The monitoring wells are to be installed following the South Carolina Well Standards, R.61-71, and the applicable guidance documents.

*Please note that R.61-71 requires the following:*

1. All wells shall be drilled, constructed, and abandoned by a South Carolina certified well driller per R.61-71.D.1.
2. All monitoring wells shall be labeled as required by R.61-71.H.2.c.
3. A Water Well Record Form or other form provided or approved by the Agency shall be completed and submitted to the Agency within 30 days after well completion or abandonment unless another schedule has been approved by the Agency. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f
4. All analytical data and water levels obtained from each monitoring well shall be submitted to the Agency within 30 days of receipt of laboratory results unless another schedule has been approved by the Agency as required by R.61-71.H.1.d.
5. If any of the information provided to the Agency changes, notification to Shane Shull (tel: (803) 898-0607 or e-mail: ShullSS@dhec.sc.gov) shall be provided a minimum of twenty-four (24) hours prior to well construction as required by R.61-71.H.1.a.
6. All temporary monitoring wells shall be abandoned within 5 days of borehole completion using appropriate methods as required by R.61-71.H.4.c. All other wells shall be properly developed per R.61-71.H.2.d.
7. Agency approval is required prior to abandonment of all monitoring wells as required by R.61-71.H.1.a.

This approval is pursuant to the provisions of Section 44-55-40 of the 1976 South Carolina Code of Laws and R.61-71 of the South Carolina Well Standards and Regulations, dated April 26, 2002. A copy of this approval should be on the site during well installation.

Date of Issuance: October 25, 2013 Approval #: UMW-25248

Shane S. Shull, Hydrogeologist
Corrective Action Section
Division of Assessment and Corrective Action
Bureau of Land and Waste Management

## Section A: Project Management

### A1 Title and Approval Page

Quality Assurance Project Plan
Addendum to the SC DHEC UST Programmatic QAPP
For
Crawford's Country Store, SCDHEC Site ID# 12982

5870 Highway 28 North, Abbeville, South Carolina

*Prepared by:*
*Kyle V. Pudney*
*Staff Biologist*
Midlands Environmental Consultants, Inc.
(Certified Site Rehabilitation Contractor UCC-0009)
235-B Dooley Road
Lexington, SC 29073
(803)808-2043

Date: October 16, 2013

Approvals

| | | |
|---|---|---|
| Shane S. Shull<br>SC DHEC Project Manager | Signature | Date 10-25-13 |
| Jeff L. Coleman<br>Contractor QA Manager | Signature | Date 10/16/13 |
| Bryan T. Shane, P.G.<br>Site Rehabilitation Contractor | Signature | Date 10-16-13 |
| Daniel J. Wright<br>Laboratory Director | Signature | Date 10/16/2013 |

# Approved Cost Agreement 46938

Facility: 12335 CRAWFORDS COUNTRY STORE
SHULLSS
PO Number:

| Task / Description | Categories | Item | Description | Qty / Pct | Unit Price | Amount |
|---|---|---|---|---|---|---|
| 01 PLAN | | | | | | |
| | | C | TIER II/COMP. PLAN/QAPP APP B | 1.0000 | 525.00 | 525.00 |
| 04 MOB/DEMOB | | | | | | |
| | | A | EQUIPMENT | 2.0000 | 575.00 | 1,150.00 |
| | | B | PERSONNEL | 5.0000 | 290.00 | 1,450.00 |
| 06 SOIL BORINGS (DRILLED) | | | | | | |
| | | A | SOIL BORINGS & FLD SCREENING | 760.0000 | 17.00 | 12,920.00 |
| 08 ABANDONMENT | | | | | | |
| | | A | ABANDONMENT 2" DIA OR LESS | 760.0000 | 5.00 | 3,800.00 |
| 09 WELL INSTALLATION | | | | | | |
| | | B | WATER TABLE (DRILLED) | 200.0000 | 38.00 | 7,600.00 |
| | | C | TELESCOPING | 150.0000 | 58.00 | 8,700.00 |
| 10 SAMPLE COLLECTION | | | | | | |
| | | A | GROUND WATER | 32.0000 | 55.00 | 1,760.00 |
| | | C | WATER SUPPLY | 2.0000 | 30.00 | 60.00 |
| | | D | GROUNDWATER NO-PURGE | 2.0000 | 35.00 | 70.00 |
| | | H | FIELD BLANK | 1.0000 | 5.00 | 5.00 |
| 11 ANALYSES | GW GROUNDWATER | | | | | |
| | | A1 | BTEXNM+OXYGS+1,2-DCA+ETH-8260B | 38.0000 | 100.00 | 3,800.00 |
| | | F | EDB | 37.0000 | 55.00 | 2,035.00 |
| 16 SUBSEQUENT SURVEY | | | | | | |
| | | A | SUBSEQUENT SURVEY | 1.0000 | 300.00 | 300.00 |
| 17 DISPOSAL | | | | | | |
| | | A | WASTEWATER | 400.0000 | 0.80 | 320.00 |
| | | C | SOIL (TREATMENT/DISPOSAL) | 5.0000 | 72.50 | 362.50 |
| 19 RPT/PROJECT MNGT & COORDINATIO | | | | | | |
| | | PCT | PERCENT | 0.1500 | 44,857.50 | 6,728.63 |
| | | | | | **Total Amount** | 51,586.13 |

# Document Receipt Information

☒ Hard Copy ☒ CD ☐ Email

Date Received 3/19/14

Permit Number 12335

Project Manager Shane Shull

Name of Contractor MECI

UST Certification Number

Docket Number 22tech

Scanned

Add HL Assess

# ADDITIONAL ASSESSMENT REPORT

Crawford's Country Store
5870 Highway 28 North
Abbeville, South Carolina
SCDHEC SITE ID 12335
CA # 46938

*Prepared By:*

Midlands Environmental Consultants, Inc.
231 Dooley Road, Lexington, SC 29073
(803) 808-2043 fax: 808-2048

March 14, 2014

MECI Project No. 13-4650

Midlands
Environmental
Consultants, Inc.

March 14, 2014

Mr. Shane Shull, Hydrogeologist
Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land & Waste Management
South Carolina Department of Health and
Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Subject: Additional Assessment Report
Crawford's Country Store
5870 Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID# 12335, CA# 46938
MECI Project Number 13-4650
Certified Site Rehabilitation Contractor UCC-0009

Dear Mr. Shull,

On behalf of Mr. Frank Crawford, Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached the Additional Assessment Report for the referenced site. This report describes assessment activities conducted at the site and results of those activities in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines, including adherence to the UST Division Programmatic Quality Assurance Program Plan (QAPP, Revision 2.0).

Midlands Environmental appreciates the opportunity to offer our professional environmental services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
**Midlands Environmental Consultants, Inc.**

Jeff L. Coleman
Senior Scientist

Bryan T. Shane, P.G.
Principal Geologist

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

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**NOTE: ITEMS LISTED WITH AN ** BESIDE IT WERE NOT NEEDED AS A PART OF THIS SCOPE OF WORK**

## 1.0 INTRODUCTION

A. **Owner/Operator Information**

| | |
|---|---|
| Facility Name: | Crawford's Country Store UST Permit #: 12335 |
| Facility Address: | 5870 S.C. Highway 28, Abbeville, SC 29620 |
| Name: | Mr. Harold Franklin Crawford |
| Address: | 31 Turtle Point, Abbeville, SC 29620 |
| Telephone #: | (864) 993-3210 |

B. **Property Owner Information**

| | |
|---|---|
| Name | Mr. Harold Franklin Crawford |
| Tax Map #: | Abbeville County Tax Map #'s: 046-00-00-045 & 046-00-00-080 |
| Address | 5870 S.C. Highway 28 North, Abbeville, SC 29620 |
| Telephone # | (864) 993-3210 |

C. **Contractor Information**

| | |
|---|---|
| Name: | Midlands Environmental Consultants, Inc. |
| Certification #: | 9 |
| Address: | P. O. Box 854, Lexington, SC 29071 |
| Telephone #: | (803) 808-2043 |

D. **SCDHEC Certified Well Driller**

| | |
|---|---|
| Name: | Environmental Drilling & Probing Services, LLC. |
| Driller: | David Brown |
| Certification #: | B 02053 |
| Address: | 17538 Greenhill Road, Charlotte, NC 28278 |
| Telephone #: | (704) 607-7529 |

E. **SCDHEC Certified Laboratory**

| | |
|---|---|
| Name: | Shealy Environmental Services, Inc. |
| Certification #: | 32010 |
| Address: | 106 Vantage Point Drive, West Columbia, SC 29172 |
| Telephone #: | (803) 791-9700 |

## 1.1 PROJECT INFORMATION

The subject site (Crawford's Country Store) is located at 5870 S.C. Highway 28 North in Abbeville, Abbeville County, South Carolina (see Figure 1). The subject site is currently an active gasoline service station and convenience store. Previously, the subject site maintained one 2,000 gallon gasoline underground storage tank (UST), one 1,000 gallon kerosene UST, one 560 gallon diesel UST, one 8,000 gallon gasoline UST, and one 10,000 gallon gasoline UST. The former UST's were removed from the ground in October of 1991. The South Carolina Department of Health and Environmental Control (SCDHEC) reported a release of petroleum product in December of 1991 and confirmed the release in March of 1993. Currently, the subject site maintains one 3,000 gallon diesel UST, one 6,000 gallon off-road diesel UST, one 6,000 gallon premium gasoline UST, one regular unleaded gasoline UST, and one 10,000 gallon regular unleaded gasoline UST.

The above information is based on reports and correspondence obtained from SCDHEC files and MECI field notes.

## 2.0 POTENTIAL RECEPTOR SURVEY

MECI personnel conducted a survey of potential receptors within a 1,000-foot radius of the site boundaries. During this survey, twelve water supply wells and two surface water bodies were identified.

The following table identifies water supply wells and their approximate distance from the site:

| Water Supply Well Number | Approximate Distance from MW-3 | Abbeville County Tax Map Number: | Notes: | Well Status |
|---|---|---|---|---|
| CLS-WW | 167' Feet NE | 046-00-00-080 | 5870 S.C. Highway 28 N. (Onsite) | Active |
| CP-WW | 291' Feet SE | 046-00-00-049 | 5846 S.C. Highway 28 N | Abandoned |
| CP-WW2 | 281' Feet S | 046-00-00-049 | 5846 S.C. Highway 28 N | Active |
| EMS-WW | 244' Feet SW | 046-00-00-048 | 3 Highway 184 N | Active |
| McCullough-WW | 703' Feet SE | 047-00-00-004 | 5804 Highway 28 N | Active |
| Café-WW | Approx. 580' Feet NW | 046-00-00-044 | Fork @ S.C. Hwy. 28 & S.C. Hwy. 184 | Active |
| Old Service Station-WW | 976' Feet N | 046-00-00-043 | 3174 South Carolina Highway 260 | Active |
| Scott-WW | 1,041' Feet NW | 046-00-00-037 | 88 S.C. Highway N | Active |
| Farm-WW | 1,044' Feet SW | 046-00-00-106 | Dry Hollow Rd. & Parker Rd. | Active |
| Major-WW | 1,257' Feet S | 046-00-00-051 | 45 Parker Road | Active |
| Driver-WW | 1,387' Feet S | 046-00-00-050 | 5733 S.C. Highway 28 N | Inactive |
| Gin House-WW | 682' Feet W | 046-00-00-041 | Dry Hollow Rd. & Gin House Road | Unknown |

All listed water supply wells listed above were sampled during the reference assessment, except for the CP-WW and Gin House-WW. Water well CP-WW was abandoned in place on March 8, 2012 BY Environmental Drilling & Probing Services. The Gin House-WW was located behind a locked fence during assessment activities and the property owner could not be located. Furthermore, the actual location of the Café-WW is not exactly known and is believed to be buried in the northeastern portion of Tax Map # 046-00-00-044. A sample (Café-WW) was collected from a spigot located along the south western corner of the onsite structure.

A pond and intermittent creek associated with the Spur Creek is located to east of the site. The pond is located approximately 700' feet northeast of the site and samples were not collected as part of this assessment. South of the pond is a swampy area which leads to an intermittent creek, which begins approximately 175' feet east of MW-34 and flows southeast. Surface water samples were collected were collected adjacent to monitoring well MW-25 (SW-1) and approximately 250' feet southeast of MW-25 (SW-2).

Telephone, electric, and septic line were identified on and surrounding the site. Utilities at the site are buried approximately three to six feet below ground surface (BGS). Given the burial depth of the utilities and the depth to groundwater, it is unlikely that utilities would serve as receptors or preferential pathways. See Figure 2, Figure 2A, and Appendix A for detailed information relating to the receptor locales.

## 2.1 SURROUNDING PROPERTY USAGE

The subject site is located outside the town limits of Abbeville in an area known as Antreville, Abbeville County, South Carolina. The site is currently an active gasoline service station and convenience store. A wildlife processing center and residence is located directly south of the site, beyond which is residential farm. East of the site is bordered by a grass field, beyond which is a swampy area and grass fields. South Caroline Highway 28 forms the western border of the site, beyond which is an Abbeville County EMS facility. South of the EMS facility is a large agricultural field and residences. Northwest of the site is a Café and old gasoline service station.

## 3.0 AREA GEOLOGY AND HYDROGEOLOGY

The mean elevation of the property, as depicted on the local USGS quadrangle (Moore, SC), appears to be approximately 710 feet above sea level. The site is located in the Piedmont Physiographic Province of South Carolina, an area underlain by ancient igneous and metamorphic rocks. The soils in this province are generally residual soils that are underlain by rock at highly varying depths.

The soils encountered in this area are the product of in-place weathering of rocks similar to the rocks underlying the site. In areas not altered by erosion or disturbed by the activities of man, the typical residual soil profile consists of near surface clayey soils and underlying sandy silt and sand. The boundary between soil and rock is gradational. A transitional zone termed "weathered rock" is normally found overlying the parent bedrock. This zone is typically the most transmissive zone for groundwater movement. Consequently, the topography of the bedrock surface is uneven, even over short horizontal distances. It is not unusual to find lenses and boulders of hard rock and zones of weathered rock within the soil mantle well above the general bedrock level.

Local precipitation is the source of practically all of the groundwater in Spartanburg County. A portion of the precipitation infiltrates into the ground and moves under the influence of gravity to the surficial aquifer. After the water has reached the surficial aquifer, the direction of movement is generally parallel to the hydraulic gradient. In the Piedmont Province, the slope of the surficial aquifer's surface under static conditions (no pumping interference) approximates the topography of an area. Thus, the movement of groundwater within the soil mantel is typically in the direction of the topographic slope. Local groundwater flow patterns may be affected by disturbed areas such as tank pits, utility trenches, building foundations, borings, wells, etc. Groundwater flow in fractured rock is often difficult to interpret due to the variability of fracture connectivity and orientation.

Locally, in the surficial aquifer, groundwater discharges into streams, lakes or springs where the groundwater table intersects lows occupied by these water bodies. The apparent direction (based on hydraulic gradient) of groundwater flow from the release is to the south and southeast, towards the unnamed intermittent creek associated with the Spur Creek. Analytical data indicates this unnamed creek may be impacted with petroleum contamination.

## 3.1 LOCAL SUBSURFACE CONDITIONS

Piedmont residual soils were encountered during drilling activities conducted at the site. The soils encountered in our borings generally consisted of micaceous fine sandy clayey silts. Residual soils were underlain by coarser grained saprolitic soils at depths of approximately 20' feet BGS. Partially weathered rock was encountered at a depth of 32' feet BGS during the installation of monitoring well

DMW-39. Mud-rotary refusal was encountered at 35' BGS during the installation of DMW-39 and the well is set on top of a potential confining formation. Test Boring Records, which depict the materials encountered in each boring, are located in Appendix A.

On February 18th, 2014, stabilized groundwater levels were measured in the surrounding monitoring wells. Depth to groundwater ranged from 0.00 to 20.79 feet BGS in the wells measured. The groundwater measurements are summarized in tabular form in Table 2 and on Figure 5. A groundwater contour map illustrating the groundwater flow direction at the site is also depicted on Figure 5.

Groundwater levels may fluctuate several feet with seasonal and rainfall variations and with change in the water level of adjacent drainage features. Normally, the highest groundwater levels occur in late winter and spring. The lowest levels occur in late summer and fall.

The above descriptions provide a general summary of the subsurface conditions encountered. The attached Test Boring Records (Appendix E) contain detailed information recorded at each new monitoring well location. The Test Boring Records represent our interpretation of the field logs based on examination of the field samples. The lines designating the interfaces between various strata represent approximate boundaries, and the transition between strata may be gradational.

## 4.0 FIELD EXPLORATION

Field exploration conducted at the site included:

- Field screening of groundwater samples collected from the site utilizing direct push techniques and laboratory analysis of samples;
- construction of eighteen (18) groundwater monitoring wells;
- repair of two monitoring wells;
- comprehensive sampling of the entire well network, nearby water supply wells, and surface water bodies;
- chemical analyses of groundwater samples; and,
- a comprehensive survey of subject site.

The monitoring well locations were selected based on the analytical results of groundwater field screening, property access, existing site conditions, estimated groundwater flow direction, and drilling accessibility.

Following the well installation, a comprehensive survey was conducted by Construction Support Services of Columbia, SC (Jay S. Joshi PLS# 14811) to locate the vertical and horizontal positions of the monitoring wells and relevant structures.

## 4.1 DIRECT PUSH GROUNDWATER FIELD SCREENING

From November 13th, 2013 through December 4th, 2013, fifty-one (51) direct push field screening points were advanced at the site to collect groundwater samples. These temporary borings were installed by W. Walker Environmental Services of West Columbia, South Carolina (S.C. Drilling Certification: William Walker #C 02402). These temporary borings were advanced utilizing an ATV-mounted drilling rig utilizing direct push technologies. The sampling depth for each of the locations was based on the water table depth, the yield of the water bearing zone as evidenced by flow of water into the direct push apparatus, and the ability to reach the watertable. The samples were generally taken at the shallowest bearing zone, with the exception of those taken to determine vertical extent. The total footage for the direct push borings was 1,189 feet. The sample locations are presented on Figure 3. To prevent cross-contamination between borings the reusable down-hole portion of the direct push sampling device was cleaned between borings. New Teflon tubing was utilized at each location. Following the collection of the groundwater samples, the hole left open by the direct push sampling device was abandoned with a bentonite/portland grout slurry. 1903 forms documenting the depth and abandonment of the direct push borings are attached in Appendix D.

The groundwater samples obtained were transported to Shealy Environmental Services, Inc of West Columbia, SC (SCDHEC Laboratory Certification #32010) for analysis for BTEX, naphthalene, and methyl-tertiary butyl ether (EPA Method 8260B). Analytical results for laboratory samples collected from the direct push borings are summarized in Table 1, Figure 3, and laboratory reports are included in Appendix B.

## 4.2 MONITORING WELL INSTALLATION

From January 26th, 2014 to February 6th, 2014, eighteen (18) monitoring wells were installed at the subject site. These wells were installed by Environmental Drilling and Probing Services, LLC. of Charlotte, North Carolina (S.C. Drilling Certification: David Brown #B 02053). Monitoring wells MW-12R, and MW-24 through MW-35 were installed as single cased, watertable bracketing monitoring wells. These watertable bracketing monitoring wells utilize a ten foot screen.

Monitoring wells DMW-36 through DMW-40 were installed as double cased "deep" monitoring wells. During construction, a 6 ¼-inch outer casing was advanced to the desired depth and grouted in-place. The grout was allowed to cure and the remainder of the depth of the borehole was achieved using mud-rotary techniques.

The following table presents well installation details:

| Well Number | Single Cased | Double Cased | Screened Interval | Total Depth (ft) |
|---|---|---|---|---|
| MW-12R | X | | 15.0-25.0 | 25.02 |
| MW-24 | X | | 2.0-12.0 | 12.31 |
| MW-25 | X | | 2.0-12.0 | 12.46 |
| MW-26 | X | | 2.0-12.0 | 11.44 |
| MW-27 | X | | 2.0-12.0 | 12.30 |
| MW-28 | X | | 14.0-24.0 | 23.73 |
| MW-29 | X | | 15.0-25.0 | 25.50 |
| MW-30 | X | | 14.0-24.0 | 24.33 |
| MW-31 | X | | 14.0-24.0 | 23.88 |
| MW-32 | X | | 14.0-24.0 | 23.85 |
| MW-33 | X | | 17.0-27.0 | 27.22 |
| MW-34 | X | | 5.0-15.0 | 15.11 |

| Well Number | Single Cased | Double Cased | Screened Interval | Total Depth (ft) |
|---|---|---|---|---|
| MW-35 | X | | 18.0-28.0 | 27.94 |
| DMW-36 | | X | 55.0-60.0 | 60.72 |
| DMW-37 | | X | 45.0-50.0 | 50.23 |
| DMW-38 | | X | 45.0-50.0 | 49.55 |
| DMW-39 | | X | 30.0-35.0 | 34.85 |
| DMW-40 | | X | 45.0-50.0 | 50.53 |

The soils encountered during drilling activities generally consisted of micaceous sandy clayey silts near surface, underlain by more coarse sandy silts with depth. Representative portions of soil samples were screened with a Photo Ionization Detector (PID) and classified by MECI personnel. Test boring records showing soil descriptions and screening result are attached in Appendix E.

Drill cuttings were containerized and transported to Abbeville County Landfill by MECI personnel. A total of 5.02 tons was disposed of in this manner. A disposal manifest for these soils is presented in Appendix G.

Following completion of the monitoring wells, the wells were developed by purging until they were determined to be functioning properly and turbidity was reduced. These wells were developed utilizing a Whale-Mega Purger well pump. The drum of purge water was treated by MECI personnel using a granular activated carbon drum. A total of 165.0 gallons of purge/development water was disposed of in this manner. A disposal manifest for the treated purge water is presented in Appendix G.

### 4.3 MONITORING WELL REPAIR

During well installation activities, new well pads were replaced on monitoring wells MW-8 and MW-15 to insure the security of the monitoring wells. In addition, the well vault from MW-8 was replaced as well. The well repair was completed under the direction of Mr. David Brown (SC Driller's License # B 02053) Environmental Drilling and Probing Services, LLC of Charlotte, NC.

### 4.4 MONITORING WELL SAMPLING AND CHEMICAL ANALYSES

On February 18, 2014, MECI personnel collected groundwater samples from the thirty-nine (39) monitoring wells at the subject site. Monitoring wells MW-3 was gauged and determined to contain 0.01 feet of measurable free phase petroleum product. All newly installed monitoring wells and pre-existing monitoring wells were purged prior to sample collection. Thirty-nine (39) monitoring wells were purged prior to sample collection.

Purging of the monitoring wells was completed utilizing a prepackaged, clear, disposable polyethylene bailer and nylon rope. Purging was completed by bailing three to five well volumes of water from the well, until pH, conductivity, dissolved oxygen, and turbidity stabilized or until all available water was evacuated from the well, whichever occurred first. A new set of nitrile gloves were worn at each monitoring well, and at all times samples were handled. Field measurements of turbidity, pH, conductivity, dissolved oxygen, and water temperature were obtained before the well sampling process. MECI utilized YSI550A meters for DO (mg/L) and temperature readings (°C), YSI63 meters for pH and conductivity (uS) readings, and a MicroTPI/TPW Turbidimeter for turbidity readings (NTU). The attached Field Data Information Sheets presents the results of the field measurements obtained during sampling processes. All wells were sampled in accordance with SCDHEC's Quality Assurance Program Plan for the Underground Storage Tank Management

Division (QAPP, Revision 2.0) and MECI's Standard Operating Procedures (MECI SOP, January 2014). Groundwater samples obtained were sent to Shealy Environmental Services, Inc. of West Columbia, SC (SCDHEC Laboratory Certification #32010) for analysis.

The following sampling matrix contains well development and requested analyses for each well:

| Monitoring Well | Purge | No Purge | Gauge Only | BTEX, Naphthalene, MTBE (EPA Method 8260-B) | EDB (EPA Method 8011) | 1,2 DCA (EPA Method 8260-B) | 8 Oxygenates (EPA Method 8260-B) | Total Lead (EPA Method 6010) | Filtered Lead (EPA Method 6010) | Sulfate (EPA Method 375.2) | Nitrate (EPA Method 335.2) | Methane (RSK Method) | PAH's (EPA Method 8270) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Analyte Sampled | | | | | | | | | |
| OMW-1 | X | | | X | X | X | X | | | | | | |
| MW-1R | X | | | X | X | X | X | | | | | | |
| MW-2 | X | | | X | X | X | X | | | | | | |
| MW-3 | | | X | | | | | | | | | | |
| MW-4 | X | | | X | X | X | X | | | | | | |
| MW-5 | X | | | X | X | X | X | | | | | | |
| MW-7 | X | | | X | X | X | X | | | | | | |
| MW-8 | X | | | X | X | X | X | | | | | | |
| MW-9 | X | | | X | X | X | X | | | | | | |
| MW-10 | X | | | X | X | X | X | | | | | | |
| MW-11 | X | | | X | X | X | X | | | | | | |
| MW-12 | X | | | X | X | X | X | | | | | | |
| MW-13 | X | | | X | X | X | X | | | | | | |
| MW-14 | X | | | X | X | X | X | | | | | | |
| MW-15 | X | | | X | X | X | X | | | | | | |
| MW-16 | X | | | X | X | X | X | | | | | | |
| DMW-17 | X | | | X | X | X | X | | | | | | |
| MW-18 | X | | | X | X | X | X | | | | | | |
| MW-19 | X | | | X | X | X | X | | | | | | |
| MW-20 | X | | | X | X | X | X | | | | | | |
| MW-21 | X | | | X | X | X | X | | | | | | |
| MW-22 | X | | | X | X | X | X | | | | | | |
| MW-23 | X | | | X | X | X | X | | | | | | |
| MW-24 | X | | | X | X | X | X | | | | | | |
| MW-25 | X | | | X | X | X | X | | | | | | |
| MW-26 | X | | | X | X | X | X | | | | | | |
| MW-27 | X | | | X | X | X | X | | | | | | |

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane
PAH = polycyclic aromatic hydrocarbons

** = Indicates Field Duplicate

| Monitoring Well | Purge | No Purge | Gauge Only | BTEX, Naphthalene, MTBE (EPA Method 8260-B) | EDB (EPA Method 8011) | 1,2 DCA (EPA Method 8260-B) | 8 Oxygenates (EPA Method 8260-B) | Total Lead (EPA Method 6010) | Filtered Lead (EPA Method 6010) | Sulfate (EPA Method 375.2) | Nitrate (EPA Method 335.2) | Methane (RSK Method) | PAH's (EPA Method 8270) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Analyte Sampled | | | | | | | | | |
| MW-28 | X | | | X | X | X | X | | | | | | |
| MW-29 | X | | | X | X | X | X | | | | | | |
| MW-30 | X | | | X | X | X | X | | | | | | |
| MW-31 | X | | | X | X | X | X | | | | | | |
| MW-32 | X | | | X | X | X | X | | | | | | |
| MW-33 | X | | | X | X | X | X | | | | | | |
| MW-34 | X | | | X | X | X | X | | | | | | |
| MW-35 | X | | | X | X | X | X | | | | | | |
| DMW-36 | X | | | X | X | X | X | | | | | | |
| DMW-37 | X | | | X | X | X | X | | | | | | |
| DMW-38 | X | | | X | X | X | X | | | | | | |
| DMW-39 | X | | | X | X | X | X | | | | | | |
| DMW-40 | X | | | X | X | X | X | | | | | | |
| MW-2 Dup. | | X | | X | X | X | X | | | | | | |
| MW-9 Dup. | | X | | X | X | X | X | | | | | | |
| MW-10 Dup. | | X | | X | X | X | X | | | | | | |
| Field Blank | | | | X | X | X | X | | | | | | |
| Trip Blank | | | | X | | X | X | | | | | | |

Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane
PAH = polycyclic aromatic hydrocarbons

** = Indicates Field Duplicate

The results of the laboratory analyses are summarized in Tables 3, Table 3A and presented in Appendix B.

Purge water produced by the purging process was treated on-site utilizing a granular activated carbon unit. A total of 224.0 gallons of purge water was disposed of in this manner. A disposal manifest for the referenced purge water is presented in Appendix G.

### 4.5 WATER SUPPLY WELL SAMPLING AND CHEMICAL ANALYSES

On February 18, 2014, MECI collected samples from ten (10) water supply wells. As discussed in Section 2.0, water supply well CP-WW is abandoned and the Gin House-WW could not be sampled due to the well being locked inside a fence and the property owner was unable to be located.

The samples obtained from the water supply wells were analyzed for volatile organic compounds including BTEX, naphthalene, methyl-tertiary-butyl-ether, 1,2 DCA, 8 oxygenates (EPA Method 8260B) and EDB (EPA method 8011). Results of the laboratory analyses are discussed in Section 5.2 and summarized in Table 3 & 3A. The analytical results are also presented in Appendix B.

## 4.6 SURFACE WATER SAMPLING AND CHEMICAL ANALYSIS

Two surface water samples were collected on February 18, 2014. SW-1 and SW-2 were collected from an unnamed intermittent creek associated with the Spur Creek. Surface water samples were collected adjacent to monitoring well MW-25 (SW-1) and approximately 250' feet southeast of MW-25 (SW-2). This creek may act as a point of local groundwater discharge.

The samples obtained from the surface water locales were analyzed for volatile organic compounds including BTEX, naphthalene, methyl-tertiary-butyl-ether, 1,2 DCA, 8 oxygenates (EPA Method 8260B) and EDB (EPA method 8011). Results of the laboratory analyses are discussed in Section 5.2 and summarized in Table 3 & 3A. The analytical results are also presented in Appendix B.

## 4.7 SITE SURVEY

Following the well installation, a comprehensive survey was conducted by Construction Support Services of Columbia, SC (Jay S. Joshi PLS# 14811) dated March 7, 2014 to locate the vertical and horizontal positions of the monitoring well network and relevant structures. A signed/stamped copy of the comprehensive survey is attached in Appendix A. See Table 2 and Figure 5 for monitoring well elevation data.

## 5.0 TEST RESULTS AND EVALUATION

The following sections discuss groundwater test results for the subject site.

## 5.1 GROUNDWATER ANALYTICAL RESULTS

As discussed in Section 4.4, groundwater samples obtained from the monitoring wells during the February 18, 2014 comprehensive groundwater sampling event were analyzed for dissolved phase petroleum constituents. Free phase petroleum product was detected in MW-3 at a thickness of 0.01 feet. Groundwater samples beneath the free product layer were not collected from MW-3 during the subject sampling event. The analytical results indicate petroleum impact to the surficial aquifer ("Shallow" Zone), with the highest dissolved concentrations being detected in the area of OMW-1 and MW-1R. Of the thirty-nine monitoring wells sampled, fourteen monitoring wells (OMW-1, MW-1R, MW-2, MW-4, MW-10, MW-11, MW-13R, MW-19, MW-20, MW-22, MW-25, MW-31, MW-35, DMW-39, and DMW-40) detected petroleum constituents above Risked Based Screening Levels (RBSL's). Petroleum constituents detected above the established RBSL include:

| ***Compound*** | ***RBSL (ug/l)*** | ***Wells Above RBSL*** |
|---|---|---|
| Benzene | 5 | OMW-1, MW-1R, MW-2, MW-4, MW-10, MW-11, MW-13R, MW-22, MW-35, & DMW-40 |
| Toluene | 1,000 | OMW-1, MW-1R, MW-2, & MW-10 |
| Ethylbenzene | 700 | OMW-1, MW-1R, MW-2, & MW-10 |
| Total Xylenes | 10,000 | OMW-1 & MW-1R |
| Naphthalene | 25 | OMW-1, MW-1R, MW-2, MW-4, MW-10, MW-13R, MW-22, MW-35, & DMW-40 |
| MTBE | 40 | OMW-1, MW-1R, MW-2, MW-4, MW-10, MW-11, MW-13R, MW-19, MW-20, MW-22, MW-25, MW-31, MW-35, DMW-39 & DMW-40 |
| EDB | 0.05 | OMW-1, MW-1R, MW-4, & MW-10 |

In addition, the analytical results also detected petroleum constituents above the laboratory method detection limit in monitoring wells MW-5, MW-7, MW-9, MW-16, MW-21, MW-23, MW-26, MW-27, MW-29, MW-33, MW-34, DMW-36, and DMW-37; however the concentrations detected did not exceed the RBSL. The results of the analyses for each monitoring well and specific parameters are listed on Table 3, Table 3A, and provided in Appendix B.

## 5.2 WATER SUPPLY WELL ANALYTICAL RESULTS

As discussed in section 4.5, water samples were obtained from ten water supply wells during the February 18, 2014 groundwater sampling event. The samples obtained from the above mentioned water supply wells were analyzed for petroleum constituents. The laboratory results from the samples obtained from CLS-WW, CP-WW2, EMS-WW, Café-WW, Old Service Station-WW, Scott-WW, Farm-WW, Major-WW, and Driver-WW did not indicate petroleum impact and all petroleum compounds were below detection limits. MTBE was detected above the method detection limit (1.8 micrograms per liter) in the sample obtained from the McCullough-WW; however this detection is below the established RBSL for MTBE. The results of the analysis for the water supply well and specific parameters are listed on Table 3, Table 3A, and provided in the laboratory reports (Appendix B).

## 5.3 SURFACE WATER SAMPLING AND CHEMICAL ANALYSIS

During the February 18, 2014 sampling event, two samples were collected from the nearby surface water (SW-1 & SW-2). Samples collected at SW-1 and SW-2 indicates MTBE concentrations above the method detection limit, but below the established RBSL. MTBE concentrations were detected at 1.5 micrograms per liter in SW-1 and at 1.4 micrograms per liter in SW-2. The results of the analysis for the surface water and specific parameters are listed on Table 3, Table 3A, and provided in the laboratory reports (Appendix B).

## 5.4 GROUNDWATER MOVEMENT

Groundwater movement is often related to topography, lithology, and elevation of recharge and discharge areas and man-made influences. Referenced groundwater elevations were determined by measuring the top of the monitoring well casing relative to a nearby datum elevation (see Figure 5) measuring the water level in the monitoring well, and computing the reference elevation of the groundwater at the time of measurement. Groundwater levels typically fluctuate with seasonal and rainfall variations.

Directions of groundwater flow were interpolated between monitoring wells by comparing the groundwater elevations at those locations considering the factors listed above. Locally, in the surficial aquifer, groundwater discharges into streams, lakes or springs where the groundwater table intersects lows occupied by these water bodies.

Groundwater elevation data from the February 18, 2014, gauging event was plotted and a groundwater contour map of the "shallow" aquifer was prepared. The data used to prepare the groundwater contour map (groundwater elevations in site monitoring wells) are summarized on Figure 5. The groundwater flow directions from the ""Shallow" surficial aquifer appear to be moving to south-southeast toward unnamed intermittent creek associated with the Spur Creek.

## 6.0 ASSESSMENT SUMMARY & RECOMMENDATIONS

Based on the results of our assessment activities, it appears that impact to the surficial aquifer has occurred due to a release of petroleum hydrocarbons. Free phase petroleum product was detected in monitoring well MW-3 during the February 18, 2014 sampling event. The analytical results indicate petroleum impact to the "shallow" surficial aquifer, with the highest dissolved concentrations being detected in the area of the former UST basin (OMW-01 & MW-1R). Additionally, the highest concentrations of dissolved phase petroleum constituents to the "deep" zone were detected in the area of DMW-40. Groundwater appears to be moving to the south-southeast toward unnamed intermittent creek associated with the Spur Creek.

Free phase petroleum product was detected in MW-3 at a thickness of 0.01 feet. Groundwater samples beneath the free product layer were not collected from MW-3 during the subject sampling event. The analytical results indicate petroleum impact to the surficial aquifer ("Shallow" Zone), with the highest dissolved concentrations being detected in the area of OMW-1 and MW-1R. Of the thirty-nine monitoring wells sampled, fourteen monitoring wells (OMW-1, MW-1R, MW-2, MW-4, MW-10, MW-11, MW-13R, MW-19, MW-20, MW-22, MW-25, MW-31, MW-35, DMW-39, and DMW-40) detected petroleum constituents above Risked Based Screening Levels (RBSL's). Petroleum constituents detected above the established RBSL include:

| ***Compound*** | ***RBSL (ug/l)*** | ***Wells Above RBSL*** |
|---|---|---|
| Benzene | 5 | OMW-1, MW-1R, MW-2, MW-4, MW-10, MW-11, MW-13R, MW-22, MW-35, & DMW-40 |
| Toluene | 1,000 | OMW-1, MW-1R, MW-2, & MW-10 |
| Ethylbenzene | 700 | OMW-1, MW-1R, MW-2, & MW-10 |
| Total Xylenes | 10,000 | OMW-1 & MW-1R |
| Naphthalene | 25 | OMW-1, MW-1R, MW-2, MW-4, MW-10, MW-13R, MW-22, MW-35, & DMW-40 |
| MTBE | 40 | OMW-1, MW-1R, MW-2, MW-4, MW-10, MW-11, MW-13R, MW-19, MW-20, MW-22, MW-25, MW-31, MW-35, DMW-39 & DMW-40 |
| EDB | 0.05 | OMW-1, MW-1R, MW-4, & MW-10 |

In addition, the analytical results also detected petroleum constituents above the laboratory method detection limit in monitoring wells MW-5, MW-7, MW-9, MW-16, MW-21, MW-23, MW-26, MW-27, MW-29, MW-33, MW-34, DMW-36, and DMW-37; however the concentrations detected did not exceed the RBSL.

Figures 4 (Benzene Isopleth), 4A (Toluene Isopleth), 4B (Ethylbenzene Isopleth), 4C (Total Xylenes Isopleth), 4D (Naphthalene Isopleth), and 4E (MTBE Isopleth) depict graphically the concentrations and approximate extent of each listed petroleum compound in the surficial aquifer at the site. Figure 4F presents the 8 oxygenates analytical data from all monitoring wells installed in conjunction with the subject UST release.

Based on current analytical results, the contaminant plume emanating from the subject site appears to be defined downgradient, both horizontally and vertically. The plume is not defined (sidegradient) to the west of MW-31/DMW-39; however this is due to property access issues with a very large tract of agricultural land. MECI recommends continued monitoring of the monitoring well network and

nearby receptors. Furthermore, MECI recommends a series of extended AFVR events be conducted on monitoring wells exhibiting free phase petroleum product and elevated concentrations of dissolved phase petroleum constituents.

## 7.0 QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assessment are consistent with those normally employed in hydrogeological assessment and waste management projects of this type. Our evaluation of site conditions has been based on our understanding of the site, project information provided to us, and data obtained in our exploration. The general subsurface conditions utilized in our evaluation have been based on interpretation of subsurface data between borings. Contents of this report are intended for the sole use of Mr. Frank Crawford, SCDHEC, and MECI under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

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# TABLES

**TABLE 1A**
**GROUNDWATER COC CONCENTRATION DATA (FIELD SCREENING)**
**CRAWFORD'S COUNTRY STORE**
**ABBEVILLE, SOUTH CAROLINA**
**MECI PROJECT NUMBER 13-4650**
**SCDHEC ID NUMBER 12335**

| Well Number | Sample Date | Sample Depth | Benzene (µg/l) | Toluene (µg/l) | Ethylbenzene (µg/l) | Total Xylenes (µg/l) | Naphthalene (µg/l) | MTBE (µg/l) |
|---|---|---|---|---|---|---|---|---|
| GPW-1 | 11/13/13 | 10-14 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-2 | 11/13/13 | 11-15 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 21 |
| GPW-3 | 11/13/13 | 10-14 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 7.0 |
| GPW-4 | 11/13/13 | 8-12 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-5 | 11/13/13 | 46-50 | 39 | <5.0 | <5.0 | <5.0 | <5.0 | 410E |
| GPW-6 | 11/13/13 | 41-45PR | 110 | <5.0 | <5.0 | 95 | 11 | 32 |
| GPW-7 | 11/13/13 | 20-24 | 0.46J | <5.0 | <5.0 | <5.0 | <5.0 | 1.7J |
| GPW-8 | 11/13/13 | 20-24 | 0.42J | <5.0 | <5.0 | <5.0 | <5.0 | 12 |
| GPW-9 | 11/13/13 | 20-24 | 0.23J | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-10 | 11/13/13 | 20-24 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-11 | 11/13/13 | 23-27 | 2.5J | <5.0 | <5.0 | <5.0 | <5.0 | 33 |
| GPW-12 | 11/13/13 | 23-27 | 170 | <25 | <25 | 10J | <25 | 2,600E |
| GPW-13 | 11/13/13 | 24-28 | 540 | <100 | <100 | <100 | <100 | 7,300E |
| GPW-14 | 11/14/13 | 24-28 | 170 | <50 | <50 | <50 | <50 | 4,200E |
| GPW-15 | 11/14/13 | 11-15 | 0.21J | <5.0 | <5.0 | <5.0 | <5.0 | 13 |
| GPW-16 | 11/14/13 | 10-14 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 3.0J |
| GPW-17 | 11/14/13 | 8-12 | 3.0J | <5.0 | <5.0 | <5.0 | <5.0 | 290E |
| GPW-18 | 11/14/13 | 8-12 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 2.3J |
| GPW-19 | 11/14/13 | 10-14 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 13 |
| GPW-20 | 11/14/13 | 23-27PR | 3.7J | <5.0 | <5.0 | <5.0 | <5.0 | 180 |
| GPW-21 | 11/14/13 | 8-12 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 1.2J |
| GPW-22 | 11/14/13 | 8-12 | 3.2J | <5.0 | <5.0 | <5.0 | <5.0 | 3.9J |
| GPW-23 | 11/14/13 | 24-28 | 0.88J | <5.0 | <5.0 | <5.0 | <5.0 | 130 |
| GPW-24 | 11/14/13 | 20-24 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 56 |
| GPW-25 | 11/14/13 | 10-14 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 0.67J |
| GPW-26 | 11/14/13 | 8-12 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 0.63J |
| GPW-27 | 12/3/13 | 21-25 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-28 | 12/3/13 | 39-43PR | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-29 | 12/3/13 | 26-30PR | 310 | <50 | <50 | 17J | <50 | 2,900E |
| GPW-30 | 12/3/13 | 18-22 | 1.3J | <5.0 | <5.0 | <5.0 | <5.0 | 150 |
| GPW-31 | 12/3/13 | 12-16PR | DRY | DRY | DRY | DRY | DRY | DRY |
| GPW-32 | 12/3/13 | 21-25PR | 0.52J | <5.0 | <5.0 | <5.0 | <5.0 | 17 |
| GPW-33 | 12/3/13 | 18-22 | 0.30J | <5.0 | <5.0 | <5.0 | <5.0 | 0.62J |
| GPW-34 | 12/3/13 | 11-15PR | DRY | DRY | DRY | DRY | DRY | DRY |
| GPW-35 | 12/3/13 | 22-26 | 0.23J | <5.0 | <5.0 | <5.0 | <5.0 | 17 |
| GPW-36 | 12/3/13 | 34-38PR | 340 | <100 | <100 | <100 | <100 | 5,500E |
| GPW-37 | 12/3/13 | 15-19PR | DRY | DRY | DRY | DRY | DRY | DRY |
| GPW-38 | 12/3/13 | 21-24 | 0.66J | <5.0 | <5.0 | <5.0 | <5.0 | 3.7J |
| GPW-39 | 12/4/13 | 45-49PR | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 2.4J |
| GPW-40 | 12/4/13 | 21-25 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-41 | 12/4/13 | 22-26 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-42 | 12/4/13 | 42-46PR | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 1.1J |
| GPW-43 | 12/4/13 | 22-26 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-44 | 12/4/13 | 5-9 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-45 | 12/4/13 | 5-9 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 0.53J |
| GPW-46 | 12/4/13 | 29-33PR | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-47 | 12/4/13 | 5-9 | <100 | <100 | <100 | <100 | <100 | 240 |
| GPW-48 | 12/4/13 | 21-25 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-49 | 12/4/13 | 21-25 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-50 | 12/4/13 | 21-25 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-51 | 12/4/13 | 21-25 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| EMS-WW | 11/13/13 | --- | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| McCollough-WW | 11/14/13 | --- | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 1.7J |

Notes:

1. BDL = Below Practical Quantitative Limits
2. µg/l = micrograms per liter
3. MTBE = Methyl-Tertiary-Butyl Ether
4. PR = Probe Refusal
5. "J" Values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
6. "J" Values used in Total BTEX Calculations
7. "E" Values = Quantitation of Compound exceeded calibration range

# TABLE 2
# PAGE 1 OF 2
# POTENTIOMETRIC DATA
# FEBRUARY 18, 2014 SAMPLING EVENT
# CRAWFORD'S COUNTRY STORE
# ABBEVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 13-4650
# SCDHEC SITE ID NUMBER 12335

| Well Number | Sample Date | Screened Interval (ft BGS) | Depth to Product (ft) | Depth to Water (ft) | Product Thickness | Well-head Elevation | Groundwater Elevation |
|---|---|---|---|---|---|---|---|
| OMW-1 | 05/16/11 | 7-22 | *** | 18.13 | *** | 97.50 | 79.37 |
| | 02/18/14 | - | *** | 16.16 | *** | 97.50 | 81.34 |
| MW-1R | 5/16/2011*** | 13-25 | 18.06 | 18.17 | 0.11 | 97.51 | 79.35 |
| | 02/18/14 | - | *** | 15.92 | *** | 97.51 | 81.59 |
| MW-2 | 05/16/11 | 10-25 | *** | 18.47 | *** | 97.57 | 79.10 |
| | 02/18/14 | - | *** | 16.49 | *** | 97.57 | 81.08 |
| MW-3 | 05/16/11 | 10-25 | *** | 18.18 | *** | 97.72 | 79.54 |
| | 2/18/2014*** | - | 17.04 | 17.05 | 0.01 | 97.72 | 80.67 |
| MW-4 | 05/16/11 | 10-25 | *** | 18.73 | *** | 97.37 | 78.64 |
| | 02/18/14 | - | *** | 17.02 | *** | 97.37 | 80.35 |
| MW-5 | 05/16/11 | 10-25 | *** | 17.58 | *** | 97.09 | 79.51 |
| | 02/18/14 | - | *** | 13.63 | *** | 97.09 | 83.46 |
| MW-6 | 05/16/11 | 10-25 | *** | NL | *** | NL | NL |
| | 02/18/14 | - | *** | NL | *** | NL | NL |
| MW-7 | 05/16/11 | 10-25 | *** | 16.04 | *** | 97.20 | 81.16 |
| | 02/18/14 | - | *** | 12.36 | *** | 97.20 | 84.84 |
| MW-8 | 05/16/11 | 10-25 | *** | 15.27 | *** | 100.09 | 84.82 |
| | 02/18/14 | - | *** | 9.54 | *** | 100.09 | 90.55 |
| MW-9 | 05/16/11 | 10-25 | *** | 17.37 | *** | 98.30 | 80.93 |
| | 02/18/14 | - | *** | 14.59 | *** | 98.30 | 83.71 |
| MW-10 | 05/16/11 | 10-25 | *** | 18.45 | *** | 97.40 | 78.95 |
| | 02/18/14 | - | *** | 16.61 | *** | 97.40 | 80.79 |
| MW-11 | 05/16/11 | 10-25 | *** | 16.65 | *** | 94.17 | 77.52 |
| | 02/18/14 | - | *** | 15.14 | *** | 94.17 | 79.03 |
| MW-12 | 05/16/11 | 10-25 | *** | 18.13 | *** | 96.32 | 78.19 |
| MW-12R | 02/18/14 | 15-25 | *** | 17.17 | *** | 97.17 | 80.00 |
| MW-13 | 05/16/11 | 10-25 | *** | 22.06 | *** | 98.74 | 76.68 |
| MW-13R | 05/16/11 | 18-30 | *** | 22.25 | *** | 98.95 | 76.70 |
| | 02/18/14 | - | *** | 20.47 | *** | 98.95 | 78.48 |
| MW-14 | 05/16/11 | 10-25 | *** | 8.77 | *** | 87.15 | 78.38 |
| | 02/18/14 | - | *** | 7.88 | *** | 87.15 | 79.27 |
| MW-15 | 05/16/11 | 10-25 | *** | NS | *** | 84.95 | NS |
| | 02/18/14 | - | *** | 3.81 | *** | 84.95 | 81.14 |
| MW-16 | 05/16/11 | 10-25 | *** | 11.74 | *** | 91.51 | 79.77 |
| | 02/18/14 | - | *** | 8.23 | *** | 91.51 | 83.28 |

Notes:

1. Groundwater depths were measured from the top of the PVC riser pipe.
2. NL = Not Located
3. *** = Groundwater elevation corrected for the presence of free phase petroleum product, using a specific gravity of 0.85 for fuel.
4. Elevations based on assumed site datum.

# TABLE 2
# PAGE 2 OF 2
# POTENTIOMETRIC DATA
# FEBRUARY 18, 2014 SAMPLING EVENT
# CRAWFORD'S COUNTRY STORE
# ABBEVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 13-4650
# SCDHEC SITE ID NUMBER 12335

| Well Number | Sample Date | Screened Interval (ft BGS) | Depth to Product (ft) | Depth to Water (ft) | Product Thickness | Well-head Elevation | Groundwater Elevation |
|---|---|---|---|---|---|---|---|
| DMW-17 | 05/16/11 | 70-75 | *** | 17.81 | *** | 97.83 | 80.02 |
| | 02/18/14 | - | *** | 15.45 | *** | 97.83 | 82.38 |
| MW-18 | 05/16/11 | 8-18 | *** | 9.12 | *** | 88.25 | 79.13 |
| | 02/18/14 | - | *** | 6.90 | *** | 88.25 | 81.35 |
| MW-19 | 05/16/11 | 15-25 | *** | 19.14 | *** | 97.30 | 78.16 |
| | 02/18/14 | - | *** | 19.15 | *** | 97.30 | 78.15 |
| MW-20 | 05/16/11 | 17-27 | *** | 22.19 | *** | 99.24 | 77.05 |
| | 02/18/14 | - | *** | 20.52 | *** | 99.24 | 78.72 |
| MW-21 | 05/16/11 | 15-25 | *** | 21.05 | *** | 96.79 | 75.74 |
| | 02/18/14 | - | *** | 19.57 | *** | 96.79 | 77.22 |
| MW-22 | 05/16/11 | 19-29 | *** | 21.93 | *** | 97.63 | 75.70 |
| | 02/18/14 | - | *** | 19.93 | *** | 97.63 | 77.70 |
| MW-23 | 05/16/11 | 13-23 | *** | 15.02 | *** | 92.38 | 77.36 |
| | 02/18/14 | - | *** | 12.82 | *** | 92.38 | 79.56 |
| MW-24 | 02/18/14 | 2-12 | *** | 0.52 | *** | 71.04 | 70.52 |
| MW-25 | 02/18/14 | 2-12 | *** | 0.00 | *** | 68.73 | 68.73 |
| MW-26 | 02/18/14 | 2-12 | *** | 0.00 | *** | 71.50 | 71.50 |
| MW-27 | 02/18/14 | 2-12 | *** | 3.24 | *** | 79.32 | 76.08 |
| MW-28 | 02/18/14 | 14-24 | *** | 17.48 | *** | 88.09 | 70.61 |
| MW-29 | 02/18/14 | 15-25 | *** | 16.99 | *** | 88.25 | 71.26 |
| MW-30 | 02/18/14 | 14-24 | *** | 15.62 | *** | 88.29 | 72.67 |
| MW-31 | 02/18/14 | 14-24 | *** | 16.42 | *** | 92.70 | 76.28 |
| MW-32 | 02/18/14 | 14-24 | *** | 16.25 | *** | 94.46 | 78.21 |
| MW-33 | 02/18/14 | 17-27 | *** | 18.94 | *** | 99.16 | 80.22 |
| MW-34 | 02/18/14 | 5-15 | *** | 5.85 | *** | 85.10 | 79.25 |
| MW-35 | 02/18/14 | 18-28 | *** | 18.88 | *** | 95.08 | 76.20 |
| DMW-36 | 02/18/14 | 55-60 | *** | 18.09 | *** | 88.50 | 70.41 |
| DMW-37 | 02/18/14 | 45-50 | *** | 16.18 | *** | 87.65 | 71.47 |
| DMW-38 | 02/18/14 | 45-50 | *** | 20.10 | *** | 99.25 | 79.15 |
| DMW-39 | 02/18/14 | 30-35 | *** | 16.33 | *** | 92.77 | 76.44 |
| DMW-40 | 02/18/14 | 45-50 | *** | 20.79 | *** | 99.25 | 78.46 |

Notes:

1. Groundwater depths were measured from the top of the PVC riser pipe.
2. NL = Not Located
3. *** = Groundwater elevation corrected for the presence of free phase petroleum product, using a specific gravity of 0.85 for fuel.
4. Elevations based on assumed site datum.

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# GROUNDWATER COC CONCENTRATION DATA
## FEBRUARY 18, 2014 SAMPLING EVENT
## CRAWFORD'S COUNTRY STORE
## ABBEVILLE, SOUTH CAROLINA
## MECI PROJECT NUMBER 13-4650
## SCDHEC ID NUMBER 12335

| Well Number | Sample Date | Benzene (µg/l) | Toluene (µg/l) | Ethylbenzene (µg/l) | Total Xylenes (µg/l) | Total BTEX (µg/l) | Naphthalene (µg/l) | MTBE (µg/l) | 1,2 DCA (µg/l) | EDB (µg/l) | Total Lead (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 05/16/11 | 6,110 | 50,000 | 3,130 | 20,600 | 79,840 | <2,500 | 1,420J | <2,500 | 9.9 | <5.0 |
| | 02/18/14 | 4,300 | 39,000 | 2,900 | 21,000 | 67,200 | 2,700 | 380J | <2,500 | 3.2 | NT |
| MW-1R | 05/16/11 | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD |
| | 02/18/14 | 9,300 | 58,000 | 4,500J | 27,000 | 98,800J | 6,000 | 2,500J | <5,000 | 0.22P | NT |
| MW-2 | 05/16/11 | 5,210 | 778 | 1,870 | 1,080 | 8,938 | 387 | 3,530 | <5.0 | <0.021 | <5.0 |
| | 02/18/14 | 3,100 | 1,000 | 2,100 | 3,700 | 9,900 | 330 | 280 | <250 | 0.041P | NT |
| MW-3 | 05/16/11 | 4,000 | 22,700 | 2,730 | 13,900 | 43,330 | 388 | 5,830 | <125 | 1.8 | <5.0 |
| | 02/18/14 | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD |
| MW-4 | 05/16/11 | 904 | 544 | 1,430 | 263 | 3,141 | 549 | 436 | <50.0 | 0.46 | 6.3 |
| | 02/18/14 | 160 | 14J | 24J | 20J | 218J | 190 | 180 | <25 | 0.16 | NT |
| MW-5 | 05/16/11 | 17.2 | 111 | 222 | 167 | 517.2 | 26.0 | 7.0J | <12.5 | <0.020 | 5.6 |
| | 02/18/14 | 3.9J | 19 | 34 | 82 | 138.9J | 9.3 | <5.0 | <5.0 | <0.020 | NT |
| MW-6 | 05/16/11 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL |
| | 02/18/14 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | <5.0 |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | 4.7J | <5.0 | <5.0 | <0.020 | NT |
| MW-8 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | 0.041 | <5.0 |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 | NT |
| MW-9 | 05/16/11 | 2.6J | 8.8 | 4.1J | 101 | 116.5J | 2.1J | 5.2 | <5.0 | <0.020 | <5.0 |
| | 02/18/14 | 1.3J | 3.2J | <5.0 | 17 | 21.5J | 2.7J | 4.1J | <5.0 | <0.020 | NT |
| MW-10 | 05/16/11 | 12,300 | 28,200 | 3,830 | 20,600 | 64,930 | 610J | 13,100 | <1,000 | 2.9 | <5.0 |
| | 02/18/14 | 4,700 | 5,000 | 1,800 | 8,100 | 19,600 | <250 | 4,200 | <250 | 1.2 | NT |
| MW-11 | 05/16/11 | 32.9 | <5.0 | <5.0 | <10.0 | 32.9 | 5.3 | 855 | <5.0 | <0.020 | <5.0 |
| | 02/18/14 | 150 | <100 | <100 | <100 | 150 | <100 | 1,800 | <100 | <0.020 | NT |
| MW-12 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 53.0 | <5.0 | 0.051 | <5.0 |
| MW-12R | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| MW-13 | 05/16/11 | 4.7J | <5.0 | <5.0 | <10.0 | 4.7J | <5.0 | 4,220 | <5.0 | <0.020 | 4.0J |
| MW-13R | 05/16/11 | 530 | <5.0 | <5.0 | 27.6 | 557.6 | 32.9 | 15,600 | 15.3 | <0.019 | <5.0 |
| | 02/18/14 | 86J | <100 | <100 | <100 | 86J | <100 | 3,700 | <100 | <0.019 | NT |
| MW-14 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 1.9J | <5.0 | <0.019 | <5.0 |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |

Notes:

1. BDL = Below Practical Quantitative Limits
2. ug/l = micrograms per liter
3. NS = Not Sampled
4. MTBE = Methyl-Tertiary-Butyl Ether
5. "P" Values = The RPF between two GC columns exceeds 40%
6. 1,2 DCA = 1,2-Dichloroethane
7. NL = Not Located
8. EDB = Ethylene Dibromide
9. "J" Values used in Total BTEX Calculations
10. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
11. PROD = Free phase petroleum product encountered

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# GROUNDWATER COC CONCENTRATION DATA
## FEBRUARY 18, 2014 SAMPLING EVENT
## CRAWFORD'S COUNTRY STORE
## ABBEVILLE, SOUTH CAROLINA
## MECI PROJECT NUMBER 13-4650
## SCDHEC ID NUMBER 12335

| Well Number | Sample Date | Benzene (µg/l) | Toluene (µg/l) | Ethylbenzene (µg/l) | Total Xylenes (µg/l) | Total BTEX (µg/l) | Naphthalene (µg/l) | MTBE (µg/l) | 1,2 DCA (µg/l) | EDB (µg/l) | Total Lead (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-15 | 05/16/11 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| MW-16 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | <5.0 |
| | 02/18/14 | <5.0 | **32** | **2.9J** | <5.0 | **34.9J** | <5.0 | <5.0 | <5.0 | <0.019 | NT |
| DMW-17 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | **20.4** |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 | NT |
| MW-18 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 | **4.0J** |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 | NT |
| MW-19 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | **405** | <5.0 | **0.15** | **22.9** |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **100** | <5.0 | <0.019 | NT |
| MW-20 | 05/16/11 | **4.4J** | <5.0 | <5.0 | <10.0 | **4.4J** | <5.0 | **324** | <5.0 | **0.039** | **14.8** |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **280** | <5.0 | <0.020 | NT |
| MW-21 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | **153** | <5.0 | **0.051** | **108** |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **27** | <5.0 | <0.019 | NT |
| MW-22 | 05/16/11 | **269** | <5.0 | <5.0 | **21.6** | **290.6** | **8.7** | **4,010** | **4.4J** | **0.22** | **11.2** |
| | 02/18/14 | **110** | <100 | <100 | <100 | **110** | <100 | **1,700** | <100 | <0.020 | NT |
| MW-23 | 05/16/11 | **2.2J** | <5.0 | <5.0 | <10.0 | **2.2J** | <5.0 | **33.1** | <5.0 | <0.019 | <5.0 |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **11** | <5.0 | <0.019 | NT |
| MW-24 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.024 | NT |
| MW-25 | 02/18/14 | **0.30J** | <5.0 | <5.0 | <5.0 | **0.30J** | <5.0 | **96** | <5.0 | <0.020 | NT |
| MW-26 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **0.81J** | <5.0 | <0.021 | NT |
| MW-27 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **11** | <5.0 | <0.021 | NT |
| MW-28 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| MW-29 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **1.4J** | <5.0 | <0.020 | NT |
| MW-30 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| MW-31 | 02/18/14 | **7.7** | <5.0 | <5.0 | <5.0 | **7.7** | <5.0 | **220** | <5.0 | <0.020 | NT |
| MW-32 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| MW-33 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **0.99J** | <5.0 | <0.020 | NT |
| MW-34 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **0.73J** | <5.0 | <0.021 | NT |

Notes:

1. BDL = Below Practical Quantitative Limits
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3. NS = Not Sampled
4. MTBE = Methyl-Tertiary-Butyl Ether
5. "P" Values = The RPF between two GC columns exceeds 40%
6. 1,2 DCA = 1,2-Dichloroethane
7. NL = Not Located
8. EDB = Ethylene Dibromide
9. "J" Values used in Total BTEX Calculations
10. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL)
11. PROD = Free phase petroleum product encountered

# GROUNDWATER COC CONCENTRATION DATA
## FEBRUARY 18, 2014 SAMPLING EVENT
## CRAWFORD'S COUNTRY STORE
## ABBEVILLE, SOUTH CAROLINA
## MECI PROJECT NUMBER 13-4650
## SCDHEC ID NUMBER 12335

| Well Number | Sample Date | Benzene (µg/l) | Toluene (µg/l) | Ethylbenzene (µg/l) | Total Xylenes (µg/l) | Total BTEX (µg/l) | Naphthalene (µg/l) | MTBE (µg/l) | 1,2 DCA (µg/l) | EDB (µg/l) | Total Lead (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-35 | 02/18/14 | 320 | <250 | <250 | <250 | 320 | <250 | 8,000 | <250 | 0.031P | NT |
| DMW-36 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.63J | <5.0 | <0.020 | NT |
| DMW-37 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 1.1J | <5.0 | <0.020 | NT |
| DMW-38 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| DMW-39 | 02/18/14 | 1.6J | <5.0 | <5.0 | <5.0 | 1.6J | <5.0 | 150 | <5.0 | <0.020 | NT |
| DMW-40 | 02/18/14 | 98 | <25 | <25 | <25 | 98 | <25 | 490 | <25 | <0.020 | NT |
| CLS-WW | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 | NT |
| | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 | NT |
| CP-WW2 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | NT | NT |
| | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 | NT |
| EMS-WW | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 | NT |
| McCollough-WW | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.8 | <1.0 | <0.020 | NT |
| Café-WW | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 | NT |
| Old Service Station-WW | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 | NT |
| Scott-WW | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 | NT |
| Farm-WW | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 | NT |
| Major-WW | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 | NT |
| Driver-WW | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 | NT |
| Gin House-WW | 02/18/14 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| CK-1 | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.5 | <1.0 | <0.020 | NT |
| CK-2 | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.4 | <1.0 | <0.019 | NT |
| MW-2 Duplicate | 02/18/14 | 3,200 | 1,000 | 2,000 | 3,600 | 9,800 | 350 | 290 | <250 | <0.020 | NT |
| MW-9 Duplicate | 02/18/14 | 2.2J | 4.7J | <5.0 | 46 | 52.9J | 2.5J | 3.9J | <5.0 | <0.020 | NT |
| MW-10 Duplicate | 02/18/14 | 4,700 | 4,400 | 1,700 | 7,300 | 18,100 | 280 | 3,700 | <250 | 0.97 | NT |
| Field Blank | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| Trip Blank | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | NT | NT |

Notes:

1. BDL = Below Practical Quantitative Limits
2. µg/l = micrograms per liter
3. NS = Not Sampled
4. MTBE = Methyl-Tertiary-Butyl Ether
5. "P" Values = The RPF between two GC columns exceeds 40%
6. 1,2 DCA = 1,2-Dichloroethane
7. NL = Not Located
8. EDB = Ethylene Dibromide
9. "J" Values used in Total BTEX Calculations
10. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
11. PROD = Free phase petroleum product encountered

# TABLE 3A

## GROUNDWATER COC CONCENTRATION DATA (OXYGENATES)
## FEBRUARY 18, 2014 SAMPLING EVENT
## CRAWFORD'S COUNTRY STORE
## ABBEVILLE, SOUTH CAROLINA
## MECI PROJECT NUMBER 13-4650
## SCDHEC SITE ID NUMBER 12335

| Well Number | Sample Date | tert-Amyl alcohol (µg/l) | tert-Amyl methyl ether (µg/l) | tert-Butyl Formate (µg/l) | Diisopropyl ether (µg/l) | 3,3-Dimethyl-1-butanol (µg/l) | Ethanol (µg/l) | Ethyl tert-butyl ether (µg/l) | tert Butyl Alcohol (µg/l) |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 5/16/2011 | <50,000 | <5,000 | <25,000 | 7,500 | <50,000 | <100,000 | <5,000 | <50,000 |
| | 2/18/2014 | 53,000 | 740J | <50,000 | 2,900J | <50,000 | <500,000 | <50,000 | <50,000 |
| MW-1R | 5/16/2011 | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD |
| | 2/18/2014 | 110,000 | 990J | <100,000 | 8,100J | <100,000 | <1,000,000 | <100,000 | <100,000 |
| MW-2 | 5/16/2011 | 5,700 | 532 | <2,500 | 4,990 | <5,000 | <10,000 | <500 | <5,000 |
| | 2/18/2014 | 620J | 240J | <5,000 | 1,800 | <5,000 | <50,000 | <5,000 | <5,000 |
| MW-3 | 5/16/2011 | 16,200 | 1,260 | <1,250 | 6,070 | <2,500 | <5,000 | <250 | <2,500 |
| | 2/18/2014 | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD |
| MW-4 | 5/16/2011 | 1,920 | <100 | <500 | 582 | <1,000 | <2,000 | <100 | <1,000 |
| | 2/18/2014 | 1,200 | 4.2J | <500 | 92 | <500 | <5,000 | <500 | 310J |
| MW-5 | 5/16/2011 | 195J | <25.0 | <125 | 6.2J | <250 | <500 | <25.0 | <250 |
| | 2/18/2014 | 110 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-6 | 5/16/2011 | NL | NL | NL | NL | NL | NL | NL | NL |
| | 2/18/2014 | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | 5/16/2011 | <100 | <10.0 | <50.0 | <5.0 | <100 | <200 | <10.0 | <100 |
| | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-8 | 5/16/2011 | <100 | <10.0 | <50.0 | <5.0 | <100 | <200 | <10.0 | <100 |
| | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-9 | 5/16/2011 | <100 | <10.0 | <50.0 | 7.7 | <100 | <200 | <10.0 | <100 |
| | 2/18/2014 | <100 | <10 | <100 | 5.0J | <100 | <1,000 | <100 | <100 |
| MW-10 | 5/16/2011 | <20,000 | 2,650 | <10,000 | 15,700 | <20,000 | <40,000 | <2,000 | <20,000 |
| | 2/18/2014 | 11,000 | 1,100 | <5,000 | 7,000 | <5,000 | <50,000 | <5,000 | 1,400J |
| MW-11 | 5/16/2011 | 469 | 46.0 | <50.0 | 454 | <100 | <200 | <10.0 | 160 |
| | 2/18/2014 | 2,200 | 120J | <2,000 | 1,300 | <2,000 | <20,000 | <2,000 | 1,000J |
| MW-12 | 5/16/2011 | 549 | <10.0 | <50.0 | 9.0 | <100 | <200 | <10.0 | 145 |
| MW-12R | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-13 | 5/16/2011 | 82.8J | 95.6 | <50.0 | 808 | <100 | <200 | <10.0 | <100 |
| MW-13R | 5/16/2011 | 3,110 | 510 | <50.0 | 4,860 | <100 | <200 | <10.0 | 1,090 |
| | 2/18/2014 | 790J | 130J | <2,000 | 1,200 | <2,000 | <20,000 | <2,000 | 220J |
| MW-14 | 5/16/2011 | 570 | <10.0 | <50.0 | <5.0 | <100 | <200 | <10.0 | 137 |
| | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |

Notes:
1. µg/l = micrograms per liter
2. NL = Not Located
3. PROD = Free Phase Petroleum Product
4. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
5. NS = Not Sampled

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GROUNDWATER ANALYTICAL RESULTS (OXYGENATES)
FEBRUARY 18, 2014 SAMPLING EVENT
CRAWFORD'S COUNTRY STORE
ABBEVILLE, SOUTH CAROLINA
MECI PROJECT NUMBER 13-4650
SCDHEC SITE ID NUMBER 12335

| Well Number | Sample Date | tert-Amyl alcohol (µg/l) | tert-Amyl methyl ether (TAME) (µg/l) | tert-Butyl Formate (µg/l) | Diisopropyl ether (µg/l) | 2,3-Dimethyl-2-butanol (µg/l) | Ethanol (µg/l) | Ethyl tert-butyl ether (µg/l) | tert Butyl Alcohol (µg/l) |
|---|---|---|---|---|---|---|---|---|---|
| MW-15 | 5/16/2011 | NS | NS | NS | NS | NS | NS | NS | NS |
| | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-16 | 5/16/2011 | <100 | <10.0 | <50.0 | <5.0 | <100 | <200 | <10.0 | <100 |
| | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| DMW-17 | 5/16/2011 | <100 | <10.0 | <50.0 | <5.0 | <100 | <200 | <10.0 | <100 |
| | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-18 | 5/16/2011 | <100 | <10.0 | <50.0 | <5.0 | <100 | <200 | <10.0 | <100 |
| | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-19 | 5/16/2011 | <100 | <10.0 | <50.0 | 40.2 | <100 | <200 | <10.0 | <100 |
| | 2/18/2014 | <100 | 0.41J | <100 | 15 | <100 | <1,000 | <100 | <100 |
| MW-20 | 5/16/2011 | 118 | 11.1 | <50.0 | 110 | <100 | <200 | <10.0 | <100 |
| | 2/18/2014 | <100 | 5.4J | <100 | 66 | <100 | <1,000 | <100 | <100 |
| MW-21 | 5/16/2011 | <100 | <10.0 | <50.0 | 9.0 | <100 | <200 | <10.0 | <100 |
| | 2/18/2014 | <100 | <10 | <100 | 1.1J | <100 | <1,000 | <100 | <100 |
| MW-22 | 5/16/2011 | 629 | 107 | <50.0 | 1,350 | <100 | <200 | <10.0 | 444 |
| | 2/18/2014 | 2,300 | 34J | <2,000 | 620 | <2,000 | <20,000 | <2,000 | <2,000 |
| MW-23 | 5/16/2011 | <100 | <10.0 | <50.0 | 26.8 | <100 | <200 | <10.0 | <100 |
| | 2/18/2014 | 110 | <10 | <100 | 8.1J | <100 | 80J | <100 | <100 |
| MW-24 | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-25 | 2/18/2014 | <100 | <10 | <100 | 13 | <100 | <1,000 | <100 | <100 |
| MW-26 | 2/18/2014 | <100 | <10 | <100 | 1.5J | <100 | <1,000 | <100 | <100 |
| MW-27 | 2/18/2014 | <100 | <10 | <100 | 5.2J | <100 | <1,000 | <100 | <100 |
| MW-28 | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-29 | 2/18/2014 | <100 | <10 | <100 | 0.70J | <100 | <1,000 | <100 | <100 |
| MW-30 | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-31 | 2/18/2014 | 130 | 4.9J | <100 | 67 | <100 | <1,000 | <100 | 12J |
| MW-32 | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-33 | 2/18/2014 | <100 | <10 | <100 | 0.82J | <100 | <1,000 | <100 | <100 |
| MW-34 | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | 1,900 | <100 | <100 |

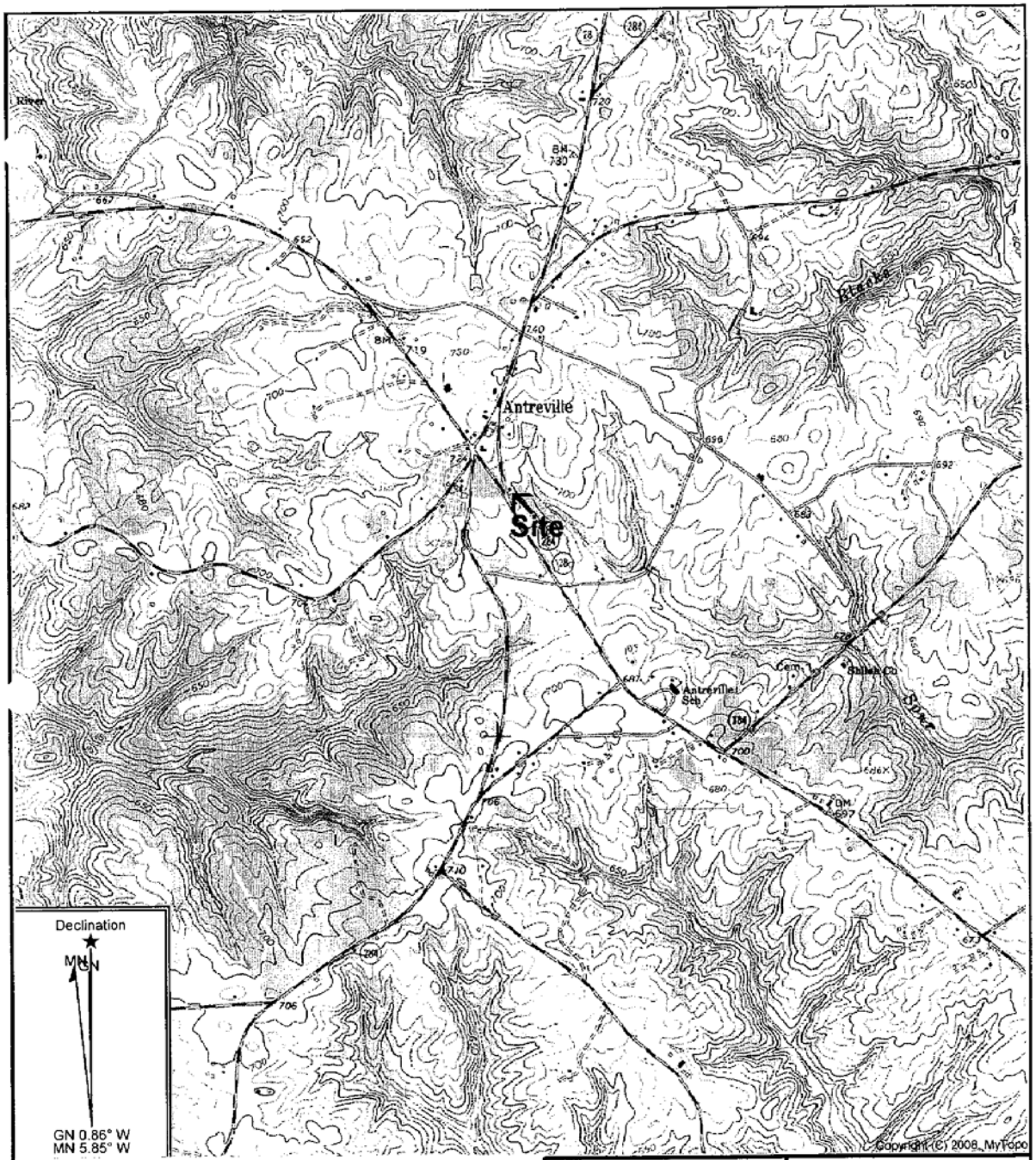
Notes:
1. µg/l = micrograms per liter
2. NL = Not Located
3. PROD = Free Phase Petroleum Product
4. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
5. NS = Not Sampled

# TABLE 3A
# PAGE 3 OF 3
# GROUNDWATER ANALYTICAL RESULTS (OXYGENATES)
# FEBRUARY 18, 2014 SAMPLING EVENT
# CRAWFORD'S COUNTRY STORE
# ABBEVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 13-4650
# SCDHEC SITE ID NUMBER 12335

| Well Number | Sample Date | tert-Amyl alcohol (µg/l) | tert-Amyl methyl ether (µg/l) | tert-Butyl Formate (µg/l) | Diisopropyl ether (µg/l) | 3,3-Dimethyl-1-butanol (µg/l) | Ethanol (µg/l) | Ethyl tert-butyl ether (µg/l) | tert Butyl Alcohol (µg/l) |
|---|---|---|---|---|---|---|---|---|---|
| MW-35 | 2/18/2014 | **5,600** | **85J** | <5,000 | **1,600** | <5,000 | <50,000 | <5,000 | <5,000 |
| DMW-36 | 2/18/2014 | <100 | <10 | <100 | **1.4J** | <100 | <1,000 | <100 | <100 |
| DMW-37 | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| DMW-38 | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| DMW-39 | 2/18/2014 | **120** | **4.7J** | <100 | **47** | <100 | <1,000 | <100 | **33J** |
| DMW-40 | 2/18/2014 | **280J** | **24J** | <500 | **320** | <500 | <5,000 | <500 | **41J** |
| CLS-WW | 5/16/2011 | <100 | <10.0 | <50.0 | <5.0 | <100 | <200 | <10.0 | <100 |
| | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| CP-WW2 | 5/16/2011 | <100 | <10.0 | <50.0 | <5.0 | <100 | <200 | <10.0 | <100 |
| | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| EMS-WW | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| McCollough-WW | 2/18/2014 | <100 | <10 | <100 | **3.5J** | <100 | <1,000 | <100 | <100 |
| Café-WW | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| Old Service Station-WW | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| Scott-WW | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| Farm-WW | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| Major-WW | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| Driver-WW | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| Gin House-WW | 2/18/2014 | NS | NS | NS | NS | NS | NS | NS | NS |
| CK-1 | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| CK-2 | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-2 Duplicate | 2/18/2014 | **570J** | **250J** | <5,000 | **1,800** | <5,000 | <50,000 | <5,000 | <5,000 |
| MW-9 Duplicate | 2/18/2014 | <100 | <10 | <100 | **5.4J** | <100 | <1,000 | <100 | <100 |
| MW-10 Duplicate | 2/18/2014 | **8,600** | **1,000** | <5,000 | **5,800** | <5,000 | <50,000 | <5,000 | **1,100J** |
| Field Blank | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| Trip Blank | 2/18/2014 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |

Notes:
1. µg/l = micrograms per liter
2. NL = Not Located
3. PROD = Free Phase Petroleum Product
4. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
5. NS = Not Sampled

**FIGURES**



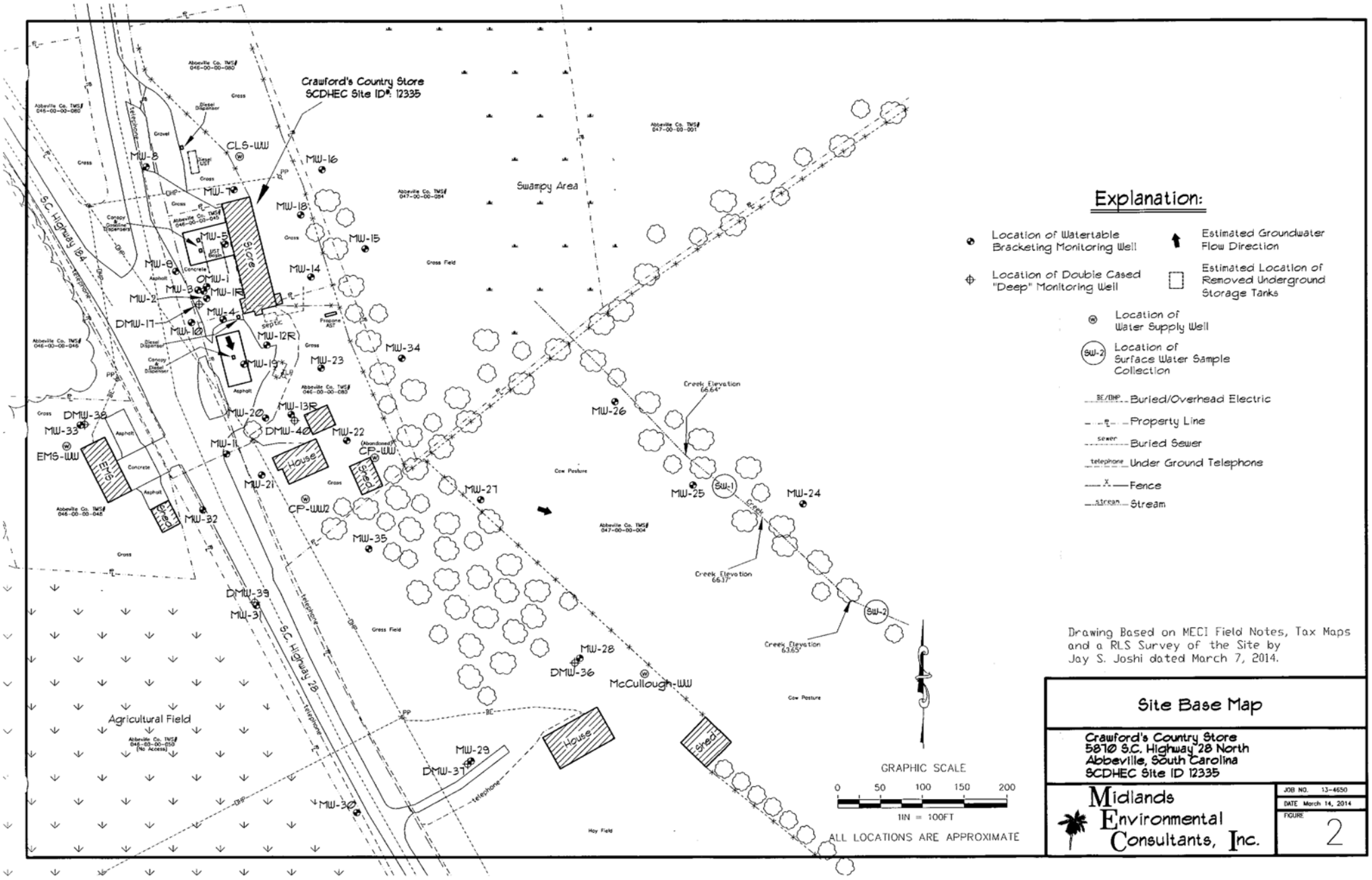

GRAPHIC SCALE

0 1000 2000 4000

1IN = 2000FT

Reference: Antreville, South Carolina
USGS 7.5 Min. Quad
Contour Interval = 10 Feet

| | |
|---|---|
| Midlands Environmental Consultants, Inc. | Site Location |
| Crawford's Country Store<br>5870 South Carolina 28 North, Abbeville, SC<br>SCDHEC Site ID# 12335 | |
| Figure 1 | MECI 11-3327 |

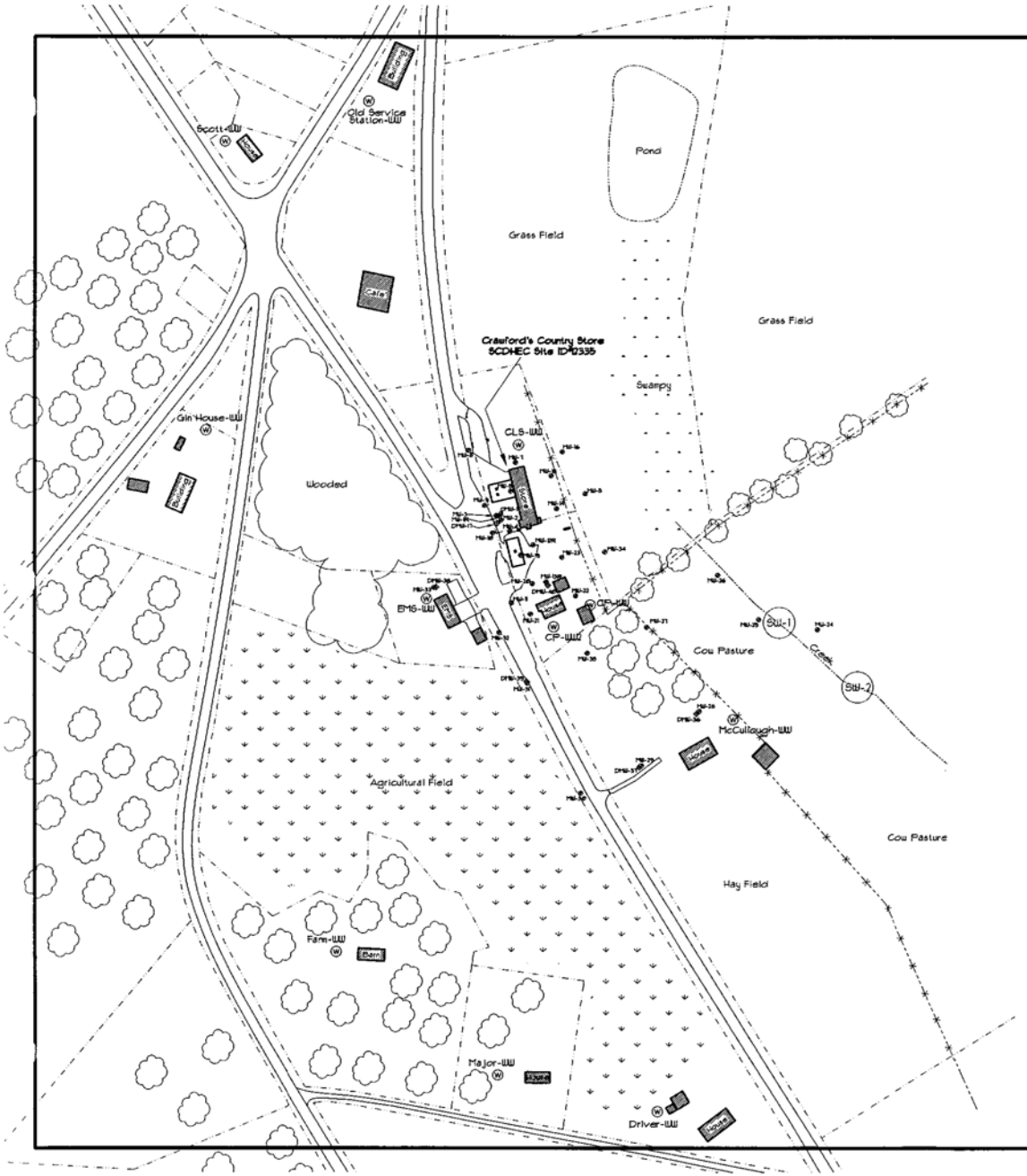



# Site Base Map

Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 13-4650
DATE March 14, 2014
FIGURE 2




## Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased "Deep" Monitoring Well
- Location of Water Supply Well
- SW-2 Location of Surface Water Sample Collection
- Property Line

GRAPHIC SCALE

0 125 250 375 500

1IN = 250FT

ALL LOCATIONS ARE APPROXIMATE

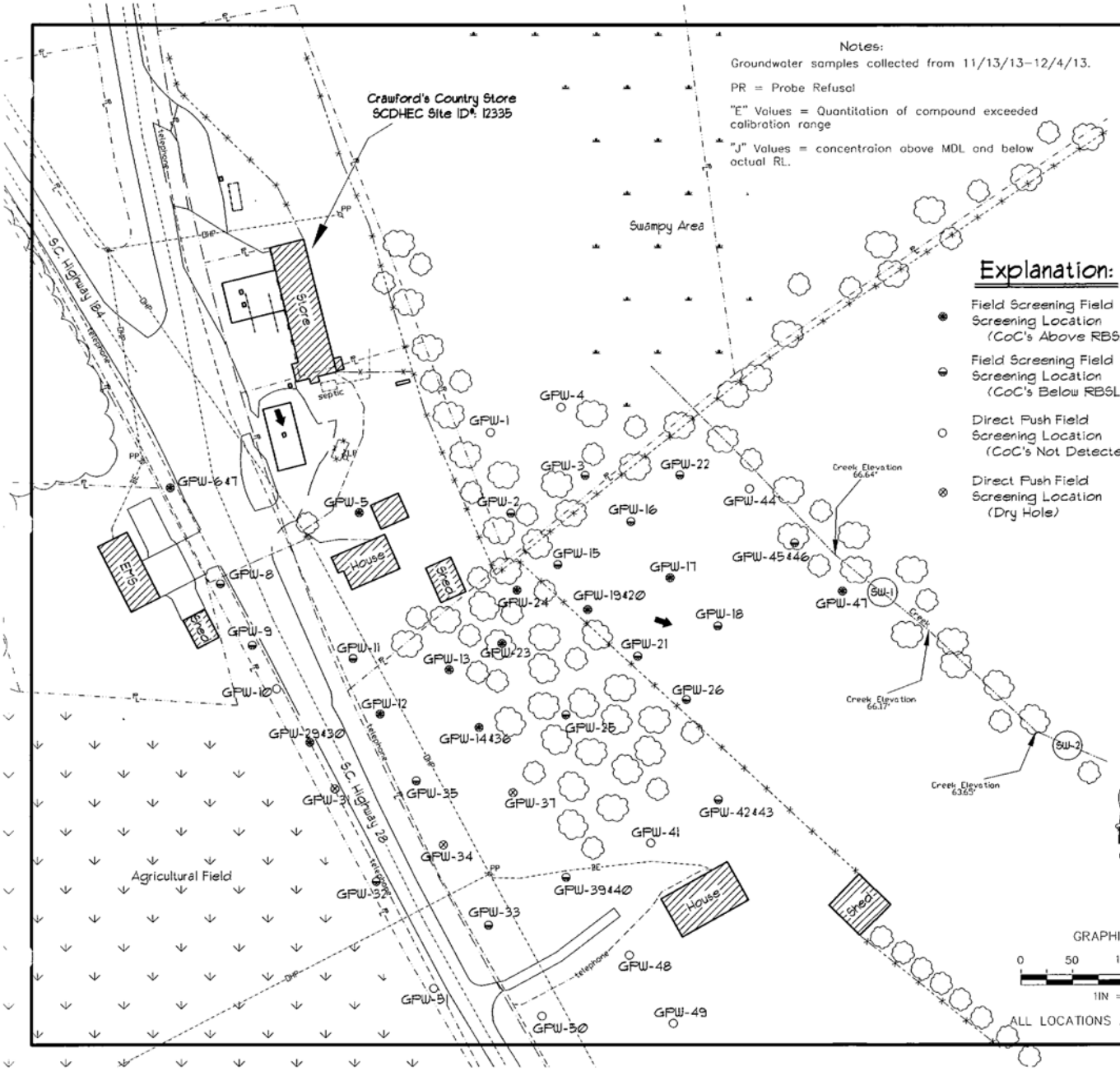
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

# Site Base Map (Receptors)

Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 13-4650
DATE March 14, 2014
FIGURE 2A




Notes:

Groundwater samples collected from 11/13/13–12/4/13.

PR = Probe Refusal

"E" Values = Quantitation of compound exceeded calibration range

"J" Values = concentraion above MDL and below actual RL.

## Explanation:

- Field Screening Field Screening Location (CoC's Above RBSL's)
- Field Screening Field Screening Location (CoC's Below RBSL's)
- Direct Push Field Screening Location (CoC's Not Detected)
- Direct Push Field Screening Location (Dry Holes)

GRAPHIC SCALE

0 50 100 150 200

1IN = 100FT

ALL LOCATIONS ARE APPROXIMATE

**Groundwater CoC Concentration Data (Field Screening)**

| Sample # | Sample Depth (ft) | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Total Xylenes (ug/l) | Naphthalene (ug/l) | MTBE (ug/l) |
|---|---|---|---|---|---|---|---|
| GPW-1 | 10-14 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-2 | 11-15 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 21 |
| GPW-3 | 10-14 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 7.0 |
| GPW-4 | 8-12 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-5 | 46-50 | 39 | <5.0 | <5.0 | <5.0 | <5.0 | 410E |
| GPW-6 | 41-45PR | 110 | <5.0 | <5.0 | 95 | 11 | 32 |
| GPW-7 | 20-24 | 0.46J | <5.0 | <5.0 | <5.0 | <5.0 | 1.7J |
| GPW-8 | 20-24 | 0.42J | <5.0 | <5.0 | <5.0 | <5.0 | 12 |
| GPW-9 | 20-24 | 0.23J | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-10 | 20-24 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-11 | 23-27 | 2.5J | <5.0 | <5.0 | <5.0 | <5.0 | 33 |
| GPW-12 | 23-27 | 170 | <25 | <25 | 10J | <25 | 2,600E |
| GPW-13 | 24-28 | 540 | <100 | <100 | <100 | <100 | 7,300E |
| GPW-14 | 24-28 | 170 | <50 | <50 | <50 | <50 | 4,200E |
| GPW-15 | 11-15 | 0.21J | <5.0 | <5.0 | <5.0 | <5.0 | 13 |
| GPW-16 | 10-14 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 3.0J |
| GPW-17 | 8-12 | 3.0J | <5.0 | <5.0 | <5.0 | <5.0 | 290E |
| GPW-18 | 8-12 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 2.3J |
| GPW-19 | 10-14 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 13 |
| GPW-20 | 23-27PR | 3.7J | <5.0 | <5.0 | <5.0 | <5.0 | 180 |
| GPW-21 | 8-12 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 1.2J |
| GPW-22 | 8-12 | 3.2J | <5.0 | <5.0 | <5.0 | <5.0 | 3.9J |
| GPW-23 | 24-28 | 0.88J | <5.0 | <5.0 | <5.0 | <5.0 | 130 |
| GPW-24 | 20-24 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 56 |
| GPW-25 | 10-14 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 0.67J |
| GPW-26 | 8-12 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 0.63J |
| GPW-27 | 21-25 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-28 | 39-43PR | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-29 | 26-30PR | 310 | <50 | <50 | 17J | <50 | 2,900E |
| GPW-30 | 18-22 | 1.3J | <5.0 | <5.0 | <5.0 | <5.0 | 150 |
| GPW-31 | 12-16PR | DRY | DRY | DRY | DRY | DRY | DRY |
| GPW-32 | 21-25PR | 0.52J | <5.0 | <5.0 | <5.0 | <5.0 | 17 |
| GPW-33 | 18-22 | 0.30J | <5.0 | <5.0 | <5.0 | <5.0 | 0.62J |
| GPW-34 | 11-15PR | DRY | DRY | DRY | DRY | DRY | DRY |
| GPW-35 | 22-26 | 0.23J | <5.0 | <5.0 | <5.0 | <5.0 | 17 |
| GPW-36 | 34-38PR | 340 | <100 | <100 | <100 | <100 | 5,500E |
| GPW-37 | 15-19PR | DRY | DRY | DRY | DRY | DRY | DRY |
| GPW-38 | 21-24 | 0.66J | <5.0 | <5.0 | <5.0 | <5.0 | 3.7J |
| GPW-39 | 45-49PR | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 2.4J |
| GPW-40 | 21-25 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-41 | 22-26 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-42 | 42-46PR | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 1.1J |
| GPW-43 | 22-26 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-44 | 5-9 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-45 | 5-9 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 0.53J |
| GPW-46 | 29-33PR | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-47 | 5-9 | <100 | <100 | <100 | <100 | <100 | 240 |
| GPW-48 | 21-25 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-49 | 21-25 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-50 | 21-25 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| GPW-51 | 21-25 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| EMS-WW | --- | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 |
| McCollough-WW | --- | <5.0 | <5.0 | <5.0 | <5.0 | <5.0 | 1.7J |

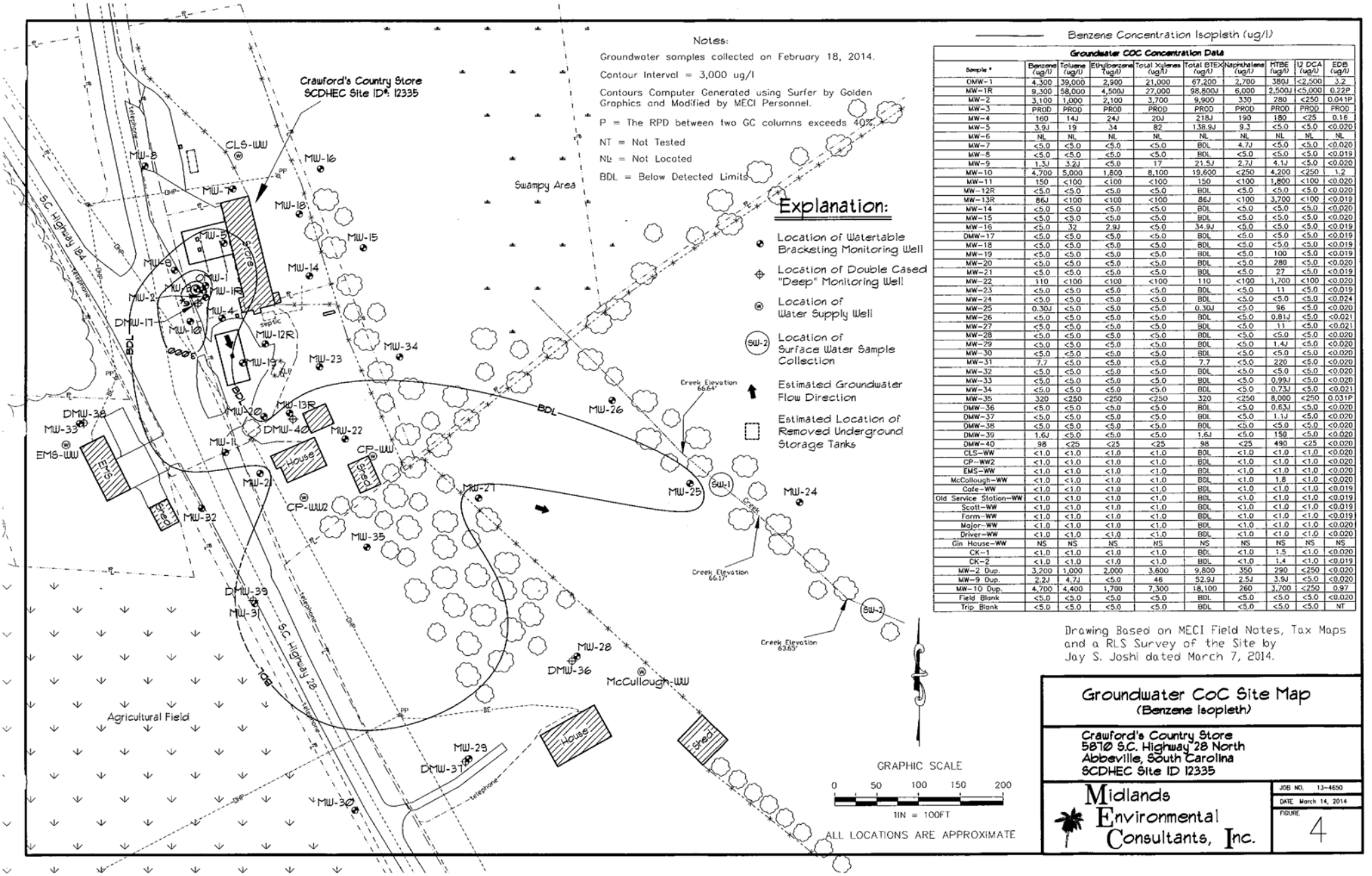
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

# Soil CoC Site Map

Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 13-4650
DATE March 14, 2014
FIGURE 3




Notes:

Groundwater samples collected on February 18, 2014.

Contour Interval = 3,000 ug/l

Contours Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

P = The RPD between two GC columns exceeds 40%.

NT = Not Tested

NL = Not Located

BDL = Below Detected Limits

## Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased "Deep" Monitoring Well
- Location of Water Supply Well
- (SW-2) Location of Surface Water Sample Collection
- Estimated Groundwater Flow Direction
- Estimated Location of Removed Underground Storage Tanks

——— Benzene Concentration Isopleth (ug/l)

**Groundwater COC Concentration Data**

| Sample # | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Total Xylenes (ug/l) | Total BTEX (ug/l) | Naphthalene (ug/l) | MTBE (ug/l) | 1,2 DCA (ug/l) | EDB (ug/l) |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 4,300 | 39,000 | 2,900 | 21,000 | 67,200 | 2,700 | 380J | <2,500 | 3.2 |
| MW-1R | 9,300 | 58,000 | 4,500J | 27,000 | 98,800J | 6,000 | 2,500J | <5,000 | 0.22P |
| MW-2 | 3,100 | 1,000 | 2,100 | 3,700 | 9,900 | 330 | 280 | <250 | 0.041P |
| MW-3 | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD |
| MW-4 | 160 | 14J | 24J | 20J | 218J | 190 | 180 | <25 | 0.16 |
| MW-5 | 3.9J | 19 | 34 | 82 | 138.9J | 9.3 | <5.0 | <5.0 | <0.020 |
| MW-6 | NL | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | 4.7J | <5.0 | <5.0 | <0.020 |
| MW-8 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-9 | 1.3J | 3.2J | <5.0 | 17 | 21.5J | 2.7J | 4.1J | <5.0 | <0.020 |
| MW-10 | 4,700 | 5,000 | 1,800 | 8,100 | 19,600 | <250 | 4,200 | <250 | 1.2 |
| MW-11 | 150 | <100 | <100 | <100 | 150 | <100 | 1,800 | <100 | <0.020 |
| MW-12R | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-13R | 86J | <100 | <100 | <100 | 86J | <100 | 3,700 | <100 | <0.019 |
| MW-14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-15 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-16 | <5.0 | 32 | 2.9J | <5.0 | 34.9J | <5.0 | <5.0 | <5.0 | <0.019 |
| DMW-17 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-18 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-19 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 100 | <5.0 | <0.019 |
| MW-20 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 280 | <5.0 | <0.020 |
| MW-21 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 27 | <5.0 | <0.019 |
| MW-22 | 110 | <100 | <100 | <100 | 110 | <100 | 1,700 | <100 | <0.020 |
| MW-23 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 11 | <5.0 | <0.019 |
| MW-24 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.024 |
| MW-25 | 0.30J | <5.0 | <5.0 | <5.0 | 0.30J | <5.0 | 96 | <5.0 | <0.020 |
| MW-26 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.81J | <5.0 | <0.021 |
| MW-27 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 11 | <5.0 | <0.021 |
| MW-28 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-29 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 1.4J | <5.0 | <0.020 |
| MW-30 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-31 | 7.7 | <5.0 | <5.0 | <5.0 | 7.7 | <5.0 | 220 | <5.0 | <0.020 |
| MW-32 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-33 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.99J | <5.0 | <0.020 |
| MW-34 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.73J | <5.0 | <0.021 |
| MW-35 | 320 | <250 | <250 | <250 | 320 | <250 | 8,000 | <250 | 0.031P |
| DMW-36 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.63J | <5.0 | <0.020 |
| DMW-37 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 1.1J | <5.0 | <0.020 |
| DMW-38 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-39 | 1.6J | <5.0 | <5.0 | <5.0 | 1.6J | <5.0 | 150 | <5.0 | <0.020 |
| DMW-40 | 98 | <25 | <25 | <25 | 98 | <25 | 490 | <25 | <0.020 |
| CLS-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| CP-WW2 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| EMS-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| McCullough-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.8 | <1.0 | <0.020 |
| Cafe-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Old Service Station-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Scott-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Farm-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Major-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| Driver-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| Gin House-WW | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| CK-1 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.5 | <1.0 | <0.020 |
| CK-2 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.4 | <1.0 | <0.019 |
| MW-2 Dup. | 3,200 | 1,000 | 2,000 | 3,600 | 9,800 | 350 | 290 | <250 | <0.020 |
| MW-9 Dup. | 2.2J | 4.7J | <5.0 | 46 | 52.9J | 2.5J | 3.9J | <5.0 | <0.020 |
| MW-10 Dup. | 4,700 | 4,400 | 1,700 | 7,300 | 18,100 | 260 | 3,700 | <250 | 0.97 |
| Field Blank | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| Trip Blank | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | NT |

GRAPHIC SCALE

0 50 100 150 200

1IN = 100FT

ALL LOCATIONS ARE APPROXIMATE

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

# Groundwater CoC Site Map
(Benzene Isopleth)

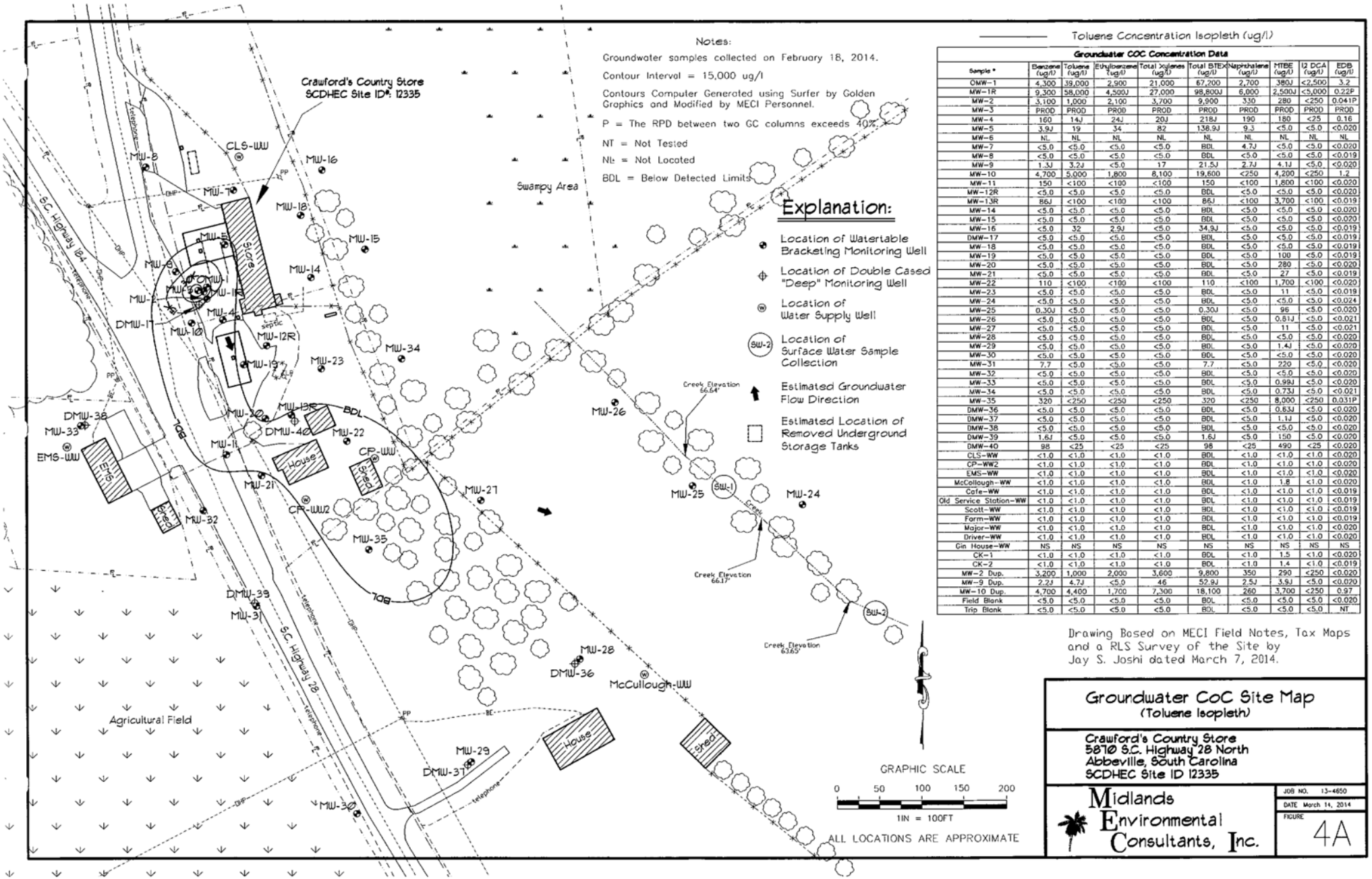
Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 13-4650

DATE March 14, 2014

FIGURE 4




Notes:

Groundwater samples collected on February 18, 2014.

Contour Interval = 15,000 ug/l

Contours Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

P = The RPD between two GC columns exceeds 40%

NT = Not Tested

NL = Not Located

BDL = Below Detected Limits

## Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased "Deep" Monitoring Well
- Location of Water Supply Well
- (SW-2) Location of Surface Water Sample Collection
- Estimated Groundwater Flow Direction
- Estimated Location of Removed Underground Storage Tanks
- Toluene Concentration Isopleth (ug/l)

**Groundwater COC Concentration Data**

| Sample * | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Total Xylenes (ug/l) | Total BTEX (ug/l) | Napthalene (ug/l) | MTBE (ug/l) | 1,2 DCA (ug/l) | EDB (ug/l) |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 4,300 | 39,000 | 2,900 | 21,000 | 67,200 | 2,700 | 380J | <2,500 | 3.2 |
| MW-1R | 9,300 | 58,000 | 4,500J | 27,000 | 98,800J | 6,000 | 2,500J | <5,000 | 0.22P |
| MW-2 | 3,100 | 1,000 | 2,100 | 3,700 | 9,900 | 330 | 280 | <250 | 0.041P |
| MW-3 | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD |
| MW-4 | 160 | 14J | 24J | 20J | 218J | 190 | 180 | <25 | 0.16 |
| MW-5 | 3.9J | 19 | 34 | 82 | 138.9J | 9.3 | <5.0 | <5.0 | <0.020 |
| MW-6 | NL | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | 4.7J | <5.0 | <5.0 | <0.020 |
| MW-8 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-9 | 1.3J | 3.2J | <5.0 | 17 | 21.5J | 2.7J | 4.1J | <5.0 | <0.020 |
| MW-10 | 4,700 | 5,000 | 1,800 | 8,100 | 19,600 | <250 | 4,200 | <250 | 1.2 |
| MW-11 | 150 | <100 | <100 | <100 | 150 | <100 | 1,800 | <100 | <0.020 |
| MW-12R | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-13R | 86J | <100 | <100 | <100 | 86J | <100 | 3,700 | <100 | <0.019 |
| MW-14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-15 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-16 | <5.0 | 32 | 2.9J | <5.0 | 34.9J | <5.0 | <5.0 | <5.0 | <0.019 |
| DMW-17 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-18 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-19 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 100 | <5.0 | <0.019 |
| MW-20 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 280 | <5.0 | <0.020 |
| MW-21 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 27 | <5.0 | <0.019 |
| MW-22 | 110 | <100 | <100 | <100 | 110 | <100 | 1,700 | <100 | <0.020 |
| MW-23 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 11 | <5.0 | <0.019 |
| MW-24 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.024 |
| MW-25 | 0.30J | <5.0 | <5.0 | <5.0 | 0.30J | <5.0 | 96 | <5.0 | <0.020 |
| MW-26 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.81J | <5.0 | <0.021 |
| MW-27 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 11 | <5.0 | <0.021 |
| MW-28 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-29 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 1.4J | <5.0 | <0.020 |
| MW-30 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-31 | 7.7 | <5.0 | <5.0 | <5.0 | 7.7 | <5.0 | 220 | <5.0 | <0.020 |
| MW-32 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-33 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.99J | <5.0 | <0.020 |
| MW-34 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.73J | <5.0 | <0.021 |
| MW-35 | 320 | <250 | <250 | <250 | 320 | <250 | 8,000 | <250 | 0.031P |
| DMW-36 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.63J | <5.0 | <0.020 |
| DMW-37 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 1.1J | <5.0 | <0.020 |
| DMW-38 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-39 | 1.6J | <5.0 | <5.0 | <5.0 | 1.6J | <5.0 | 150 | <5.0 | <0.020 |
| DMW-40 | 98 | <25 | <25 | <25 | 98 | <25 | 490 | <25 | <0.020 |
| CLS-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| CP-WW2 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| EMS-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| McCullough-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.8 | <1.0 | <0.020 |
| Cafe-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Old Service Station-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Scott-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Farm-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Major-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| Driver-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| Gin House-WW | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| CK-1 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.5 | <1.0 | <0.020 |
| CK-2 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.4 | <1.0 | <0.019 |
| MW-2 Dup. | 3,200 | 1,000 | 2,000 | 3,600 | 9,800 | 350 | 290 | <250 | <0.020 |
| MW-9 Dup. | 2.2J | 4.7J | <5.0 | 46 | 52.9J | 2.5J | 3.9J | <5.0 | <0.020 |
| MW-10 Dup. | 4,700 | 4,400 | 1,700 | 7,300 | 18,100 | 260 | 3,700 | <250 | 0.97 |
| Field Blank | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| Trip Blank | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | NT |

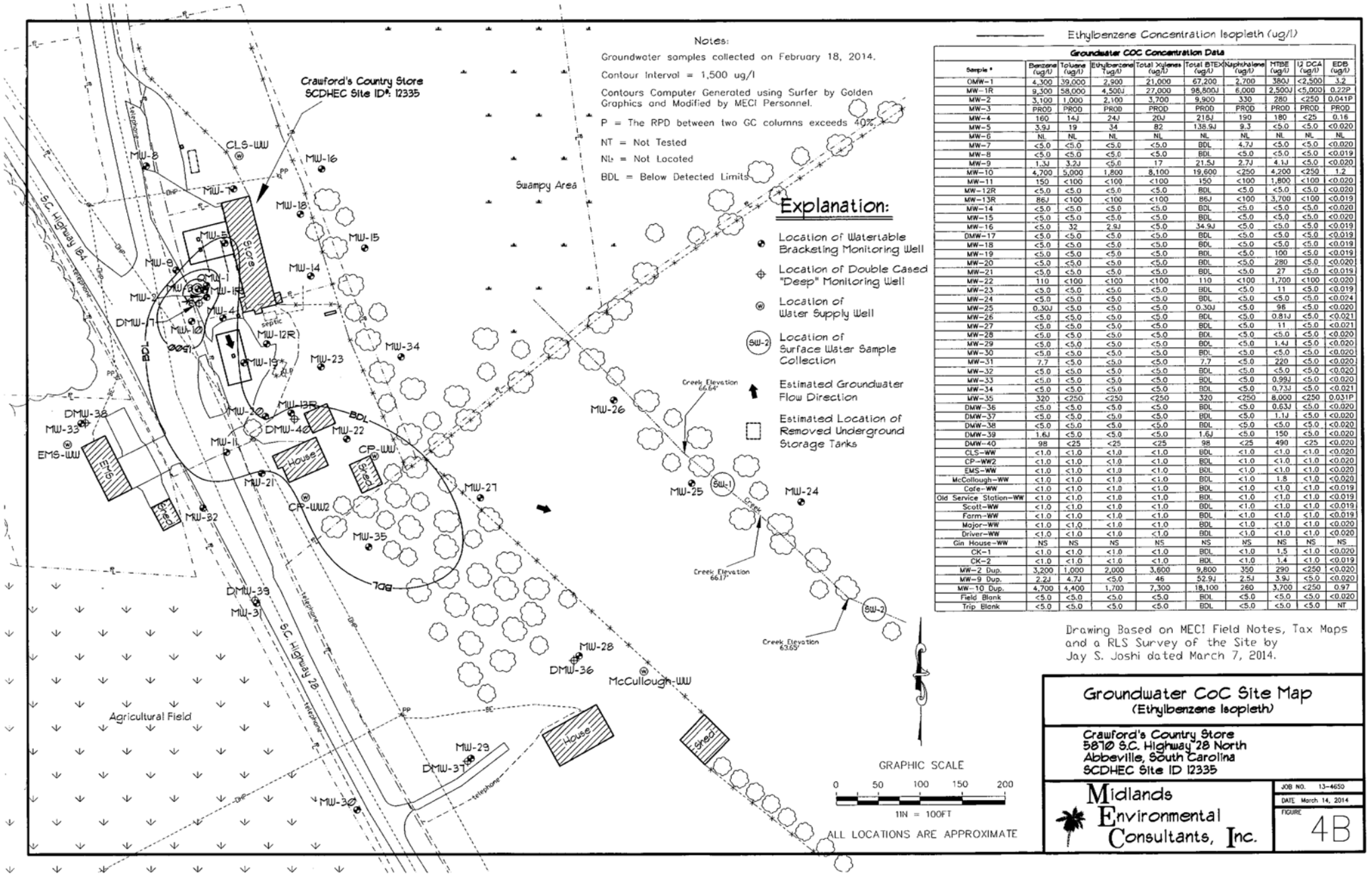
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

# Groundwater CoC Site Map
## (Toluene Isopleth)

Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 13-4650
DATE March 14, 2014
FIGURE 4A




**Groundwater COC Concentration Data**

| Sample # | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Total Xylenes (ug/l) | Total BTEX (ug/l) | Naphthalene (ug/l) | MTBE (ug/l) | 12 DCA (ug/l) | EDB (ug/l) |
|---|---|---|---|---|---|---|---|---|---|
| DMW-1 | 4,300 | 39,000 | 2,900 | 21,000 | 67,200 | 2,700 | 380J | <2,500 | 3.2 |
| MW-1R | 9,300 | 58,000 | 4,500J | 27,000 | 98,800J | 6,000 | 2,500J | <5,000 | 0.22P |
| MW-2 | 3,100 | 1,000 | 2,100 | 3,700 | 9,900 | 330 | 280 | <250 | 0.041P |
| MW-3 | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD |
| MW-4 | 160 | 14J | 24J | 20J | 215J | 190 | 180 | <25 | 0.16 |
| MW-5 | 3.9J | 19 | 34 | 82 | 138.9J | 9.3 | <5.0 | <5.0 | <0.020 |
| MW-6 | NL | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | 4.7J | <5.0 | <5.0 | <0.020 |
| MW-8 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-9 | 1.3J | 3.2J | <5.0 | 17 | 21.5J | 2.7J | 4.1J | <5.0 | <0.020 |
| MW-10 | 4,700 | 5,000 | 1,800 | 8,100 | 19,600 | <250 | 4,200 | <250 | 1.2 |
| MW-11 | 150 | <100 | <100 | <100 | 150 | <100 | 1,800 | <100 | <0.020 |
| MW-12R | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-13R | 86J | <100 | <100 | <100 | 86J | <100 | 3,700 | <100 | <0.019 |
| MW-14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-15 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-16 | <5.0 | 32 | 2.9J | <5.0 | 34.9J | <5.0 | <5.0 | <5.0 | <0.019 |
| DMW-17 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-18 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-19 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 100 | <5.0 | <0.019 |
| MW-20 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 280 | <5.0 | <0.020 |
| MW-21 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 27 | <5.0 | <0.019 |
| MW-22 | 110 | <100 | <100 | <100 | 110 | <100 | 1,700 | <100 | <0.020 |
| MW-23 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 11 | <5.0 | <0.019 |
| MW-24 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.024 |
| MW-25 | 0.30J | <5.0 | <5.0 | <5.0 | 0.30J | <5.0 | 96 | <5.0 | <0.020 |
| MW-26 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.81J | <5.0 | <0.021 |
| MW-27 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 11 | <5.0 | <0.021 |
| MW-28 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-29 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 1.4J | <5.0 | <0.020 |
| MW-30 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-31 | 7.7 | <5.0 | <5.0 | <5.0 | 7.7 | <5.0 | 220 | <5.0 | <0.020 |
| MW-32 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-33 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.99J | <5.0 | <0.020 |
| MW-34 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.73J | <5.0 | <0.021 |
| MW-35 | 320 | <250 | <250 | <250 | 320 | <250 | 8,000 | <250 | 0.031P |
| DMW-36 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.63J | <5.0 | <0.020 |
| DMW-37 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 1.1J | <5.0 | <0.020 |
| DMW-38 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-39 | 1.6J | <5.0 | <5.0 | <5.0 | 1.6J | <5.0 | 150 | <5.0 | <0.020 |
| DMW-40 | 98 | <25 | <25 | <25 | 98 | <25 | 490 | <25 | <0.020 |
| CLS-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| CP-WW2 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| EMS-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| McCullough-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.8 | <1.0 | <0.020 |
| Cafe-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Old Service Station-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Scott-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Farm-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Major-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| Driver-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| Gin House-WW | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| CK-1 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.5 | <1.0 | <0.020 |
| CK-2 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.4 | <1.0 | <0.019 |
| MW-2 Dup. | 3,200 | 1,000 | 2,000 | 3,600 | 9,800 | 350 | 290 | <250 | <0.020 |
| MW-9 Dup. | 2.2J | 4.7J | <5.0 | 46 | 52.9J | 2.5J | 3.9J | <5.0 | <0.020 |
| MW-10 Dup. | 4,700 | 4,400 | 1,700 | 7,300 | 18,100 | 260 | 3,700 | <250 | 0.97 |
| Field Blank | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| Trip Blank | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | NT |

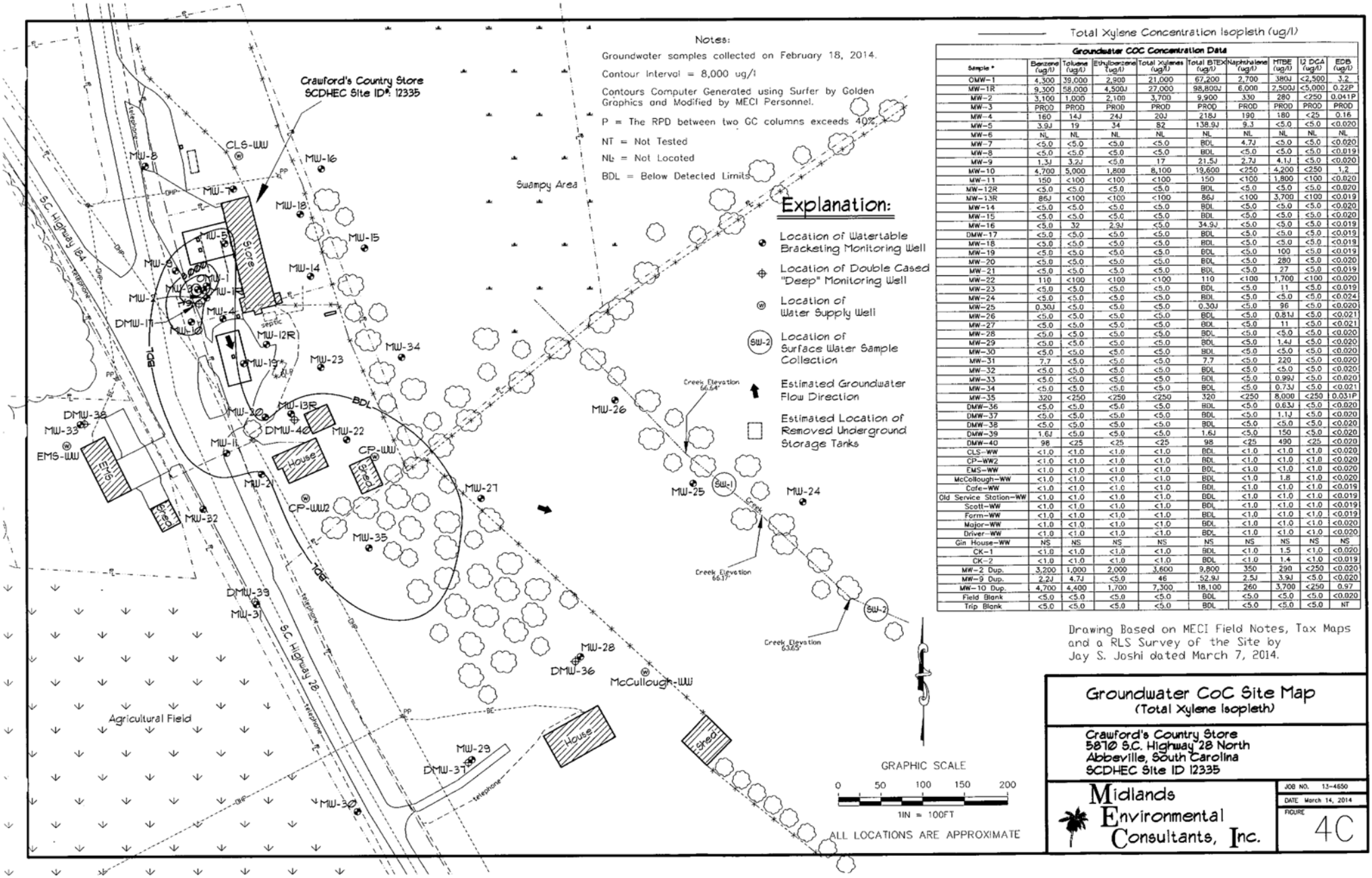
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

# Groundwater CoC Site Map
(Ethylbenzene Isopleth)

Crawford's Country Store
5810 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 13-4650
DATE March 14, 2014
FIGURE 4B




Notes:

Groundwater samples collected on February 18, 2014.

Contour Interval = 8,000 ug/l

Contours Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

P = The RPD between two GC columns exceeds 40%

NT = Not Tested

NL = Not Located

BDL = Below Detected Limits

## Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased "Deep" Monitoring Well
- Location of Water Supply Well
- Location of Surface Water Sample Collection
- Estimated Groundwater Flow Direction
- Estimated Location of Removed Underground Storage Tanks
- Total Xylene Concentration Isopleth (ug/l)

**Groundwater COC Concentration Data**

| Sample # | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Total Xylenes (ug/l) | Total BTEX (ug/l) | Naphthalene (ug/l) | MTBE (ug/l) | 12 DCA (ug/l) | EDB (ug/l) |
|---|---|---|---|---|---|---|---|---|---|
| DMW-1 | 4,300 | 39,000 | 2,900 | 21,000 | 67,200 | 2,700 | 380J | <2,500 | 3.2 |
| MW-1R | 9,300 | 58,000 | 4,500J | 27,000 | 98,800J | 6,000 | 2,500J | <5,000 | 0.22P |
| MW-2 | 3,100 | 1,000 | 2,100 | 3,700 | 9,900 | 330 | 280 | <250 | 0.041P |
| MW-3 | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD |
| MW-4 | 160 | 14J | 24J | 20J | 218J | 190 | 180 | <25 | 0.16 |
| MW-5 | 3.9J | 19 | 34 | 82 | 138.9J | 9.3 | <5.0 | <5.0 | <0.020 |
| MW-6 | NL | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | 4.7J | <5.0 | <5.0 | <0.020 |
| MW-8 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-9 | 1.3J | 3.2J | <5.0 | 17 | 21.5J | 2.7J | 4.1J | <5.0 | <0.020 |
| MW-10 | 4,700 | 5,000 | 1,800 | 8,100 | 19,600 | <250 | 4,200 | <250 | 1.2 |
| MW-11 | 150 | <100 | <100 | <100 | 150 | <100 | 1,800 | <100 | <0.020 |
| MW-12R | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-13R | 86J | <100 | <100 | <100 | 86J | <100 | 3,700 | <100 | <0.019 |
| MW-14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-15 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-16 | <5.0 | 32 | 2.9J | <5.0 | 34.9J | <5.0 | <5.0 | <5.0 | <0.019 |
| DMW-17 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-18 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-19 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 100 | <5.0 | <0.019 |
| MW-20 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 280 | <5.0 | <0.020 |
| MW-21 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 27 | <5.0 | <0.019 |
| MW-22 | 110 | <100 | <100 | <100 | 110 | <100 | 1,700 | <100 | <0.020 |
| MW-23 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 11 | <5.0 | <0.019 |
| MW-24 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.024 |
| MW-25 | 0.30J | <5.0 | <5.0 | <5.0 | 0.30J | <5.0 | 96 | <5.0 | <0.020 |
| MW-26 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.81J | <5.0 | <0.021 |
| MW-27 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 11 | <5.0 | <0.021 |
| MW-28 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-29 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 1.4J | <5.0 | <0.020 |
| MW-30 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-31 | 7.7 | <5.0 | <5.0 | <5.0 | 7.7 | <5.0 | 220 | <5.0 | <0.020 |
| MW-32 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-33 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.99J | <5.0 | <0.020 |
| MW-34 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.73J | <5.0 | <0.021 |
| MW-35 | 320 | <250 | <250 | <250 | 320 | <250 | 8,000 | <250 | 0.031P |
| DMW-36 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.63J | <5.0 | <0.020 |
| DMW-37 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 1.1J | <5.0 | <0.020 |
| DMW-38 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-39 | 1.6J | <5.0 | <5.0 | <5.0 | 1.6J | <5.0 | 150 | <5.0 | <0.020 |
| DMW-40 | 98 | <25 | <25 | <25 | 98 | <25 | 490 | <25 | <0.020 |
| CLS-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| CP-WW2 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| EMS-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| McCollough-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.8 | <1.0 | <0.020 |
| Cafe-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Old Service Station-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Scott-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Farm-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Major-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| Driver-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| Gin House-WW | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| CK-1 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.5 | <1.0 | <0.020 |
| CK-2 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.4 | <1.0 | <0.019 |
| MW-2 Dup. | 3,200 | 1,000 | 2,000 | 3,600 | 9,800 | 350 | 290 | <250 | <0.020 |
| MW-9 Dup. | 2.2J | 4.7J | <5.0 | 46 | 52.9J | 2.5J | 3.9J | <5.0 | <0.020 |
| MW-10 Dup. | 4,700 | 4,400 | 1,700 | 7,300 | 18,100 | 260 | 3,700 | <250 | 0.97 |
| Field Blank | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| Trip Blank | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | NT |

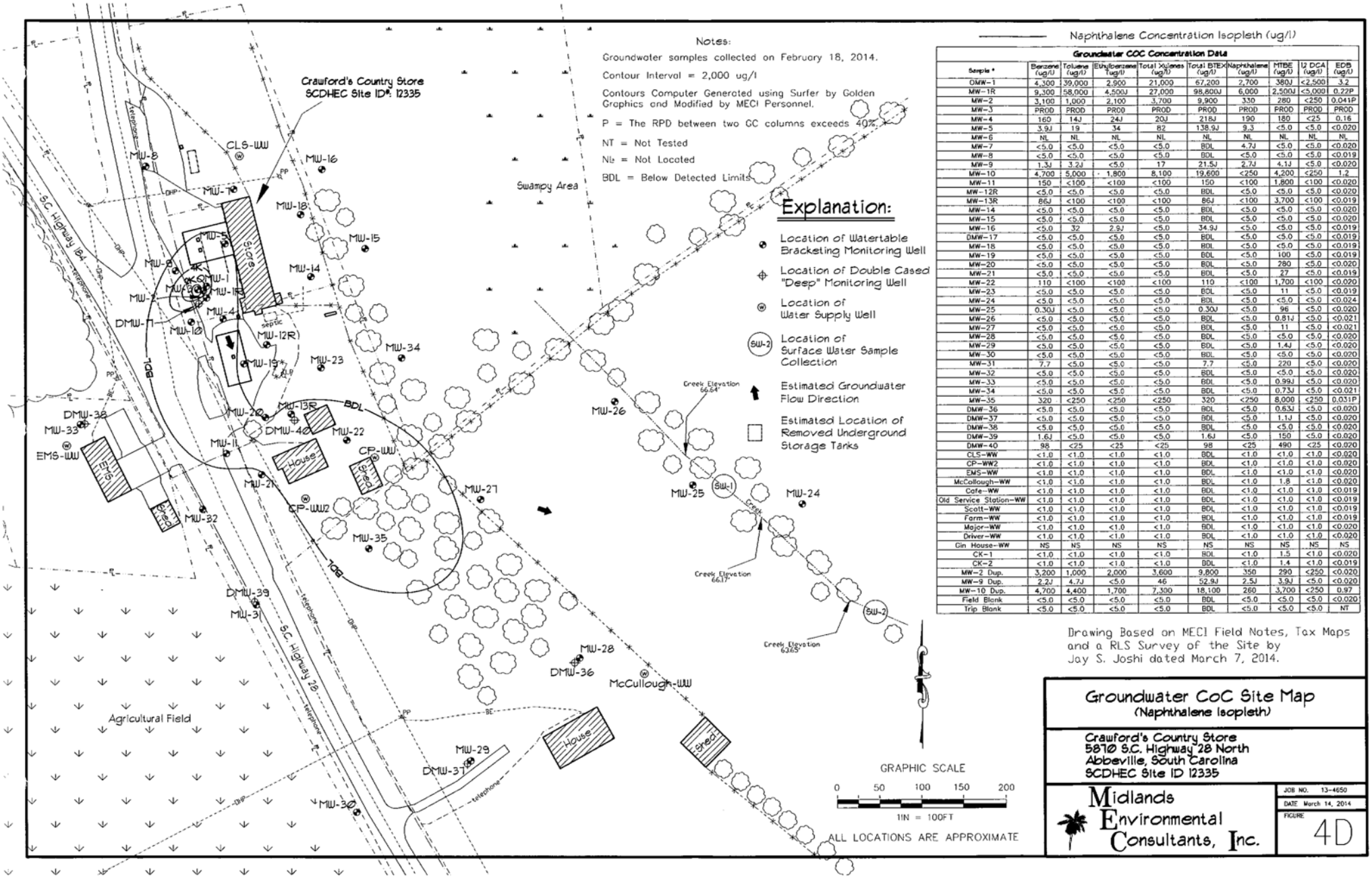
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

# Groundwater CoC Site Map
## (Total Xylene Isopleth)

Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 13-4650
DATE March 14, 2014
FIGURE 4C




Notes:

Groundwater samples collected on February 18, 2014.

Contour Interval = 2,000 ug/l

Contours Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

P = The RPD between two GC columns exceeds 40%

NT = Not Tested

NL = Not Located

BDL = Below Detected Limits

## Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased "Deep" Monitoring Well
- Location of Water Supply Well
- (SW-2) Location of Surface Water Sample Collection
- Estimated Groundwater Flow Direction
- Estimated Location of Removed Underground Storage Tanks

Naphthalene Concentration Isopleth (ug/l)

**Groundwater COC Concentration Data**

| Sample # | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Total Xylenes (ug/l) | Total BTEX (ug/l) | Naphthalene (ug/l) | MTBE (ug/l) | 1,2 DCA (ug/l) | EDB (ug/l) |
|---|---|---|---|---|---|---|---|---|---|
| DMW-1 | 4,300 | 39,000 | 2,900 | 21,000 | 67,200 | 2,700 | 380J | <2,500 | 3.2 |
| MW-1R | 9,300 | 58,000 | 4,500J | 27,000 | 98,800J | 6,000 | 2,500J | <5,000 | 0.22P |
| MW-2 | 3,100 | 1,000 | 2,100 | 3,700 | 9,900 | 330 | 280 | <250 | 0.041P |
| MW-3 | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD |
| MW-4 | 160 | 14J | 24J | 20J | 218J | 190 | 180 | <25 | 0.16 |
| MW-5 | 3.9J | 19 | 34 | 82 | 138.9J | 9.3 | <5.0 | <5.0 | <0.020 |
| MW-6 | NL | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | 4.7J | <5.0 | <5.0 | <0.020 |
| MW-8 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-9 | 1.3J | 3.2J | <5.0 | 17 | 21.5J | 2.7J | 4.1J | <5.0 | <0.020 |
| MW-10 | 4,700 | 5,000 | 1,800 | 8,100 | 19,600 | <250 | 4,200 | <250 | 1.2 |
| MW-11 | 150 | <100 | <100 | <100 | 150 | <100 | 1,800 | <100 | <0.020 |
| MW-12R | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-13R | 86J | <100 | <100 | <100 | 86J | <100 | 3,700 | <100 | <0.019 |
| MW-14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-15 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-16 | <5.0 | 32 | 2.9J | <5.0 | 34.9J | <5.0 | <5.0 | <5.0 | <0.019 |
| DMW-17 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-18 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-19 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 100 | <5.0 | <0.019 |
| MW-20 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 280 | <5.0 | <0.020 |
| MW-21 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 27 | <5.0 | <0.019 |
| MW-22 | 110 | <100 | <100 | <100 | 110 | <100 | 1,700 | <100 | <0.020 |
| MW-23 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 11 | <5.0 | <0.019 |
| MW-24 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.024 |
| MW-25 | 0.30J | <5.0 | <5.0 | <5.0 | 0.30J | <5.0 | 98 | <5.0 | <0.020 |
| MW-26 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.81J | <5.0 | <0.021 |
| MW-27 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 11 | <5.0 | <0.021 |
| MW-28 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-29 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 1.4J | <5.0 | <0.020 |
| MW-30 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-31 | 7.7 | <5.0 | <5.0 | <5.0 | 7.7 | <5.0 | 220 | <5.0 | <0.020 |
| MW-32 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-33 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.99J | <5.0 | <0.020 |
| MW-34 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.73J | <5.0 | <0.021 |
| MW-35 | 320 | <250 | <250 | <250 | 320 | <250 | 8,000 | <250 | 0.031P |
| DMW-36 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.63J | <5.0 | <0.020 |
| DMW-37 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 1.1J | <5.0 | <0.020 |
| DMW-38 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-39 | 1.6J | <5.0 | <5.0 | <5.0 | 1.6J | <5.0 | 150 | <5.0 | <0.020 |
| DMW-40 | 98 | <25 | <25 | <25 | 98 | <25 | 490 | <25 | <0.020 |
| CLS-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| CP-WW2 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| EMS-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| McCullough-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.8 | <1.0 | <0.020 |
| Cafe-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Old Service Station-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Scott-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Farm-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Major-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| Driver-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| Gin House-WW | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| CK-1 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.5 | <1.0 | <0.020 |
| CK-2 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.4 | <1.0 | <0.019 |
| MW-2 Dup. | 3,200 | 1,000 | 2,000 | 3,600 | 9,800 | 350 | 290 | <250 | <0.020 |
| MW-9 Dup. | 2.2J | 4.7J | <5.0 | 46 | 52.9J | 2.5J | 3.9J | <5.0 | <0.020 |
| MW-10 Dup. | 4,700 | 4,400 | 1,700 | 7,300 | 18,100 | 260 | 3,700 | <250 | 0.97 |
| Field Blank | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| Trip Blank | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | NT |

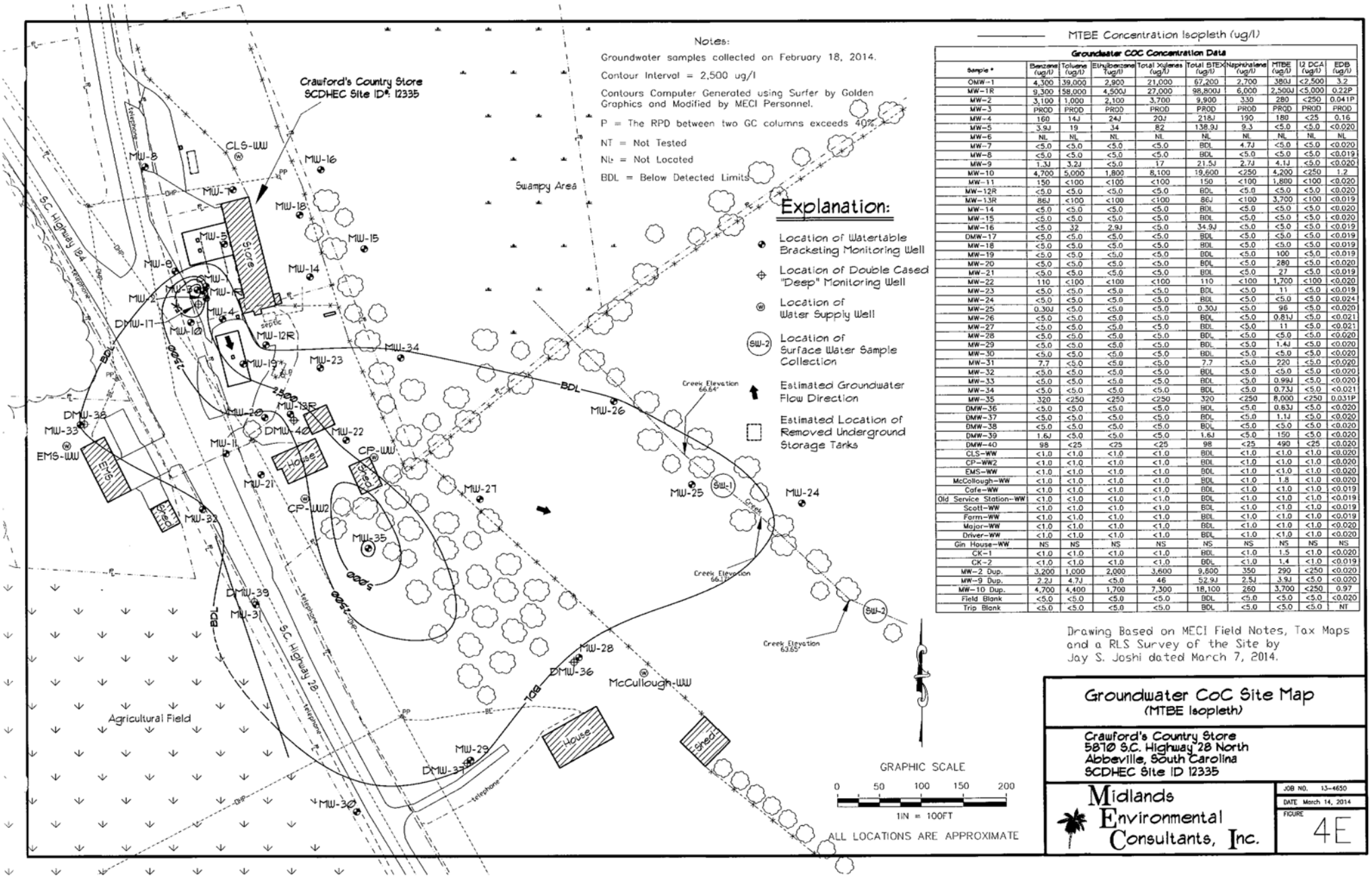
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

# Groundwater CoC Site Map
## (Naphthalene Isopleth)

Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 13-4650
DATE March 14, 2014
FIGURE 4D




**Groundwater COC Concentration Data**

| Sample # | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Total Xylenes (ug/l) | Total BTEX (ug/l) | Naphthalene (ug/l) | MTBE (ug/l) | 1,2 DCA (ug/l) | EDB (ug/l) |
|---|---|---|---|---|---|---|---|---|---|
| DMW-1 | 4,300 | 39,000 | 2,900 | 21,000 | 67,200 | 2,700 | 380J | <2,500 | 3.2 |
| MW-1R | 9,300 | 58,000 | 4,500J | 27,000 | 98,800J | 6,000 | 2,500J | <5,000 | 0.22P |
| MW-2 | 3,100 | 1,000 | 2,100 | 3,700 | 9,900 | 330 | 280 | <250 | 0.041P |
| MW-3 | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD |
| MW-4 | 160 | 14J | 24J | 20J | 218J | 190 | 180 | <25 | 0.16 |
| MW-5 | 3.9J | 19 | 34 | 82 | 138.9J | 9.3 | <5.0 | <5.0 | <0.020 |
| MW-6 | NL | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | 4.7J | <5.0 | <5.0 | <0.020 |
| MW-8 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-9 | 1.3J | 3.2J | <5.0 | 17 | 21.5J | 2.7J | 4.1J | <5.0 | <0.020 |
| MW-10 | 4,700 | 5,000 | 1,800 | 8,100 | 19,600 | <250 | 4,200 | <250 | 1.2 |
| MW-11 | 150 | <100 | <100 | <100 | 150 | <100 | 1,800 | <100 | <0.020 |
| MW-12R | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-13R | 86J | <100 | <100 | <100 | 86J | <100 | 3,700 | <100 | <0.019 |
| MW-14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-15 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-16 | <5.0 | 32 | 2.9J | <5.0 | 34.9J | <5.0 | <5.0 | <5.0 | <0.019 |
| DMW-17 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-18 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-19 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 100 | <5.0 | <0.019 |
| MW-20 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 280 | <5.0 | <0.020 |
| MW-21 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 27 | <5.0 | <0.019 |
| MW-22 | 110 | <100 | <100 | <100 | 110 | <100 | 1,700 | <100 | <0.020 |
| MW-23 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 11 | <5.0 | <0.019 |
| MW-24 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.024 |
| MW-25 | 0.30J | <5.0 | <5.0 | <5.0 | 0.30J | <5.0 | 96 | <5.0 | <0.020 |
| MW-26 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.81J | <5.0 | <0.021 |
| MW-27 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 11 | <5.0 | <0.021 |
| MW-28 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-29 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 1.4J | <5.0 | <0.020 |
| MW-30 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-31 | 7.7 | <5.0 | <5.0 | <5.0 | 7.7 | <5.0 | 220 | <5.0 | <0.020 |
| MW-32 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-33 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.99J | <5.0 | <0.020 |
| MW-34 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.73J | <5.0 | <0.021 |
| MW-35 | 320 | <250 | <250 | <250 | 320 | <250 | 8,000 | <250 | 0.031P |
| DMW-36 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 0.83J | <5.0 | <0.020 |
| DMW-37 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | 1.1J | <5.0 | <0.020 |
| DMW-38 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-39 | 1.6J | <5.0 | <5.0 | <5.0 | 1.6J | <5.0 | 150 | <5.0 | <0.020 |
| DMW-40 | 98 | <25 | <25 | <25 | 98 | <25 | 490 | <25 | <0.020 |
| CLS-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| CP-WW2 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| EMS-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| McCullough-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.8 | <1.0 | <0.020 |
| Cafe-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Old Service Station--WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Scott-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Farm-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Major-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| Driver-WW | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| Gin House-WW | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| CK-1 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.5 | <1.0 | <0.020 |
| CK-2 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | 1.4 | <1.0 | <0.019 |
| MW-2 Dup. | 3,200 | 1,000 | 2,000 | 3,600 | 9,800 | 350 | 290 | <250 | <0.020 |
| MW-9 Dup. | 2.2J | 4.7J | <5.0 | 46 | 52.9J | 2.5J | 3.9J | <5.0 | <0.020 |
| MW-10 Dup. | 4,700 | 4,400 | 1,700 | 7,300 | 18,100 | 260 | 3,700 | <250 | 0.97 |
| Field Blank | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| Trip Blank | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | NT |

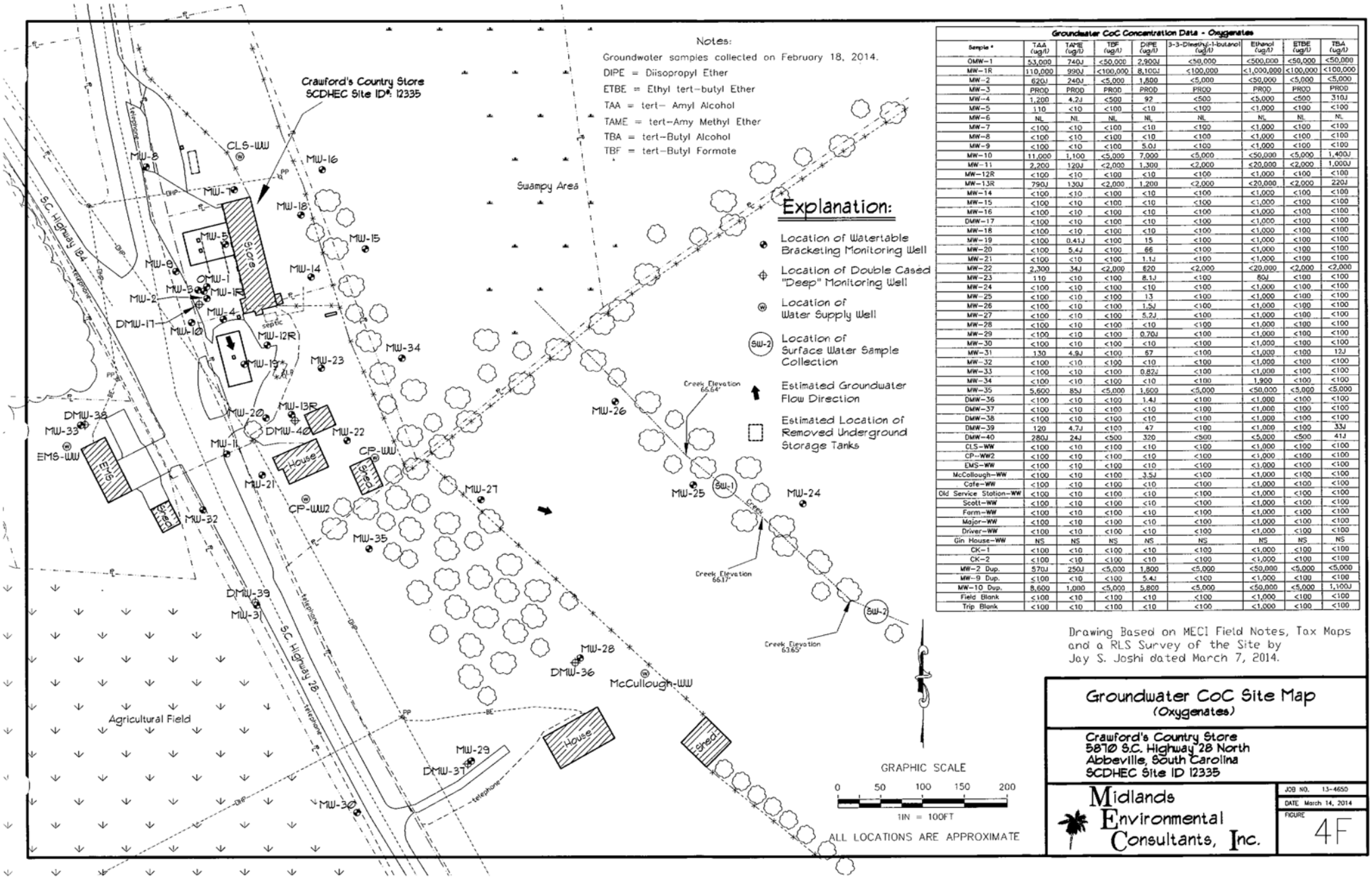
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

# Groundwater CoC Site Map
(MTBE Isopleth)

Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 13-4650
DATE March 14, 2014
FIGURE 4E




**Groundwater CoC Concentration Data - Oxygenates**

| Sample # | TAA (ug/l) | TAME (ug/l) | TBF (ug/l) | DIPE (ug/l) | 3-3-Dimethyl-1-butanol (ug/l) | Ethanol (ug/l) | ETBE (ug/l) | TBA (ug/l) |
|---|---|---|---|---|---|---|---|---|
| OMW-1 | 53,000 | 740J | <50,000 | 2,900J | <50,000 | <500,000 | <50,000 | <50,000 |
| MW-1R | 110,000 | 990J | <100,000 | 8,100J | <100,000 | <1,000,000 | <100,000 | <100,000 |
| MW-2 | 620J | 240J | <5,000 | 1,800 | <5,000 | <50,000 | <5,000 | <5,000 |
| MW-3 | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD |
| MW-4 | 1,200 | 4.2J | <500 | 92 | <500 | <5,000 | <500 | 310J |
| MW-5 | 110 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-6 | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-8 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-9 | <100 | <10 | <100 | 5.0J | <100 | <1,000 | <100 | <100 |
| MW-10 | 11,000 | 1,100 | <5,000 | 7,000 | <5,000 | <50,000 | <5,000 | 1,400J |
| MW-11 | 2,200 | 120J | <2,000 | 1,300 | <2,000 | <20,000 | <2,000 | 1,000J |
| MW-12R | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-13R | 790J | 130J | <2,000 | 1,200 | <2,000 | <20,000 | <2,000 | 220J |
| MW-14 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-15 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-16 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| DMW-17 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-18 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-19 | <100 | 0.41J | <100 | 15 | <100 | <1,000 | <100 | <100 |
| MW-20 | <100 | 5.4J | <100 | 66 | <100 | <1,000 | <100 | <100 |
| MW-21 | <100 | <10 | <100 | 1.1J | <100 | <1,000 | <100 | <100 |
| MW-22 | 2,300 | 34J | <2,000 | 620 | <2,000 | <20,000 | <2,000 | <2,000 |
| MW-23 | 110 | <10 | <100 | 8.1J | <100 | 80J | <100 | <100 |
| MW-24 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-25 | <100 | <10 | <100 | 13 | <100 | <1,000 | <100 | <100 |
| MW-26 | <100 | <10 | <100 | 1.5J | <100 | <1,000 | <100 | <100 |
| MW-27 | <100 | <10 | <100 | 5.2J | <100 | <1,000 | <100 | <100 |
| MW-28 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-29 | <100 | <10 | <100 | 0.70J | <100 | <1,000 | <100 | <100 |
| MW-30 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-31 | 130 | 4.9J | <100 | 67 | <100 | <1,000 | <100 | 12J |
| MW-32 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-33 | <100 | <10 | <100 | 0.82J | <100 | <1,000 | <100 | <100 |
| MW-34 | <100 | <10 | <100 | <10 | <100 | 1,900 | <100 | <100 |
| MW-35 | 5,600 | 85J | <5,000 | 1,600 | <5,000 | <50,000 | <5,000 | <5,000 |
| DMW-36 | <100 | <10 | <100 | 1.4J | <100 | <1,000 | <100 | <100 |
| DMW-37 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| DMW-38 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| DMW-39 | 120 | 4.7J | <100 | 47 | <100 | <1,000 | <100 | 33J |
| DMW-40 | 280J | 24J | <500 | 320 | <500 | <5,000 | <500 | 41J |
| CLS-WW | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| CP--WW2 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| EMS-WW | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| McCollough-WW | <100 | <10 | <100 | 3.5J | <100 | <1,000 | <100 | <100 |
| Cafe-WW | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| Old Service Station-WW | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| Scott-WW | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| Farm-WW | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| Major-WW | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| Driver-WW | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| Gin House-WW | NS | NS | NS | NS | NS | NS | NS | NS |
| CK-1 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| CK-2 | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| MW-2 Dup. | 570J | 250J | <5,000 | 1,800 | <5,000 | <50,000 | <5,000 | <5,000 |
| MW-9 Dup. | <100 | <10 | <100 | 5.4J | <100 | <1,000 | <100 | <100 |
| MW-10 Dup. | 8,600 | 1,000 | <5,000 | 5,800 | <5,000 | <50,000 | <5,000 | 1,100J |
| Field Blank | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |
| Trip Blank | <100 | <10 | <100 | <10 | <100 | <1,000 | <100 | <100 |

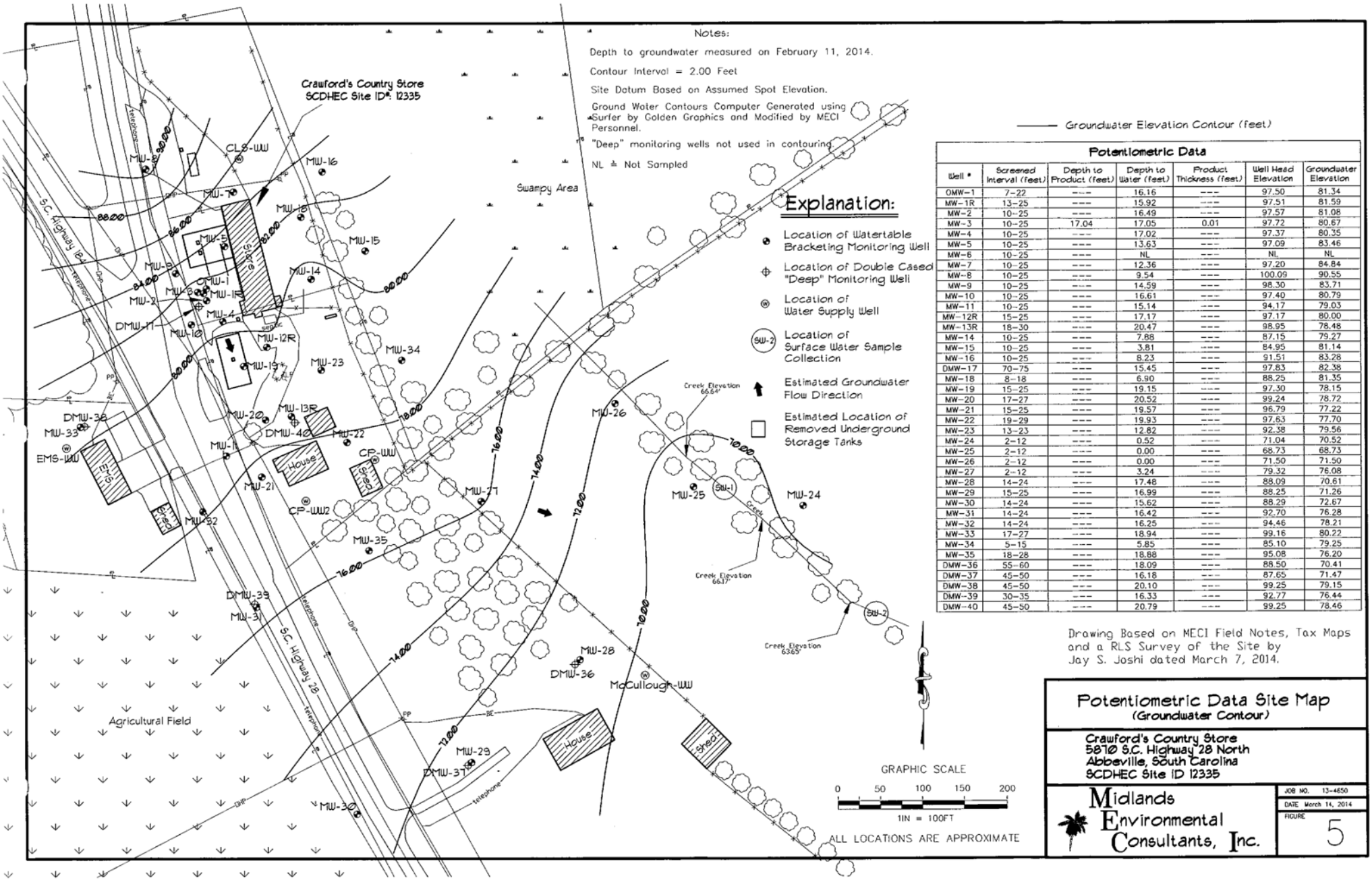
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

# Groundwater CoC Site Map
(Oxygenates)

Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 13-4650
DATE March 14, 2014
FIGURE 4F




**Potentiometric Data**

| Well # | Screened Interval (feet) | Depth to Product (feet) | Depth to Water (feet) | Product Thickness (feet) | Well Head Elevation | Groundwater Elevation |
|---|---|---|---|---|---|---|
| OMW-1 | 7-22 | --- | 16.16 | --- | 97.50 | 81.34 |
| MW-1R | 13-25 | --- | 15.92 | --- | 97.51 | 81.59 |
| MW-2 | 10-25 | --- | 16.49 | --- | 97.57 | 81.08 |
| MW-3 | 10-25 | 17.04 | 17.05 | 0.01 | 97.72 | 80.67 |
| MW-4 | 10-25 | --- | 17.02 | --- | 97.37 | 80.35 |
| MW-5 | 10-25 | --- | 13.63 | --- | 97.09 | 83.46 |
| MW-6 | 10-25 | --- | NL | --- | NL | NL |
| MW-7 | 10-25 | --- | 12.36 | --- | 97.20 | 84.84 |
| MW-8 | 10-25 | --- | 9.54 | --- | 100.09 | 90.55 |
| MW-9 | 10-25 | --- | 14.59 | --- | 98.30 | 83.71 |
| MW-10 | 10-25 | --- | 16.61 | --- | 97.40 | 80.79 |
| MW-11 | 10-25 | --- | 15.14 | --- | 94.17 | 79.03 |
| MW-12R | 15-25 | --- | 17.17 | --- | 97.17 | 80.00 |
| MW-13R | 18-30 | --- | 20.47 | --- | 98.95 | 78.48 |
| MW-14 | 10-25 | --- | 7.88 | --- | 87.15 | 79.27 |
| MW-15 | 10-25 | --- | 3.81 | --- | 84.95 | 81.14 |
| MW-16 | 10-25 | --- | 8.23 | --- | 91.51 | 83.28 |
| DMW-17 | 70-75 | --- | 15.45 | --- | 97.83 | 82.38 |
| MW-18 | 8-18 | --- | 6.90 | --- | 88.25 | 81.35 |
| MW-19 | 15-25 | --- | 19.15 | --- | 97.30 | 78.15 |
| MW-20 | 17-27 | --- | 20.52 | --- | 99.24 | 78.72 |
| MW-21 | 15-25 | --- | 19.57 | --- | 96.79 | 77.22 |
| MW-22 | 19-29 | --- | 19.93 | --- | 97.63 | 77.70 |
| MW-23 | 13-23 | --- | 12.82 | --- | 92.38 | 79.56 |
| MW-24 | 2-12 | --- | 0.52 | --- | 71.04 | 70.52 |
| MW-25 | 2-12 | --- | 0.00 | --- | 68.73 | 68.73 |
| MW-26 | 2-12 | --- | 0.00 | --- | 71.50 | 71.50 |
| MW-27 | 2-12 | --- | 3.24 | --- | 79.32 | 76.08 |
| MW-28 | 14-24 | --- | 17.48 | --- | 88.09 | 70.61 |
| MW-29 | 15-25 | --- | 16.99 | --- | 88.25 | 71.26 |
| MW-30 | 14-24 | --- | 15.62 | --- | 88.29 | 72.67 |
| MW-31 | 14-24 | --- | 16.42 | --- | 92.70 | 76.28 |
| MW-32 | 14-24 | --- | 16.25 | --- | 94.46 | 78.21 |
| MW-33 | 17-27 | --- | 18.94 | --- | 99.16 | 80.22 |
| MW-34 | 5-15 | --- | 5.85 | --- | 85.10 | 79.25 |
| MW-35 | 18-28 | --- | 18.88 | --- | 95.08 | 76.20 |
| DMW-36 | 55-60 | --- | 18.09 | --- | 88.50 | 70.41 |
| DMW-37 | 45-50 | --- | 16.18 | --- | 87.65 | 71.47 |
| DMW-38 | 45-50 | --- | 20.10 | --- | 99.25 | 79.15 |
| DMW-39 | 30-35 | --- | 16.33 | --- | 92.77 | 76.44 |
| DMW-40 | 45-50 | --- | 20.79 | --- | 99.25 | 78.46 |

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

# Potentiometric Data Site Map
(Groundwater Contour)

Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 13-4650
DATE March 14, 2014
FIGURE 5

**APPENDIX A:**

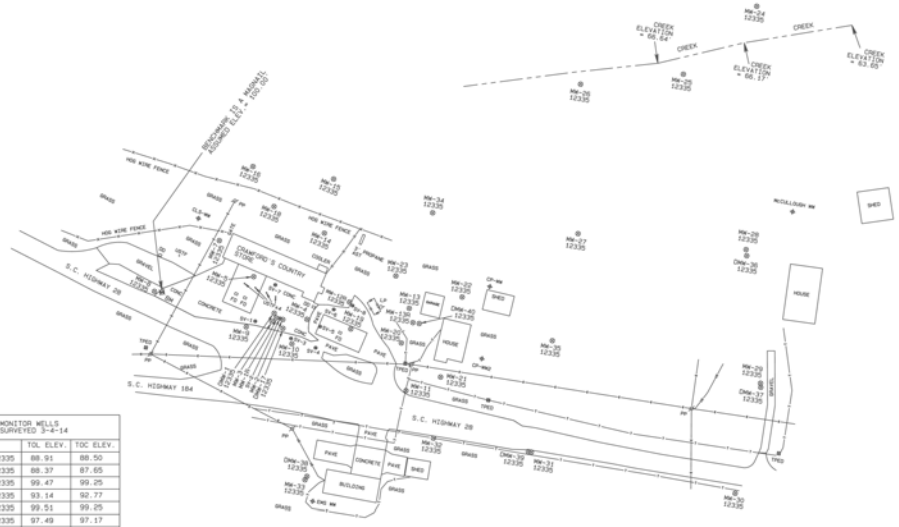
**SITE SURVEY**

| MONITOR WELLS SURVEYED 5-19-11 | | |
|---|---|---|
| WELL | TOL ELEV. | TOC ELEV. |
| OMW-1 12335 | 97.84 | 97.50 |
| MW-1R 12335 | 97.76 | 97.51 |
| MW-2 12335 | 97.81 | 97.57 |
| MW-3 12335 | 98.00 | 97.72 |
| MW-4 12335 | 97.61 | 97.37 |
| MW-5 12335 | 97.29 | 97.09 |
| MW-6 12335 | NOT FOUND | |
| MW-7 12335 | 97.35 | 97.20 |
| MW-8 12335 | 100.36 | 100.09 |
| MW-9 12335 | 98.46 | 98.30 |
| MW-10 12335 | 97.62 | 97.40 |
| MW-11 12335 | 94.53 | 94.17 |
| | | |
| MW-13R 12335 | 99.39 | 98.95 |
| MW-13 12335 | NO LID | 98.74 |
| MW-14 12335 | 87.32 | 87.15 |
| MW-15 12335 | 85.30 | 84.95 |
| MW-16 12335 | 91.87 | 91.51 |
| OMW-17 12335 | 97.97 | 97.63 |
| MW-18 12335 | 88.90 | 88.25 |
| MW-19 12335 | 97.86 | 97.30 |
| MW-20 12335 | 99.72 | 99.24 |
| MW-21 12335 | 97.28 | 96.79 |
| MW-22 12335 | 98.21 | 97.63 |
| MW-23 12335 | 93.14 | 92.38 |

| EXTRACTION WELLS SURVEYED 5-19-14 | | |
|---|---|---|
| WELL | TOL ELEV. | TOC ELEV. |
| SV-4 | 97.33 | * |
| SV-5 | 97.63 | * |
| SV-6 | 97.62 | * |
| SV-7 | 97.31 | * |
| SV-8 | 97.49 | * |

SV-1, SV-2, AND SV-3 ARE PAVED OVER. SV-4, SV-5, SV-6, SV-7, AND SV-8 ARE FILLED WITH CLAY.

| MONITOR WELLS SURVEYED 3-4-14 | | |
|---|---|---|
| WELL | TOL ELEV. | TOC ELEV. |
| OMW-36 12335 | 88.91 | 88.50 |
| OMW-37 12335 | 88.37 | 87.65 |
| OMW-38 12335 | 99.47 | 99.25 |
| OMW-39 12335 | 93.14 | 92.77 |
| OMW-40 12335 | 99.51 | 99.25 |
| MW-12R 12335 | 97.49 | 97.17 |
| MW-24 12335 | 71.37 | 71.04 |
| MW-25 12335 | 68.97 | 68.73 |
| MW-26 12335 | 71.77 | 71.50 |
| MW-27 12335 | 79.58 | 79.32 |
| MW-28 12335 | 88.55 | 88.09 |
| MW-29 12335 | 88.45 | 88.25 |
| MW-30 12335 | 88.52 | 88.29 |
| MW-31 12335 | 93.11 | 92.70 |
| MW-32 12335 | 94.85 | 94.46 |
| MW-33 12335 | 99.50 | 99.16 |
| MW-34 12335 | 85.35 | 85.10 |
| MW-35 12335 | 95.42 | 95.08 |




GRAPHIC SCALE 1"=60'

0 60 120 180

LEGEND AND ABBREVIATIONS:

- MW = MONITORING WELL
- BM = BENCHMARK
- TPED = TELEPHONE PEDESTAL
- PP = POWER POLE
- LP = LIGHT POLE
- UST = UNDERGROUND STORAGE TANK
- WW = WATER SUPPLY WELL
- FD = FUEL DISPENSER
- —E— = OVERHEAD POWER LINE
- ——— = CREEK
- —T— = UNDERGROUND TELEPHONE LINE
- —X— = HOG WIRE FENCE LINE
- —UE— = UNDERGROUND POWER LINE

SOUTH CAROLINA REGISTERED LAND SURVEYOR No. 14811 JAY S. JOSHI

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION

SC STATE PLANE COORDINATE SYSTEM NAD 83 GRID NORTH

COMPREHENSIVE SITE SKETCH OF

# CRAWFORD'S COUNTRY STORE

5870 S.C. HIGHWAY 28 NORTH
ABBEVILLE, ABBEVILLE COUNTY, SC
SCDHEC SITE ID #12335
PREPARED FOR

MIDLANDS ENVIRONMENTAL CONSULTANTS, INC.

THIS PARCEL MAY BE SUBJECT TO EASEMENTS AND/OR RESTRICTIONS NOT SHOWN. FINAL DETAILS ARE CONCLUSIVE OF TITLE SEARCH

NOTE: NOT FOR THE PURPOSE OF RECORDATION AT COUNTY COURTHOUSE, OR THE CONVEYANCE OF PROPERTY.

NOTE: I HEREBY CERTIFY THAT THE FIELD WORK, CALCULATIONS, AND DRAFTING WERE DONE UNDER MY DIRECT SUPERVISION.


JAY S. JOSHI PLS # 14811
P.O. BOX 90408, COLUMBIA, SC, 29290 803-776-9909


DATE: MARCH 7, 2014 JOB #0304148
sub of #051911W

REVISED MARCH 12, 2014
MW-12 REMOVED FROM DRAWING & WELL TABLE
MW-13 CHANGED TO MW-13R
MW-13R CHANGED TO MW-13

**APPENDIX B:**

**SAMPLING LOGS, LABORATORY DATA SHEETS, & CHAIN-OF-CUSTODY FORMS**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D, McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** OMW-1

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 16.16 | | feet |
| Total Well Depth (TWD) | 22 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 5.84 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 0.95 | gallons |
| 3 casing volume (3 X CV)= | 5 | 4.76 | gallons |

Total Volume of Water Purged Before Sampling 0.5 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 16:19 | 16:23 | | | | | | |
| pH (s.u.) | 7.13 | 7.13 | | | | | | |
| Specific Conductivity (µmhos/cm) | 210.9 | 215.0 | | | | | | |
| Water Temperature (° C) | 21.0 | 20.7 | | | | | | |
| Dissolved Oxygen | 0.99 | 0.91 | | | | | | |
| Turbidity (NTU) | 14.2 | 196.4 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 16:23 **Dry at 0.5 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-1R

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 15.92 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 9.08 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.48 | gallons |
| 3 casing volume (3 X CV)= | 5 | 7.40 | gallons |

Total Volume of Water Purged Before Sampling 3 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 15:48 | 15:52 | 15:55 | | | | | |
| pH (s.u.) | Sheen | Sheen | Sheen | | | | | |
| Specific Conductivity (µmhos/cm) | Sheen | Sheen | Sheen | | | | | |
| Water Temperature (° C) | Sheen | Sheen | Sheen | | | | | |
| Dissolved Oxygen | Sheen | Sheen | Sheen | | | | | |
| Turbidity (NTU) | Sheen | Sheen | Sheen | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 15:55 **Dry at 3.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-2

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 16.49 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 8.51 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.39 | gallons |
| 3 casing volume (3 X CV)= | 5 | 6.94 | gallons |

Total Volume of Water Purged Before Sampling 2.5 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 15:00 | 15:05 | | | | | | |
| pH (s.u.) | Sheen | Sheen | | | | | | |
| Specific Conductivity (µmhos/cm) | Sheen | Sheen | | | | | | |
| Water Temperature (° C) | Sheen | Sheen | | | | | | |
| Dissolved Oxygen | Sheen | Sheen | | | | | | |
| Turbidity (NTU) | Sheen | Sheen | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 15:05 **Dry at 2.5 Gallons**
**Duplicate Sample Collected**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D, McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-3

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | 0.01 | | feet |
| Depth to Free Product (DFP) | 17.04 | | feet |
| Depth to Ground Water (DGW) | 17.05 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 7.95 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.30 | gallons |
| 3 casing volume (3 X CV)= | 5 | 6.48 | gallons |

Total Volume of Water Purged Before Sampling PROD gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | PROD | | | | | | | |
| pH (s.u.) | PROD | | | | | | | |
| Specific Conductivity (µmhos/cm) | PROD | | | | | | | |
| Water Temperature (° C) | PROD | | | | | | | |
| Dissolved Oxygen | PROD | | | | | | | |
| Turbidity (NTU) | PROD | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: **Product Detected/Not Sampled**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-4

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 17.02 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 7.98 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.30 | gallons |
| 3 casing volume (3 X CV)= | 5 | 6.50 | gallons |

Total Volume of Water Purged Before Sampling 3 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 14:40 | 14:42 | 14:44 | | | | | |
| pH (s.u.) | 6.77 | 6.84 | 6.85 | | | | | |
| Specific Conductivity (µmhos/cm) | 39.7 | 72.2 | 73.3 | | | | | |
| Water Temperature (° C) | 21.4 | 21.5 | 21.7 | | | | | |
| Dissolved Oxygen | 1.40 | 1.06 | 1.11 | | | | | |
| Turbidity (NTU) | 16.0 | 243.4 | 261.9 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 15:05 **Dry at 3.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-5

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 13.63 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 11.37 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.85 | gallons |
| 3 casing volume (3 X CV)= | 5 | 9.27 | gallons |

Total Volume of Water Purged Before Sampling 2.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 15:50 | 15:53 | | | | | | |
| pH (s.u.) | 4.86 | 5.41 | | | | | | |
| Specific Conductivity (µmhos/cm) | 53.9 | 106.0 | | | | | | |
| Water Temperature (° C) | 20.4 | 19.1 | | | | | | |
| Dissolved Oxygen | 1.50 | 2.37 | | | | | | |
| Turbidity (NTU) | 46.9 | 233.6 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 15:53 **Dry at 2.5 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| pH/Conductivity Meter | | DO Meter | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-7

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 12.36 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 12.64 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 2.06 | gallons |
| 3 casing volume (3 X CV)= | 5 | 10.30 | gallons |

Total Volume of Water Purged Before Sampling 2.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 14:50 | 14:53 | | | | | | |
| pH (s.u.) | 3.52 | 3.53 | | | | | | |
| Specific Conductivity (µmhos/cm) | 87.6 | 90.4 | | | | | | |
| Water Temperature (°C) | 16.6 | 16.7 | | | | | | |
| Dissolved Oxygen | 3.84 | 3.17 | | | | | | |
| Turbidity (NTU) | 18.6 | 106.3 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 14:53 **Dry at 2.5 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-8

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 9.54 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 15.46 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 2.52 | gallons |
| 3 casing volume (3 X CV)= | 5 | 12.60 | gallons |

Total Volume of Water Purged Before Sampling 3 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 14:40 | 14:43 | | | | | | |
| pH (s.u.) | 3.21 | 3.31 | | | | | | |
| Specific Conductivity (µmhos/cm) | 65.3 | 72.3 | | | | | | |
| Water Temperature (° C) | 18.2 | 19.5 | | | | | | |
| Dissolved Oxygen | 1.89 | 1.74 | | | | | | |
| Turbidity (NTU) | 21.7 | 138.5 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 14:43 **Dry at 3.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-9

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 14.59 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 10.41 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.70 | gallons |
| 3 casing volume (3 X CV)= | 5 | 8.48 | gallons |

Total Volume of Water Purged Before Sampling 2.5 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 15:40 | 15:42 | | | | | | |
| pH (s.u.) | 4.40 | 4.57 | | | | | | |
| Specific Conductivity (µmhos/cm) | 56.7 | 54.4 | | | | | | |
| Water Temperature (° C) | 20.4 | 21.1 | | | | | | |
| Dissolved Oxygen | 1.29 | 1.60 | | | | | | |
| Turbidity (NTU) | 29.1 | 232.4 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 15:42 **Dry at 2.5 Gallons**
**Duplicate Sample Collected**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-10

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 16.61 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 8.39 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.37 | gallons |
| 3 casing volume (3 X CV)= | 5 | 6.84 | gallons |

Total Volume of Water Purged Before Sampling 2.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 14:57 | 14:59 | | | | | | |
| pH (s.u.) | 7.14 | 7.17 | | | | | | |
| Specific Conductivity (µmhos/cm) | 172.3 | 180.7 | | | | | | |
| Water Temperature (° C) | 22.3 | 22.0 | | | | | | |
| Dissolved Oxygen | 0.67 | 1.07 | | | | | | |
| Turbidity (NTU) | 29.5 | 224.3 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 14:59 **Dry at 2.5 Gallons**
**Duplicate Sample Collected**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-11

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 15.14 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 9.86 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.61 | gallons |
| 3 casing volume (3 X CV)= | 5 | 8.04 | gallons |

Total Volume of Water Purged Before Sampling 3.5 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 13:24 | 13:27 | 13:30 | | | | | |
| pH (s.u.) | 6.52 | 6.54 | 6.53 | | | | | |
| Specific Conductivity (µmhos/cm) | 37.5 | 53.4 | 72.0 | | | | | |
| Water Temperature (° C) | 20.7 | 20.7 | 20.5 | | | | | |
| Dissolved Oxygen | 1.04 | 1.21 | 1.69 | | | | | |
| Turbidity (NTU) | 13.4 | 194.3 | 216.4 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 13:30 **Dry at 3.5 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D, McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-12R

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 17.17 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 7.83 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.28 | gallons |
| 3 casing volume (3 X CV)= | 5 | 6.38 | gallons |

Total Volume of Water Purged Before Sampling 3 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 14:22 | 14:23 | 14:24 | | | | | |
| pH (s.u.) | 6.71 | 6.65 | 6.59 | | | | | |
| Specific Conductivity (µmhos/cm) | 84.7 | 79.8 | 72.1 | | | | | |
| Water Temperature (° C) | 19.9 | 19.9 | 19.8 | | | | | |
| Dissolved Oxygen | 2.57 | 2.81 | 3.15 | | | | | |
| Turbidity (NTU) | 19.4 | 219.3 | 241.9 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 14:24 **Dry at 3.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-13R

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 20.49 | | feet |
| Total Well Depth (TWD) | 30 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 9.51 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.55 | gallons |
| 3 casing volume (3 X CV)= | 5 | 7.75 | gallons |

Total Volume of Water Purged Before Sampling 2 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 12:40 | 12:44 | | | | | | |
| pH (s.u.) | 6.82 | 6.81 | | | | | | |
| Specific Conductivity (µmhos/cm) | 57.3 | 50.2 | | | | | | |
| Water Temperature (° C) | 18.6 | 18.6 | | | | | | |
| Dissolved Oxygen | 0.96 | 2.99 | | | | | | |
| Turbidity (NTU) | 13.4 | 116.3 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 12:44 **Dry at 2.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-14

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 7.88 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 17.12 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 2.79 | gallons |
| 3 casing volume (3 X CV)= | 5 | 13.95 | gallons |

Total Volume of Water Purged Before Sampling 14 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 15:20 | 15:23 | 15:26 | 15:29 | 15:32 | 15:35 | | |
| pH (s.u.) | 6.58 | 6.58 | 6.59 | 6.66 | 6.62 | 6.60 | | |
| Specific Conductivity (µmhos/cm) | 242.0 | 265.4 | 259.3 | 252.9 | 249.8 | 247.4 | | |
| Water Temperature (° C) | 14.3 | 14.3 | 14.6 | 14.9 | 15.4 | 15.7 | | |
| Dissolved Oxygen | 2.21 | 2.28 | 2.03 | 1.95 | 1.83 | 1.79 | | |
| Turbidity (NTU) | 62.8 | 157.4 | 188.6 | 252.4 | 344.5 | 479.3 | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 15:35

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| pH/Conductivity Meter | | DO Meter | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-15

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 3.81 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 21.19 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 3.45 | gallons |
| 3 casing volume (3 X CV)= | 5 | 17.27 | gallons |

Total Volume of Water Purged Before Sampling 10 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:25 | 11:29 | 11:33 | | | | | |
| pH (s.u.) | 7.71 | 7.72 | 7.74 | | | | | |
| Specific Conductivity (µmhos/cm) | 12.7 | 21.4 | 15.3 | | | | | |
| Water Temperature (° C) | 10.0 | 11.0 | 13.9 | | | | | |
| Dissolved Oxygen | 8.78 | 9.04 | 8.36 | | | | | |
| Turbidity (NTU) | 10.9 | 231.4 | 238.3 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:33 **Dry at 10.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-16

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 8.23 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 16.77 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 2.73 | gallons |
| 3 casing volume (3 X CV)= | 5 | 13.67 | gallons |

Total Volume of Water Purged Before Sampling 6 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:00 | 11:03 | 11:06 | | | | | |
| pH (s.u.) | 7.98 | 7.49 | 7.43 | | | | | |
| Specific Conductivity (µmhos/cm) | 13.3 | 26.6 | 23.2 | | | | | |
| Water Temperature (° C) | 15.3 | 16.9 | 17.2 | | | | | |
| Dissolved Oxygen | 2.56 | 2.64 | 2.52 | | | | | |
| Turbidity (NTU) | 23.2 | 215.4 | 234.6 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:06 **Dry at 6.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** DMW-17

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 15.45 | | feet |
| Total Well Depth (TWD) | 75 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 59.55 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 9.71 | gallons |
| 3 casing volume (3 X CV)= | 5 | 48.53 | gallons |

Total Volume of Water Purged Before Sampling 9.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 15:10 | 15:20 | | | | | | |
| pH (s.u.) | 7.34 | 7.06 | | | | | | |
| Specific Conductivity (µmhos/cm) | 93.2 | 81.8 | | | | | | |
| Water Temperature (°C) | 22.0 | 20.5 | | | | | | |
| Dissolved Oxygen | 3.86 | 4.02 | | | | | | |
| Turbidity (NTU) | 12.2 | 186.4 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 15:20 **Dry at 9.5 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-18

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 6.90 | | feet |
| Total Well Depth (TWD) | 18 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 11.1 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.81 | gallons |
| 3 casing volume (3 X CV)= | 5 | 9.05 | gallons |

Total Volume of Water Purged Before Sampling 9 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 15:05 | 15:07 | 15:09 | 15:11 | 15:13 | 15:15 | | |
| pH (s.u.) | 6.51 | 6.22 | 6.20 | 6.11 | 6.19 | 6.17 | | |
| Specific Conductivity (µmhos/cm) | 74.7 | 74.4 | 74.0 | 73.2 | 67.5 | 63.7 | | |
| Water Temperature (° C) | 15.5 | 16.0 | 16.1 | 16.2 | 16.4 | 16.5 | | |
| Dissolved Oxygen | 4.72 | 4.54 | 4.58 | 4.67 | 4.72 | 4.65 | | |
| Turbidity (NTU) | 64.4 | 132.5 | 179.3 | 225.1 | 289.1 | 284.7 | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 15:15

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-19

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 19.15 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 5.85 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 0.95 | gallons |
| 3 casing volume (3 X CV)= | 5 | 4.77 | gallons |

Total Volume of Water Purged Before Sampling 2 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 14:16 | 14:17 | 14:18 | | | | | |
| pH (s.u.) | 6.47 | 6.55 | 6.54 | | | | | |
| Specific Conductivity (µmhos/cm) | 99.9 | 88.0 | 94.0 | | | | | |
| Water Temperature (° C) | 21.1 | 19.9 | 20.1 | | | | | |
| Dissolved Oxygen | 1.81 | 3.95 | 2.83 | | | | | |
| Turbidity (NTU) | 15.2 | 194.3 | 219.6 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 14:18 **Dry at 2.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-20

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 20.52 | | feet |
| Total Well Depth (TWD) | 27 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 6.48 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.06 | gallons |
| 3 casing volume (3 X CV)= | 5 | 5.28 | gallons |

Total Volume of Water Purged Before Sampling 2 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 12:32 | 12:34 | | | | | | |
| pH (s.u.) | 6.75 | 6.68 | | | | | | |
| Specific Conductivity (µmhos/cm) | 34.9 | 34.1 | | | | | | |
| Water Temperature (° C) | 19.5 | 20.2 | | | | | | |
| Dissolved Oxygen | 2.11 | 2.58 | | | | | | |
| Turbidity (NTU) | 16.4 | 94.3 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 12:34 **Dry at 2.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-21

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): $3.14 \times (D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 19.57 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 5.43 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 0.89 | gallons |
| 3 casing volume (3 X CV)= | 5 | 4.43 | gallons |

Total Volume of Water Purged Before Sampling 1.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 13:07 | 13:08 | | | | | | |
| pH (s.u.) | 6.60 | 6.11 | | | | | | |
| Specific Conductivity (µmhos/cm) | 31.6 | 72.4 | | | | | | |
| Water Temperature (° C) | 19.3 | 18.9 | | | | | | |
| Dissolved Oxygen | 5.90 | 4.32 | | | | | | |
| Turbidity (NTU) | 11.1 | 194.3 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 13:08 **Dry at 1.5 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912A1 | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-22

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 19.93 | | feet |
| Total Well Depth (TWD) | 29 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 9.07 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.48 | gallons |
| 3 casing volume (3 X CV)= | 5 | 7.39 | gallons |

Total Volume of Water Purged Before Sampling 4 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 12:21 | 12:24 | 12:28 | | | | | |
| pH (s.u.) | 7.14 | 7.26 | 7.28 | | | | | |
| Specific Conductivity (µmhos/cm) | 59.3 | 59.2 | 63.5 | | | | | |
| Water Temperature (° C) | 16.7 | 16.9 | 16.9 | | | | | |
| Dissolved Oxygen | 0.83 | 1.20 | 1.34 | | | | | |
| Turbidity (NTU) | 21.3 | 138.8 | 217.3 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 12:28 **Dry at 4.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D, McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-23

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 12.82 | | feet |
| Total Well Depth (TWD) | 23 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 10.18 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.66 | gallons |
| 3 casing volume (3 X CV)= | 5 | 8.30 | gallons |

Total Volume of Water Purged Before Sampling 6 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 12:17 | 12:19 | 12:21 | 12:23 | 12:25 | | | |
| pH (s.u.) | 7.05 | 7.06 | 6.94 | 7.00 | 6.94 | | | |
| Specific Conductivity (µmhos/cm) | 108.1 | 108.0 | 113.1 | 115.1 | 115.0 | | | |
| Water Temperature (° C) | 17.7 | 17.4 | 17.9 | 18.2 | 18.0 | | | |
| Dissolved Oxygen | 1.35 | 1.93 | 1.51 | 1.70 | 2.93 | | | |
| Turbidity (NTU) | 16.2 | 115.3 | 131.4 | 135.2 | 138.4 | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 12:25 **Dry at 6.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D, McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-24

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 0.52 | | feet |
| Total Well Depth (TWD) | 12 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 11.48 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.87 | gallons |
| 3 casing volume (3 X CV)= | 5 | 9.36 | gallons |

Total Volume of Water Purged Before Sampling 4 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 10:10 | 10:12 | 10:14 | | | | | |
| pH (s.u.) | 6.02 | 6.76 | 6.72 | | | | | |
| Specific Conductivity (µmhos/cm) | 69.0 | 62.0 | 58.8 | | | | | |
| Water Temperature (° C) | 11.7 | 12.0 | 13.6 | | | | | |
| Dissolved Oxygen | 4.50 | 4.28 | 4.84 | | | | | |
| Turbidity (NTU) | 20.7 | 162.5 | 231.4 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 10:14 **Dry at 4.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-25

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 0.00 | | feet |
| Total Well Depth (TWD) | 12 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 12 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.96 | gallons |
| 3 casing volume (3 X CV)= | 5 | 9.78 | gallons |

Total Volume of Water Purged Before Sampling 10 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 10:20 | 10:22 | 10:24 | 10:26 | 10:28 | 10:30 | | |
| pH (s.u.) | 6.09 | 6.19 | 6.23 | 6.26 | 6.24 | 6.25 | | |
| Specific Conductivity (µmhos/cm) | 61.9 | 61.8 | 59.0 | 58.4 | 58.0 | 57.7 | | |
| Water Temperature (° C) | 15.1 | 14.5 | 15.5 | 15.4 | 15.3 | 15.1 | | |
| Dissolved Oxygen | 4.36 | 5.11 | 4.37 | 4.41 | 4.52 | 4.59 | | |
| Turbidity (NTU) | 48.3 | 172.4 | 221.8 | 265.3 | 341.9 | 460.5 | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 10:30

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-26

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 0.00 | | feet |
| Total Well Depth (TWD) | 12 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 12 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.96 | gallons |
| 3 casing volume (3 X CV)= | 5 | 9.78 | gallons |

Total Volume of Water Purged Before Sampling 4 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 10:40 | 10:42 | 10:44 | | | | | |
| pH (s.u.) | 5.55 | 5.40 | 5.23 | | | | | |
| Specific Conductivity (µmhos/cm) | 71.3 | 70.2 | 68.7 | | | | | |
| Water Temperature (° C) | 15.4 | 15.2 | 15.1 | | | | | |
| Dissolved Oxygen | 7.94 | 7.98 | 8.03 | | | | | |
| Turbidity (NTU) | 55.2 | 164.9 | 248.3 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 10:44 **Dry at 4.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| pH/Conductivity Meter | | DO Meter | |
|---|---|---|---|
| YSI 63 | | YSI 550A | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-27

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 3.24 | | feet |
| Total Well Depth (TWD) | 12 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 8.76 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.43 | gallons |
| 3 casing volume (3 X CV)= | 5 | 7.14 | gallons |

Total Volume of Water Purged Before Sampling 2 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 10:53 | 10:55 | | | | | | |
| pH (s.u.) | 6.81 | 6.05 | | | | | | |
| Specific Conductivity (µmhos/cm) | 62.8 | 65.6 | | | | | | |
| Water Temperature (° C) | 11.9 | 11.8 | | | | | | |
| Dissolved Oxygen | 4.82 | 5.29 | | | | | | |
| Turbidity (NTU) | 39.8 | 213.4 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 10:55 **Dry at 2.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D, McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-28

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 17.48 | | feet |
| Total Well Depth (TWD) | 24 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 6.52 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.06 | gallons |
| 3 casing volume (3 X CV)= | 5 | 5.31 | gallons |

Total Volume of Water Purged Before Sampling 1 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:20 | 11:22 | | | | | | |
| pH (s.u.) | 6.15 | 6.16 | | | | | | |
| Specific Conductivity (µmhos/cm) | 84.6 | 82.6 | | | | | | |
| Water Temperature (° C) | 17.4 | 17.5 | | | | | | |
| Dissolved Oxygen | 5.41 | 5.44 | | | | | | |
| Turbidity (NTU) | 47.3 | 104.3 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:22 **Dry at 1.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912A1 | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-29

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 16.99 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 8.01 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.31 | gallons |
| 3 casing volume (3 X CV)= | 5 | 6.53 | gallons |

Total Volume of Water Purged Before Sampling 1 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 12:10 | 12:12 | | | | | | |
| pH (s.u.) | 6.97 | 6.92 | | | | | | |
| Specific Conductivity (µmhos/cm) | 49.9 | 48.6 | | | | | | |
| Water Temperature (° C) | 19.3 | 19.6 | | | | | | |
| Dissolved Oxygen | 6.32 | 6.68 | | | | | | |
| Turbidity (NTU) | 37.6 | 84.5 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 12:12 **Dry at 1.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D, McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| pH/Conductivity Meter | | DO Meter | |
|---|---|---|---|
| YSI 63 | | YSI 550A | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-30

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 15.62 | | feet |
| Total Well Depth (TWD) | 24 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 8.38 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.37 | gallons |
| 3 casing volume (3 X CV)= | 5 | 6.83 | gallons |

Total Volume of Water Purged Before Sampling 2.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 13:05 | 13:07 | | | | | | |
| pH (s.u.) | 5.84 | 5.99 | | | | | | |
| Specific Conductivity (µmhos/cm) | 23.1 | 21.2 | | | | | | |
| Water Temperature (° C) | 18.5 | 18.5 | | | | | | |
| Dissolved Oxygen | 8.60 | 8.31 | | | | | | |
| Turbidity (NTU) | 54.4 | 286.1 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 13:08 **Dry at 2.5 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D, McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-31

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 16.42 | | feet |
| Total Well Depth (TWD) | 24 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 7.58 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.24 | gallons |
| 3 casing volume (3 X CV)= | 5 | 6.18 | gallons |

Total Volume of Water Purged Before Sampling 2 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 12:50 | 12:52 | | | | | | |
| pH (s.u.) | 6.07 | 6.07 | | | | | | |
| Specific Conductivity (µmhos/cm) | 58.7 | 49.2 | | | | | | |
| Water Temperature (° C) | 19.9 | 20.2 | | | | | | |
| Dissolved Oxygen | 2.87 | 4.67 | | | | | | |
| Turbidity (NTU) | 56.8 | 234.9 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 12:52 **Dry at 2.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| pH/Conductivity Meter | | DO Meter | |
|---|---|---|---|
| YSI 63 | | YSI 550A | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-32

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 16.25 | | feet |
| Total Well Depth (TWD) | 24 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 7.75 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.26 | gallons |
| 3 casing volume (3 X CV)= | 5 | 6.32 | gallons |

Total Volume of Water Purged Before Sampling 1.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 14:05 | 14:07 | | | | | | |
| pH (s.u.) | 6.53 | 6.62 | | | | | | |
| Specific Conductivity (µmhos/cm) | 44.1 | 59.1 | | | | | | |
| Water Temperature (° C) | 21.0 | 20.5 | | | | | | |
| Dissolved Oxygen | 6.93 | 7.94 | | | | | | |
| Turbidity (NTU) | 37.6 | 253.6 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 14:07 **Dry at 1.5 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D, McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-33

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 18.94 | | feet |
| Total Well Depth (TWD) | 27 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 8.06 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.31 | gallons |
| 3 casing volume (3 X CV)= | 5 | 6.57 | gallons |

Total Volume of Water Purged Before Sampling 2 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 14:20 | 14:22 | | | | | | |
| pH (s.u.) | 6.47 | 6.37 | | | | | | |
| Specific Conductivity (µmhos/cm) | 39.4 | 35.9 | | | | | | |
| Water Temperature (° C) | 19.1 | 19.3 | | | | | | |
| Dissolved Oxygen | 3.55 | 3.94 | | | | | | |
| Turbidity (NTU) | 62.7 | 146.5 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 14:22 **Dry at 2.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912A1 | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-34

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 5.85 | | feet |
| Total Well Depth (TWD) | 15 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 9.15 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.49 | gallons |
| 3 casing volume (3 X CV)= | 5 | 7.46 | gallons |

Total Volume of Water Purged Before Sampling 3 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 12:05 | 12:07 | 12:08 | | | | | |
| pH (s.u.) | 7.32 | 7.32 | 7.29 | | | | | |
| Specific Conductivity (µmhos/cm) | 40.3 | 31.7 | 28.5 | | | | | |
| Water Temperature (° C) | 14.8 | 14.2 | 14.7 | | | | | |
| Dissolved Oxygen | 1.22 | 1.91 | 3.03 | | | | | |
| Turbidity (NTU) | 120.3 | 280.9 | 335.6 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 12:08 **Dry at 3.0 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-35

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 18.88 | | feet |
| Total Well Depth (TWD) | 28 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 9.12 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.49 | gallons |
| 3 casing volume (3 X CV)= | 5 | 7.43 | gallons |

Total Volume of Water Purged Before Sampling 2.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 12:35 | 12:37 | | | | | | |
| pH (s.u.) | 6.58 | 6.45 | | | | | | |
| Specific Conductivity (µmhos/cm) | 79.4 | 80.2 | | | | | | |
| Water Temperature (° C) | 18.4 | 17.9 | | | | | | |
| Dissolved Oxygen | 2.80 | 2.40 | | | | | | |
| Turbidity (NTU) | 36.9 | 241.6 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 12:38 **Dry at 2.5 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** DMW-36

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 18.09 | | feet |
| Total Well Depth (TWD) | 60 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 41.91 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 6.83 | gallons |
| 3 casing volume (3 X CV)= | 5 | 34.16 | gallons |

Total Volume of Water Purged Before Sampling 30 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:35 | 11:42 | 11:49 | 11:56 | 12:01 | | | |
| pH (s.u.) | 6.93 | 7.19 | 6.91 | 6.97 | 7.00 | | | |
| Specific Conductivity (µmhos/cm) | 112.0 | 175.0 | 172.4 | 175.6 | 177.5 | | | |
| Water Temperature (° C) | 17.9 | 17.3 | 17.4 | 17.5 | 17.6 | | | |
| Dissolved Oxygen | 6.72 | 5.93 | 5.86 | 5.79 | 5.75 | | | |
| Turbidity (NTU) | 14.8 | 89.3 | 127.6 | 158.4 | 236.1 | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 12:01 **Dry at 30.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** DMW-37

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 16.18 | | feet |
| Total Well Depth (TWD) | 50 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 33.82 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 5.51 | gallons |
| 3 casing volume (3 X CV)= | 5 | 27.56 | gallons |

Total Volume of Water Purged Before Sampling 16 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 12:10 | 12:15 | 12:20 | 12:25 | | | | |
| pH (s.u.) | 6.28 | 6.29 | 6.14 | 6.14 | | | | |
| Specific Conductivity (µmhos/cm) | 62.3 | 54.6 | 48.4 | 47.1 | | | | |
| Water Temperature (° C) | 19.6 | 18.7 | 18.3 | 18.3 | | | | |
| Dissolved Oxygen | 6.48 | 7.51 | 7.33 | 8.40 | | | | |
| Turbidity (NTU) | 11.7 | 59.2 | 144.9 | 192.6 | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 12:25 **Dry at 16.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** DMW-38

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 20.10 | | feet |
| Total Well Depth (TWD) | 50 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 29.9 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 4.87 | gallons |
| 3 casing volume (3 X CV)= | 5 | 24.37 | gallons |

Total Volume of Water Purged Before Sampling 21 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 14:15 | 14:20 | 14:25 | 14:30 | 14:35 | | | |
| pH (s.u.) | 6.16 | 6.83 | 6.71 | 6.64 | 6.59 | | | |
| Specific Conductivity (µmhos/cm) | 44.3 | 33.4 | 33.0 | 34.6 | 33.3 | | | |
| Water Temperature (° C) | 19.3 | 18.0 | 18.1 | 18.3 | 18.5 | | | |
| Dissolved Oxygen | 5.43 | 3.33 | 3.86 | 4.11 | 4.46 | | | |
| Turbidity (NTU) | 31.8 | 65.0 | 153.5 | 189.4 | 231.6 | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 14:35 **Dry at 21.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D. McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** DMW-39

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 16.33 | | feet |
| Total Well Depth (TWD) | 35 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 18.67 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 3.04 | gallons |
| 3 casing volume (3 X CV)= | 5 | 15.22 | gallons |

Total Volume of Water Purged Before Sampling 3 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 12:50 | 12:53 | | | | | | |
| pH (s.u.) | 5.35 | 5.49 | | | | | | |
| Specific Conductivity (µmhos/cm) | 54.8 | 81.8 | | | | | | |
| Water Temperature (° C) | 19.8 | 19.4 | | | | | | |
| Dissolved Oxygen | 6.51 | 3.74 | | | | | | |
| Turbidity (NTU) | 26.6 | 381.6 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 12:53 **Dry at 3.0 Gallons**

South Carolina Department of Health and Environmental Control
Bureau of Land and Waste Management Underground Storage Tank Program

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/18/2014

**Field Personnel:** R. Ariail, G. Globensky, B. Johnson, W. Huss, & D, McCartha

**General Weather Conditions:** Clear

**Ambient Air Temperature:** 10.0 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** DMW-40

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 20.79 | | feet |
| Total Well Depth (TWD) | 50 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 29.21 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 4.76 | gallons |
| 3 casing volume (3 X CV)= | 5 | 23.81 | gallons |

Total Volume of Water Purged Before Sampling 24 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 12:55 | 13:00 | 13:05 | 13:10 | 13:12 | 13:15 | | |
| pH (s.u.) | 6.80 | 6.75 | 6.71 | 6.64 | 6.63 | 6.64 | | |
| Specific Conductivity (µmhos/cm) | 74.1 | 72.5 | 72.2 | 71.0 | 70.4 | 71.2 | | |
| Water Temperature (° C) | 19.4 | 18.4 | 18.2 | 18.2 | 18.3 | 18.2 | | |
| Dissolved Oxygen | 1.31 | 1.20 | 1.45 | 1.79 | 1.21 | 1.42 | | |
| Turbidity (NTU) | 10.5 | 202.6 | 216.9 | 243.9 | 142.6 | 95.2 | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 13:15

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Report of Analysis

**Midlands Environmental Consultants, Inc.**
235 Dooley Rd
Lexington, SC 29073
Attention: Bryan Shane

Project Name: **Crawfords Country Store**

Project Number: **13-4650**

Lot Number: **OK15025**

Date Completed: **11/18/2013**

**Kelly M. Maberry**
Project Manager

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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

## Case Narrative

## Midlands Environmental Consultants, Inc.

### Lot Number: OK15025

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

The VOC data is screening only. Laboratory QC may not pass and samples may be analyzed outside of tune time.

## Sample Summary

### Midlands Environmental Consultants, Inc.

**Lot Number: OK15025**

| Sample Number | Sample ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| 001 | GPW-1 | Aqueous | 11/13/2013 1046 | 11/15/2013 |
| 002 | GPW-2 | Aqueous | 11/13/2013 1100 | 11/15/2013 |
| 003 | GPW-3 | Aqueous | 11/13/2013 1115 | 11/15/2013 |
| 004 | GPW-4 | Aqueous | 11/13/2013 1137 | 11/15/2013 |
| 005 | GPW-5 | Aqueous | 11/13/2013 1225 | 11/15/2013 |
| 006 | GPW-6 | Aqueous | 11/13/2013 1315 | 11/15/2013 |
| 007 | GPW-7 | Aqueous | 11/13/2013 1350 | 11/15/2013 |
| 008 | GPW-8 | Aqueous | 11/13/2013 1440 | 11/15/2013 |
| 009 | GPW-9 | Aqueous | 11/13/2013 1500 | 11/15/2013 |
| 010 | GPW-10 | Aqueous | 11/13/2013 1520 | 11/15/2013 |
| 011 | GPW-11 | Aqueous | 11/13/2013 1715 | 11/15/2013 |
| 012 | GPW-12 | Aqueous | 11/13/2013 1620 | 11/15/2013 |
| 013 | GPW-13 | Aqueous | 11/13/2013 1640 | 11/15/2013 |
| 014 | GPW-14 | Aqueous | 11/13/2013 1705 | 11/15/2013 |
| 015 | GPW-15 | Aqueous | 11/14/2013 1015 | 11/15/2013 |
| 016 | GPW-16 | Aqueous | 11/14/2013 1030 | 11/15/2013 |
| 017 | GPW-17 | Aqueous | 11/14/2013 1044 | 11/15/2013 |
| 018 | GPW-18 | Aqueous | 11/14/2013 1108 | 11/15/2013 |
| 019 | GPW-19 | Aqueous | 11/14/2013 1130 | 11/15/2013 |
| 020 | GPW-20 | Aqueous | 11/14/2013 1237 | 11/15/2013 |
| 021 | GPW-21 | Aqueous | 11/14/2013 1223 | 11/15/2013 |
| 022 | GPW-22 | Aqueous | 11/14/2013 1253 | 11/15/2013 |
| 023 | GPW-23 | Aqueous | 11/14/2013 1415 | 11/15/2013 |
| 024 | GPW-24 | Aqueous | 11/14/2013 1440 | 11/15/2013 |
| 025 | GPW-25 | Aqueous | 11/14/2013 1520 | 11/15/2013 |
| 026 | GPW-26 | Aqueous | 11/14/2013 1603 | 11/15/2013 |
| 027 | EMS-WW | Aqueous | 11/13/2013 1415 | 11/15/2013 |
| 028 | McCullough-WW | Aqueous | 11/14/2013 1510 | 11/15/2013 |

(28 samples)

## Executive Summary

## Midlands Environmental Consultants, Inc.

### Lot Number: OK15025

| Sample | Sample ID | Matrix | Parameter | Method | Result | Q | Units | Page |
|---|---|---|---|---|---|---|---|---|
| 002 | GPW-2 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 21 | | ug/L | 6 |
| 003 | GPW-3 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 7.0 | | ug/L | 7 |
| 005 | GPW-5 | Aqueous | Benzene | 8260B | 39 | | ug/L | 9 |
| 005 | GPW-5 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 410 | E | ug/L | 9 |
| 006 | GPW-6 | Aqueous | Benzene | 8260B | 110 | | ug/L | 10 |
| 006 | GPW-6 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 32 | | ug/L | 10 |
| 006 | GPW-6 | Aqueous | Naphthalene | 8260B | 11 | | ug/L | 10 |
| 006 | GPW-6 | Aqueous | Xylenes (total) | 8260B | 95 | | ug/L | 10 |
| 007 | GPW-7 | Aqueous | Benzene | 8260B | 0.46 | J | ug/L | 11 |
| 007 | GPW-7 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 1.7 | J | ug/L | 11 |
| 008 | GPW-8 | Aqueous | Benzene | 8260B | 0.42 | J | ug/L | 12 |
| 008 | GPW-8 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 12 | | ug/L | 12 |
| 009 | GPW-9 | Aqueous | Benzene | 8260B | 0.23 | J | ug/L | 13 |
| 011 | GPW-11 | Aqueous | Benzene | 8260B | 2.5 | J | ug/L | 15 |
| 011 | GPW-11 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 33 | | ug/L | 15 |
| 012 | GPW-12 | Aqueous | Benzene | 8260B | 170 | | ug/L | 16 |
| 012 | GPW-12 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 2600 | E | ug/L | 16 |
| 012 | GPW-12 | Aqueous | Xylenes (total) | 8260B | 10 | J | ug/L | 16 |
| 013 | GPW-13 | Aqueous | Benzene | 8260B | 540 | | ug/L | 17 |
| 013 | GPW-13 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 7300 | E | ug/L | 17 |
| 014 | GPW-14 | Aqueous | Benzene | 8260B | 170 | | ug/L | 18 |
| 014 | GPW-14 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 4200 | E | ug/L | 18 |
| 015 | GPW-15 | Aqueous | Benzene | 8260B | 0.21 | J | ug/L | 19 |
| 015 | GPW-15 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 13 | | ug/L | 19 |
| 016 | GPW-16 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 3.0 | J | ug/L | 20 |
| 017 | GPW-17 | Aqueous | Benzene | 8260B | 3.0 | J | ug/L | 21 |
| 017 | GPW-17 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 290 | E | ug/L | 21 |
| 018 | GPW-18 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 2.3 | J | ug/L | 22 |
| 019 | GPW-19 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 13 | | ug/L | 23 |
| 020 | GPW-20 | Aqueous | Benzene | 8260B | 3.7 | J | ug/L | 24 |
| 020 | GPW-20 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 180 | | ug/L | 24 |
| 021 | GPW-21 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 1.2 | J | ug/L | 25 |
| 022 | GPW-22 | Aqueous | Benzene | 8260B | 3.2 | J | ug/L | 26 |
| 022 | GPW-22 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 3.9 | J | ug/L | 26 |
| 023 | GPW-23 | Aqueous | Benzene | 8260B | 0.88 | J | ug/L | 27 |
| 023 | GPW-23 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 130 | | ug/L | 27 |
| 024 | GPW-24 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 56 | | ug/L | 28 |
| 025 | GPW-25 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 0.67 | J | ug/L | 29 |
| 026 | GPW-26 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 0.63 | J | ug/L | 30 |
| 028 | McCullough-WW | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 1.7 | J | ug/L | 32 |

(40 detections)

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-001**

Description: **GPW-1** Matrix: **Aqueous**

Date Sampled: **11/13/2013 1046**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/17/2013 2019 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 90 | 70-130 |
| Bromofluorobenzene | | 110 | 70-130 |
| Toluene-d8 | | 88 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-002**

Description: **GPW-2** Matrix: **Aqueous**

Date Sampled: **11/13/2013 1100**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/17/2013 2041 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **21** | | **5.0** | **0.40** | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 91 | 70-130 |
| Bromofluorobenzene | | 105 | 70-130 |
| Toluene-d8 | | 96 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-003**

Description: **GPW-3** Matrix: **Aqueous**

Date Sampled: **11/13/2013 1115**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/17/2013 2102 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **7.0** | | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 85 | 70-130 |
| Bromofluorobenzene | | 93 | 70-130 |
| Toluene-d8 | | 80 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-004**

Description: **GPW-4** Matrix: **Aqueous**

Date Sampled: **11/13/2013 1137**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/17/2013 2124 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 90 | 70-130 |
| Bromofluorobenzene | | 107 | 70-130 |
| Toluene-d8 | | 85 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-005**

Description: **GPW-5** Matrix: **Aqueous**

Date Sampled: **11/13/2013 1225**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/17/2013 2145 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **39** | | **5.0** | **0.20** | **ug/L** | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **410** | **E** | **5.0** | **0.40** | **ug/L** | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 93 | 70-130 |
| Bromofluorobenzene | | 95 | 70-130 |
| Toluene-d8 | | 99 | 70-130 |

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time

ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-006**

Description: **GPW-6** Matrix: **Aqueous**

Date Sampled: **11/13/2013 1315**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/17/2013 2207 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | **71-43-2** | **8260B** | **110** | | **5.0** | **0.20** | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **32** | | **5.0** | **0.40** | ug/L | 1 |
| **Naphthalene** | **91-20-3** | **8260B** | **11** | | **5.0** | **1.7** | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Xylenes (total)** | **1330-20-7** | **8260B** | **95** | | **5.0** | **1.7** | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 92 | 70-130 |
| Bromofluorobenzene | | 95 | 70-130 |
| Toluene-d8 | | 97 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-007**

Description: **GPW-7** Matrix: **Aqueous**

Date Sampled: **11/13/2013 1350**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/17/2013 2228 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **0.46** | **J** | **5.0** | **0.20** | **ug/L** | **1** |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **1.7** | **J** | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 93 | 70-130 |
| Bromofluorobenzene | | 84 | 70-130 |
| Toluene-d8 | | 88 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-008**

Description: **GPW-8** Matrix: **Aqueous**

Date Sampled: **11/13/2013 1440**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/17/2013 2249 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **0.42** | **J** | **5.0** | **0.20** | **ug/L** | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **12** | | **5.0** | **0.40** | **ug/L** | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 94 | 70-130 |
| Bromofluorobenzene | | 94 | 70-130 |
| Toluene-d8 | | 92 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-009**

Description: **GPW-9** Matrix: **Aqueous**

Date Sampled: **11/13/2013 1500**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/17/2013 2310 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **0.23** | **J** | **5.0** | **0.20** | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 94 | 70-130 |
| Bromofluorobenzene | | 95 | 70-130 |
| Toluene-d8 | | 92 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-010**

Description: **GPW-10** Matrix: **Aqueous**

Date Sampled: **11/13/2013 1520**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/17/2013 2331 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 95 | 70-130 |
| Bromofluorobenzene | | 95 | 70-130 |
| Toluene-d8 | | 95 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-011**

Description: **GPW-11** Matrix: **Aqueous**

Date Sampled: **11/13/2013 1715**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/17/2013 2352 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **2.5** | J | **5.0** | **0.20** | **ug/L** | **1** |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **33** | | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 95 | 70-130 |
| Bromofluorobenzene | | 110 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-012**

Description: **GPW-12** Matrix: **Aqueous**

Date Sampled: **11/13/2013 1620**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 5 | 11/18/2013 1052 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **170** | | **25** | **1.0** | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 25 | 8.5 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **2600** | **E** | **25** | **2.0** | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 25 | 8.5 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 25 | 8.5 | ug/L | 1 |
| **Xylenes (total)** | **1330-20-7** | **8260B** | **10** | **J** | **25** | **8.5** | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 96 | 70-130 |
| Bromofluorobenzene | | 94 | 70-130 |
| Toluene-d8 | | 95 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-013**

Description: **GPW-13** Matrix: **Aqueous**

Date Sampled: **11/13/2013 1640**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 20 | 11/18/2013 1134 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **540** | | **100** | **4.0** | **ug/L** | **1** |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 100 | 34 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **7300** | **E** | **100** | **8.0** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 100 | 34 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 100 | 34 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 100 | 34 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 98 | 70-130 |
| Bromofluorobenzene | | 95 | 70-130 |
| Toluene-d8 | | 97 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-014**

Description: **GPW-14** Matrix: **Aqueous**

Date Sampled: **11/13/2013 1705**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 10 | 11/18/2013 1113 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **170** | | 50 | 2.0 | **ug/L** | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 50 | 17 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **4200** | **E** | 50 | 4.0 | **ug/L** | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 50 | 17 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 50 | 17 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 50 | 17 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 98 | 70-130 |
| Bromofluorobenzene | | 96 | 70-130 |
| Toluene-d8 | | 96 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-015**

Description: **GPW-15** Matrix: **Aqueous**

Date Sampled: **11/14/2013 1015**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/18/2013 0013 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **0.21** | **J** | **5.0** | **0.20** | **ug/L** | **1** |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **13** | | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 91 | 70-130 |
| Bromofluorobenzene | | 93 | 70-130 |
| Toluene-d8 | | 94 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-016**

Description: **GPW-16** Matrix: **Aqueous**

Date Sampled: **11/14/2013 1030**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/18/2013 0034 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **3.0** | **J** | **5.0** | **0.40** | **ug/L** | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 100 | 70-130 |
| Bromofluorobenzene | | 107 | 70-130 |
| Toluene-d8 | | 105 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-17**
Date Sampled: **11/14/2013 1044**
Date Received: **11/15/2013**

Laboratory ID: **OK15025-017**
Matrix: **Aqueous**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/18/2013 0055 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **3.0** | **J** | **5.0** | **0.20** | **ug/L** | **1** |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **290** | **E** | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 93 | 70-130 |
| Bromofluorobenzene | | 95 | 70-130 |
| Toluene-d8 | | 95 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-018**

Description: **GPW-18** Matrix: **Aqueous**

Date Sampled: **11/14/2013 1108**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/18/2013 0117 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **2.3** | **J** | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 95 | 70-130 |
| Bromofluorobenzene | | 96 | 70-130 |
| Toluene-d8 | | 93 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-019**

Description: **GPW-19** Matrix: **Aqueous**

Date Sampled: **11/14/2013 1130**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/18/2013 0138 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | 13 | | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 96 | 70-130 |
| Bromofluorobenzene | | 95 | 70-130 |
| Toluene-d8 | | 94 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-020**

Description: **GPW-20** Matrix: **Aqueous**

Date Sampled: **11/14/2013 1237**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/18/2013 0159 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **3.7** | **J** | **5.0** | **0.20** | **ug/L** | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **180** | | **5.0** | **0.40** | **ug/L** | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 94 | 70-130 |
| Bromofluorobenzene | | 94 | 70-130 |
| Toluene-d8 | | 94 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-021**

Description: **GPW-21** Matrix: **Aqueous**

Date Sampled: **11/14/2013 1223**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/18/2013 0220 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **1.2** | **J** | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 95 | 70-130 |
| Bromofluorobenzene | | 95 | 70-130 |
| Toluene-d8 | | 92 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-022**

Description: **GPW-22** Matrix: **Aqueous**

Date Sampled: **11/14/2013 1253**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/18/2013 0241 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **3.2** | **J** | **5.0** | **0.20** | **ug/L** | **1** |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **3.9** | **J** | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 99 | 70-130 |
| Bromofluorobenzene | | 97 | 70-130 |
| Toluene-d8 | | 98 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-023**

Description: **GPW-23** Matrix: **Aqueous**

Date Sampled: **11/14/2013 1415**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/18/2013 0845 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **0.88** | **J** | **5.0** | **0.20** | **ug/L** | **1** |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **130** | | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | N | 65 | 70-130 |
| Bromofluorobenzene | N | 66 | 70-130 |
| Toluene-d8 | N | 66 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-024**

Description: **GPW-24** Matrix: **Aqueous**

Date Sampled: **11/14/2013 1440**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/18/2013 0906 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **56** | | **5.0** | **0.40** | ug/L | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 93 | 70-130 |
| Bromofluorobenzene | | 95 | 70-130 |
| Toluene-d8 | | 95 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-025**

Description: **GPW-25** Matrix: **Aqueous**

Date Sampled: **11/14/2013 1520**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/18/2013 0928 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **0.67** | **J** | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 95 | 70-130 |
| Bromofluorobenzene | | 94 | 70-130 |
| Toluene-d8 | | 93 | 70-130 |

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time

ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-026**

Description: **GPW-26** Matrix: **Aqueous**

Date Sampled: **11/14/2013 1603**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/18/2013 0949 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **0.63** | **J** | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 95 | 70-130 |
| Bromofluorobenzene | | 95 | 70-130 |
| Toluene-d8 | | 94 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-027**

Description: **EMS-WW** Matrix: **Aqueous**

Date Sampled: **11/13/2013 1415**

Date Received: **11/15/2013**

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/18/2013 1010 | TAF | | 34567 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 94 | 70-130 |
| Bromofluorobenzene | | 94 | 70-130 |
| Toluene-d8 | | 94 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# Volatile Organic Compounds by GC/MS

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OK15025-028**

Description: **McCullough-WW** Matrix: **Aqueous**

Date Sampled: **11/14/2013 1510**

Date Received: **11/15/2013**

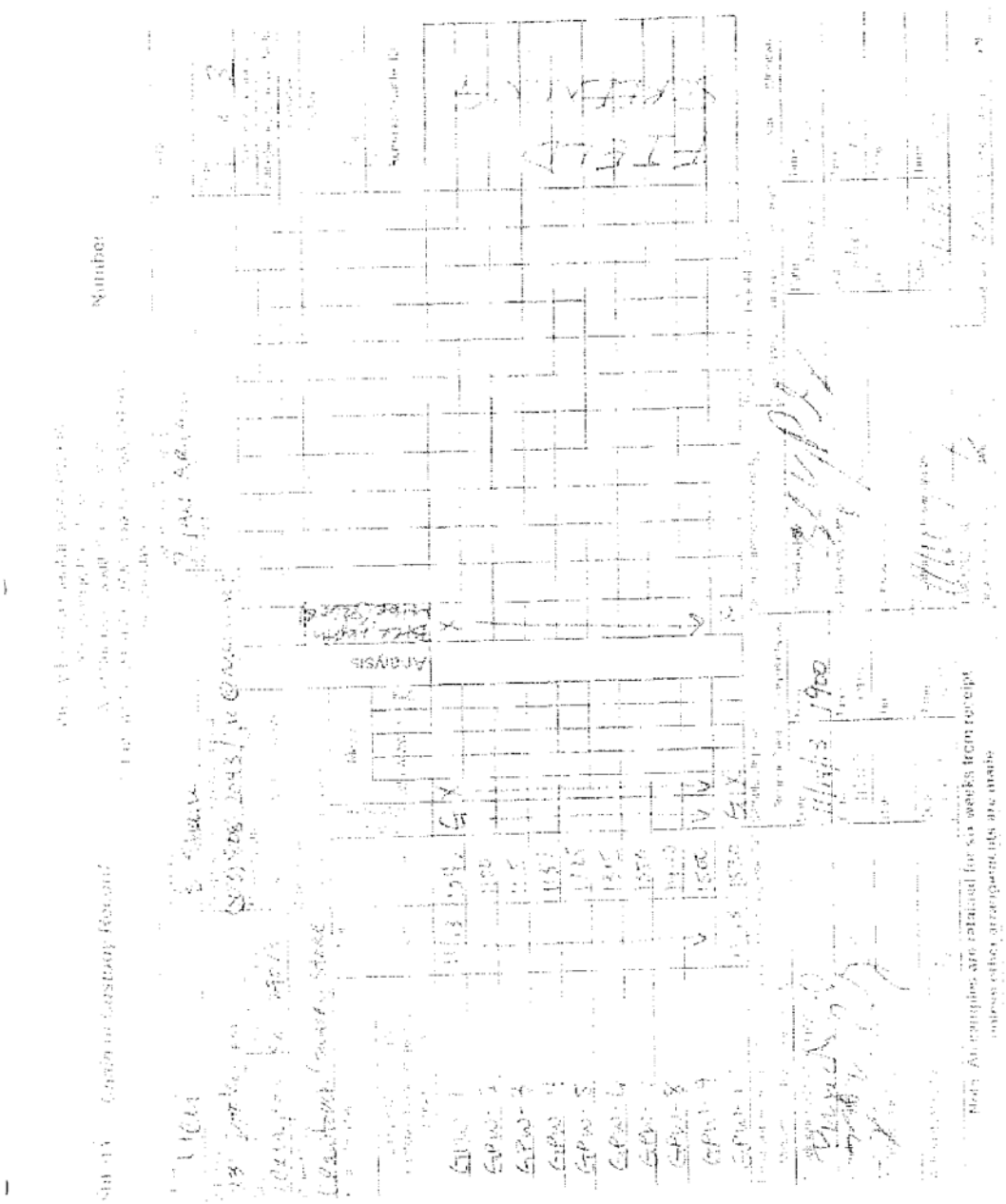
| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 11/18/2013 1031 | TAF | | 34567 |

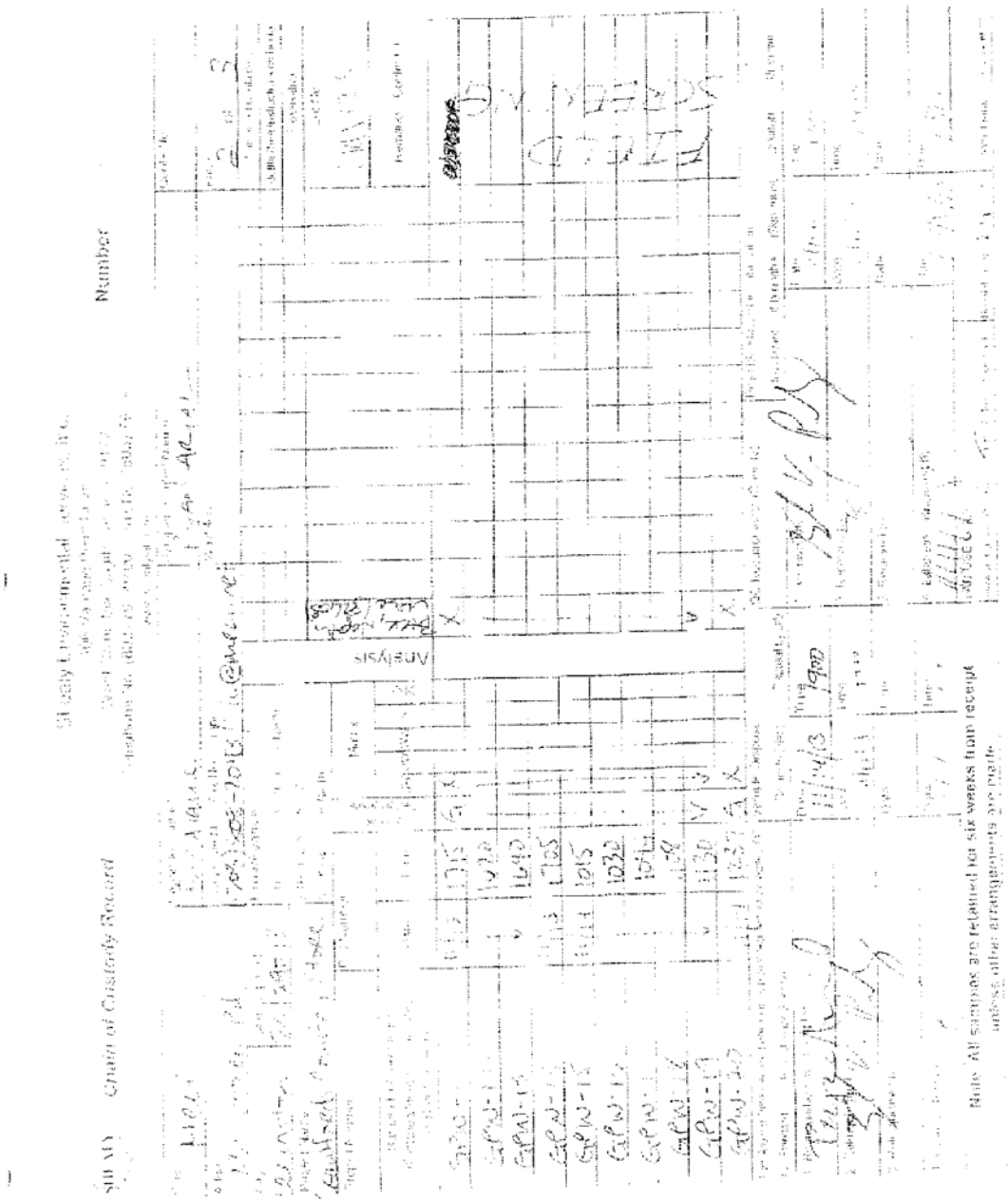
| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **1.7** | **J** | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

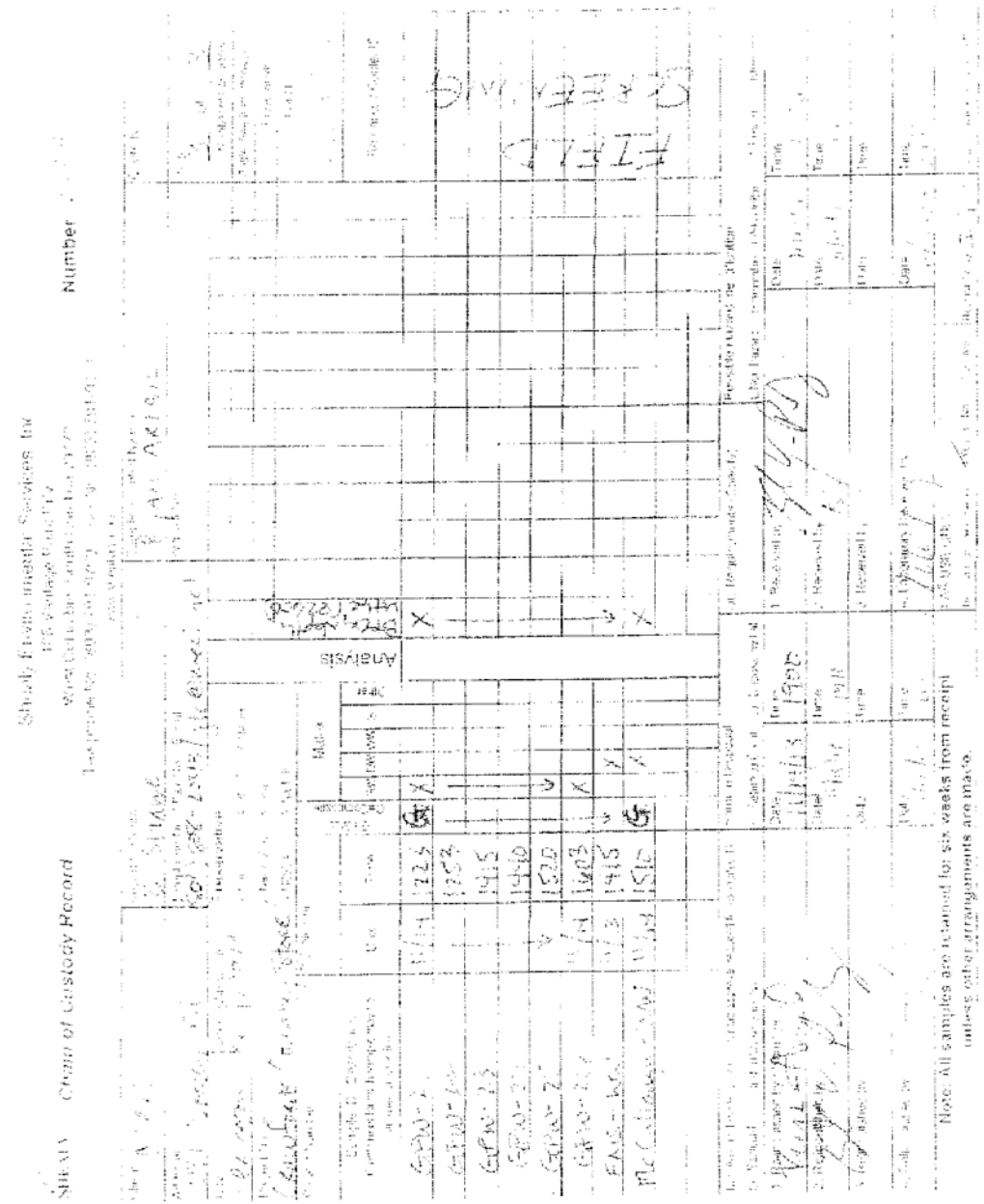
| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 97 | 70-130 |
| Bromofluorobenzene | | 98 | 70-130 |
| Toluene-d8 | | 98 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"




Number
Chain of Custody Record
ANALYSIS


Chain of Custody Record
Number
ANALYSIS
Note: All samples are retained for six weeks from receipt
unless other arrangements are made.

# Sample Receipt Checklist (SRC)

Client: _____ Cooler Inspected by/date: _____ Lot # _____

Means of receipt: ☐ SESI ☐ Client ☐ UPS ☐ FedEx ☐ Airborne Esp ☐ Other

| | | | |
|---|---|---|---|
| Yes ☐ | No ☐ | | 1. Were custody seals present on the cooler? |
| Yes ☐ | No ☐ | | 2. If custody seals were present, were they intact and unbroken? |

Cooler ID Original temperature upon receipt/Derived (corrected) temperature upon receipt:

/ / °C / / °C / / °C / / °C

Method: ☐ Temperature Blank ☐ Against Bottles IR Gun ID: _____ IR Gun Correction Factor: _____°C

Method of coolant: ☐ Wet Ice ☐ Blue Ice ☐ Dry Ice ☐ None

If response is No or Yes for 14, 15, 16), an explanation/resolution must be provided.

| | | | |
|---|---|---|---|
| Yes ☐ | No ☐ | NA ☐ | 3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____. (For coolers received via commercial courier, PMs are to be notified immediately |
| Yes ☐ | No ☐ | NA ☐ | 4. Is the commercial courier's packing slip attached to this form? |
| Yes ☐ | No ☐ | | 5. Were proper custody procedures (relinquished/received) followed? |
| Yes ☐ | No ☐ | NA ☐ | 5a Were samples relinquished by client to commercial courier? |
| Yes ☐ | No ☐ | | 6. Were sample IDs listed? |
| Yes ☐ | No ☐ | | 7. Was collection date & time listed? |
| Yes ☐ | No ☐ | | 8. Were tests to be performed listed on the COC? |
| Yes ☐ | No ☐ | | 9. Did all samples arrive in the proper containers for each test? |
| Yes ☐ | No ☐ | | 10. Did all container label information (ID, date, time) agree with COC? |
| Yes ☐ | No ☐ | | 11. Did all containers arrive in good condition (unbroken, lids on, etc.)? |
| Yes ☐ | No ☐ | | 12. Was adequate sample volume available? |
| Yes ☐ | No ☐ | | 13. Were all samples received within ½ the holding time or 48 hours, whichever comes first? |
| Yes ☐ | No ☐ | | 14. Were any samples containers missing? |
| Yes ☐ | No ☐ | | 15. Were there any excess samples not listed on COC? |
| Yes ☐ | No ☐ | NA ☐ | 16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials? |
| Yes ☐ | No ☐ | NA ☐ | 17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2? |
| Yes ☐ | No ☐ | NA ☐ | 18. Were all cyanide and/or sulfide samples received at a pH >12? |
| Yes ☐ | No ☐ | NA ☐ | 19. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine? |
| Yes ☐ | No ☐ | NA ☐ | 20. Were collection temperatures documented on the COC for NC samples? |
| Yes ☐ | No ☐ | NA ☐ | 21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS? |

**Sample Preservation** (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ ($H_2SO_4$,$HNO_3$,HCl,NaOH) with the SR # (number)

Sample(s) _____ were received with bubbles >6 mm in diameter.

Sample(s) _____ were received with TRC >0.2 mg/L for NH3/ TKN/ cyanide/ phenol

Sample labels verified by: _____ Date: _____

**Corrective Action taken, if necessary:**

Was client notified: Yes ☐ No ☐ Did client respond: Yes ☐ No ☐

SESI employee: _____ Date of response: _____

Comments: _____

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Report of Analysis

**Midlands Environmental Consultants, Inc.**
235 Dooley Rd
Lexington, SC 29073
Attention: Bryan Shane

Project Name: **Crawfords Country Store**

Project Number: **13-4650**

Lot Number: **OL06074**

Date Completed: **12/10/2013**

**Kelly M. Maberry**
Project Manager

This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

## Case Narrative

## Midlands Environmental Consultants, Inc.

### Lot Number: OL06074

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

The VOC data is screening only. Laboratory QC may not pass and samples may be analyzed outside of tune time.

## Sample Summary

## Midlands Environmental Consultants, Inc.

**Lot Number: OL06074**

| Sample Number | Sample ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| 001 | GPW-27 | Aqueous | 12/03/2013 1106 | 12/06/2013 |
| 002 | GPW-28 | Aqueous | 12/03/2013 1154 | 12/06/2013 |
| 003 | GPW-29 | Aqueous | 12/03/2013 1300 | 12/06/2013 |
| 004 | GPW-30 | Aqueous | 12/03/2013 1318 | 12/06/2013 |
| 005 | GPW-32 | Aqueous | 12/03/2013 1418 | 12/06/2013 |
| 006 | GPW-33 | Aqueous | 12/03/2013 1500 | 12/06/2013 |
| 007 | GPW-35 | Aqueous | 12/03/2013 1600 | 12/06/2013 |
| 008 | GPW-36 | Aqueous | 12/03/2013 1630 | 12/06/2013 |
| 009 | GPW-38 | Aqueous | 12/03/2013 1747 | 12/06/2013 |
| 010 | GPW-39 | Aqueous | 12/04/2013 1035 | 12/06/2013 |
| 011 | GPW-40 | Aqueous | 12/04/2013 1107 | 12/06/2013 |
| 012 | GPW-41 | Aqueous | 12/04/2013 1200 | 12/06/2013 |
| 013 | GPW-42 | Aqueous | 12/04/2013 1241 | 12/06/2013 |
| 014 | GPW-43 | Aqueous | 12/04/2013 1305 | 12/06/2013 |
| 015 | GPW-44 | Aqueous | 12/04/2013 1338 | 12/06/2013 |
| 016 | GPW-45 | Aqueous | 12/04/2013 1357 | 12/06/2013 |
| 017 | GPW-46 | Aqueous | 12/04/2013 1420 | 12/06/2013 |
| 018 | GPW-47 | Aqueous | 12/04/2013 1455 | 12/06/2013 |
| 019 | GPW-48 | Aqueous | 12/04/2013 1546 | 12/06/2013 |
| 020 | GPW-49 | Aqueous | 12/04/2013 1614 | 12/06/2013 |
| 021 | GPW-50 | Aqueous | 12/04/2013 1647 | 12/06/2013 |
| 022 | GPW-51 | Aqueous | 12/04/2013 1710 | 12/06/2013 |

(22 samples)

## Executive Summary

## Midlands Environmental Consultants, Inc.

### Lot Number: OL06074

| Sample | Sample ID | Matrix | Parameter | Method | Result | Q | Units | Page |
|---|---|---|---|---|---|---|---|---|
| 003 | GPW-29 | Aqueous | Benzene | 8260B | 310 | | ug/L | 7 |
| 003 | GPW-29 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 2900 | E | ug/L | 7 |
| 003 | GPW-29 | Aqueous | Xylenes (total) | 8260B | 17 | J | ug/L | 7 |
| 004 | GPW-30 | Aqueous | Benzene | 8260B | 1.3 | J | ug/L | 8 |
| 004 | GPW-30 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 150 | | ug/L | 8 |
| 005 | GPW-32 | Aqueous | Benzene | 8260B | 0.52 | J | ug/L | 9 |
| 005 | GPW-32 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 17 | | ug/L | 9 |
| 006 | GPW-33 | Aqueous | Benzene | 8260B | 0.30 | J | ug/L | 10 |
| 006 | GPW-33 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 0.62 | J | ug/L | 10 |
| 007 | GPW-35 | Aqueous | Benzene | 8260B | 0.23 | J | ug/L | 11 |
| 007 | GPW-35 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 17 | | ug/L | 11 |
| 008 | GPW-36 | Aqueous | Benzene | 8260B | 340 | | ug/L | 12 |
| 008 | GPW-36 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 5500 | E | ug/L | 12 |
| 009 | GPW-38 | Aqueous | Benzene | 8260B | 0.66 | J | ug/L | 13 |
| 009 | GPW-38 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 3.7 | J | ug/L | 13 |
| 010 | GPW-39 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 2.4 | J | ug/L | 14 |
| 013 | GPW-42 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 1.1 | J | ug/L | 17 |
| 016 | GPW-45 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 0.53 | J | ug/L | 20 |
| 018 | GPW-47 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 240 | | ug/L | 22 |

(19 detections)

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-27**
Date Sampled: **12/03/2013 1106**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-001**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 12/09/2013 1907 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 87 | 70-130 |
| Bromofluorobenzene | | 93 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-28**
Date Sampled: **12/03/2013 1154**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-002**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 12/09/2013 1929 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 85 | 70-130 |
| Bromofluorobenzene | | 92 | 70-130 |
| Toluene-d8 | | 99 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-29**
Date Sampled: **12/03/2013 1300**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-003**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 10 | 12/09/2013 1950 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **310** | | **50** | **2.0** | **ug/L** | **1** |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 50 | 17 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **2900** | **E** | **50** | **4.0** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 50 | 17 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 50 | 17 | ug/L | 1 |
| **Xylenes (total)** | **1330-20-7** | **8260B** | **17** | **J** | **50** | **17** | **ug/L** | **1** |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 85 | 70-130 |
| Bromofluorobenzene | | 93 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-30**
Date Sampled: **12/03/2013 1318**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-004**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 12/09/2013 2011 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **1.3** | **J** | **5.0** | **0.20** | **ug/L** | **1** |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **150** | | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 85 | 70-130 |
| Bromofluorobenzene | | 92 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-32**
Date Sampled: **12/03/2013 1418**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-005**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 12/09/2013 2032 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **0.52** | **J** | **5.0** | **0.20** | **ug/L** | **1** |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **17** | | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 86 | 70-130 |
| Bromofluorobenzene | | 94 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-33**
Date Sampled: **12/03/2013 1500**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-006**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 12/09/2013 2053 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **0.30** | **J** | **5.0** | **0.20** | **ug/L** | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **0.62** | **J** | **5.0** | **0.40** | **ug/L** | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 86 | 70-130 |
| Bromofluorobenzene | | 93 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-35**
Date Sampled: **12/03/2013 1600**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-007**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 12/09/2013 2114 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **0.23** | **J** | **5.0** | **0.20** | **ug/L** | **1** |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **17** | | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 86 | 70-130 |
| Bromofluorobenzene | | 94 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-36**
Date Sampled: **12/03/2013 1630**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-008**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 20 | 12/09/2013 2136 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **340** | | **100** | **4.0** | **ug/L** | **1** |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 100 | 34 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **5500** | **E** | **100** | **8.0** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 100 | 34 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 100 | 34 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 100 | 34 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 85 | 70-130 |
| Bromofluorobenzene | | 92 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OL06074-009**

Description: **GPW-38** Matrix: **Aqueous**

Date Sampled: **12/03/2013 1747**

Date Received: **12/06/2013**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 12/09/2013 2157 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **Benzene** | **71-43-2** | **8260B** | **0.66** | **J** | **5.0** | **0.20** | **ug/L** | **1** |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **3.7** | **J** | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 84 | 70-130 |
| Bromofluorobenzene | | 92 | 70-130 |
| Toluene-d8 | | 95 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **OL06074-010**

Description: **GPW-39** Matrix: **Aqueous**

Date Sampled: **12/04/2013 1035**

Date Received: **12/06/2013**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 12/09/2013 2218 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **2.4** | **J** | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 85 | 70-130 |
| Bromofluorobenzene | | 93 | 70-130 |
| Toluene-d8 | | 98 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-40**
Date Sampled: **12/04/2013 1107**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-011**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 12/09/2013 2239 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 85 | 70-130 |
| Bromofluorobenzene | | 92 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

PQL = Practical quantitation limit
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
H = Out of holding time
ND = Not detected at or above the MDL
J = Estimated result < PQL and ≥ MDL
P = The RPD between two GC columns exceeds 40%
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-41**
Date Sampled: **12/04/2013 1200**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-012**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 12/09/2013 2301 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 85 | 70-130 |
| Bromofluorobenzene | | 92 | 70-130 |
| Toluene-d8 | | 99 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-42**
Date Sampled: **12/04/2013 1241**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-013**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 12/09/2013 2322 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **1.1** | **J** | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 84 | 70-130 |
| Bromofluorobenzene | | 92 | 70-130 |
| Toluene-d8 | | 99 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-43**
Date Sampled: **12/04/2013 1305**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-014**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 12/09/2013 2343 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 86 | 70-130 |
| Bromofluorobenzene | | 94 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-44**
Date Sampled: **12/04/2013 1338**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-015**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 12/10/2013 0004 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 85 | 70-130 |
| Bromofluorobenzene | | 93 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-45**
Date Sampled: **12/04/2013 1357**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-016**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 12/10/2013 0201 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **0.53** | **J** | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 83 | 70-130 |
| Bromofluorobenzene | | 92 | 70-130 |
| Toluene-d8 | | 99 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-46**
Date Sampled: **12/04/2013 1420**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-017**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 12/10/2013 0222 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 84 | 70-130 |
| Bromofluorobenzene | | 93 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-47**
Date Sampled: **12/04/2013 1455**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-018**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 20 | 12/10/2013 0243 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 100 | 4.0 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 100 | 34 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **240** | | **100** | **8.0** | **ug/L** | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 100 | 34 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 100 | 34 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 100 | 34 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 85 | 70-130 |
| Bromofluorobenzene | | 92 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-48**
Date Sampled: **12/04/2013 1546**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-019**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 12/10/2013 0304 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 85 | 70-130 |
| Bromofluorobenzene | | 93 | 70-130 |
| Toluene-d8 | | 99 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-49**
Date Sampled: **12/04/2013 1614**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-020**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 12/10/2013 0325 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 85 | 70-130 |
| Bromofluorobenzene | | 91 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-50**
Date Sampled: **12/04/2013 1647**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-021**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 12/10/2013 0346 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 85 | 70-130 |
| Bromofluorobenzene | | 93 | 70-130 |
| Toluene-d8 | | 99 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **GPW-51**
Date Sampled: **12/04/2013 1710**
Date Received: **12/06/2013**

Laboratory ID: **OL06074-022**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 12/10/2013 0407 | ALL | | 35973 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 84 | 70-130 |
| Bromofluorobenzene | | 91 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

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## Chain of Custody Record

Number 26773

| | | | |
|---|---|---|---|
| Client: MCL | Report to Contact: B. Shane | Sampler (Printed Name): RYAN AKIN | Quote No. |
| Address: 231 Dooley Rd | Telephone No. / Fax No. / Email: 803.808.2543 / jlcenvi.net | Waybill No. | Page: 1 of 3 |
| City: Lexington State: SC Zip Code: 29073 | Preservative: 1. Lapres 4. HNO3 7. NaOH; 2. NaOH/ZnA 5. HCL; 3. H2SO4 6. Na thio. | | Number of Containers; Note (See Instructions on back); Preservative |
| Project Name: Crawfords County Store | | | Lot No. OL09074 |
| Project Number | P.O. Number | | Remarks / Cooler ID |

| Sample ID / Description (Containers for each sample may be combined on one line) | Date | Time | Grab / Composite | Matrix: GW | DW | WW | S | Other | Analysis: BTEX, Naph, Lthbe (8260B) | |
|---|---|---|---|---|---|---|---|---|---|---|
| GPW-27 | 12/3 | 1106 | G | X | | | | | X | |
| GPW-28 | | 1154 | | | | | | | | |
| GPW-29 | | 1300 | | | | | | | | |
| GPW-30 | | 1318 | | | | | | | X | |
| ~~GPW-31~~ | | | | | | | | | DRY | |
| GPW-32 | | 1418 | | | | | | | X | |
| GPW-33 | | 1500 | | | | | | | X | |
| ~~GPW-34~~ | | | | | | | | | DRY | |
| GPW-35 | | 1600 | | | | | | | X | |
| GPW-36 | 12/3 | 1630 | G | X | | | | | X | |

Field Screening

Turnaround Time Required (Prior lab approval required for expedited TAT): ☐ Standard ☐ Rush (Please Specify)

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab

QC Requirements (Specify):

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished by / Sampler: RYAN AKIN | 12/4/13 | 2024 | 1. Received by | 12/4/13 | 2026 |
| 2. Relinquished by | 12/6/13 | 10:17 | 2. Received by | 12/6/13 | 1017 |
| 3. Relinquished by | Date | Time | 3. Received by | Date | Time |
| 4. Relinquished by | Date 12/6/13 | Time 1630 | 4. Laboratory Received by: Kelly Wilson | Date 12-6-13 | Time 16:30 |

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY — Received on Ice: ☑ Yes ☐ No ☐ Ice Pack — Receipt Temp: 0.3 °C — Temp. Blank: ☐ Y / ☐ N

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## Chain of Custody Record

Number 26774

| | | | |
|---|---|---|---|
| Client: MCI | Report to Contact: B. Shane | Sampler (Printed Name): Ryan Allair | Quote No. |
| Address: 231 Dooley Rd | Telephone No. / Fax No. / Email: 803-808-2043 / jlc@mci.net | Waybill No. | Page: 2 of 3 |
| City: Lexington / State: SC / Zip Code: 29073 | Preservative: 1. Unpres. 2. NaOH/ZnA 3. H2SO4 4. HNO3 5. HCL 6. Na Thio. 7. NaOH | | Number of Containers / Bottle (See Instructions on back) / Preservative |
| Project Name: Crawfords Country Store | | | Lot No. 0L04074 |
| Project Number | P.O Number | | |

| Sample ID / Description (Combine for each sample only to combined on one line) | Date | Time | Grab/Comp. C | Matrix: SW | DW | WW | S | Other | Analysis: BTEX, Naphth. Lutite (8260B) | Remarks / Cooler ID |
|---|---|---|---|---|---|---|---|---|---|---|
| ~~GPW-37~~ | | | | | | | | | DRY | |
| GPW-38 | 12/3 | 1747 | G | X | | | | | X | |
| GPW-39 | 12/4 | 1035 | | | | | | | | |
| GPW-40 | | 1107 | | | | | | | | |
| GPW-41 | | 1200 | | | | | | | | |
| GPW-42 | | 1241 | | | | | | | | |
| GPW-43 | | 1305 | | | | | | | | |
| GPW-44 | | 1338 | | | | | | | | |
| GPW-45 | | 1357 | | | | | | | | Field Screening |
| GPW-46 | 12/4 | 1420 | G | X | | | | | X | |

Turn Around Time Required (Prior lab approval required for expedited TAT): ☐ Standard ☐ Rush (Please Specify)

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab

QC Requirements (Specify)

Possible Hazard Identification: ☐Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison ☐Unknown

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished by / Sampler: Ryan Allair | 12/4/13 | 2026 | 1. Received by | 12/4/13 | 2026 |
| 2. Relinquished by | 12/4/13 | 2117 | 2. Received by | 12/4/13 | 2117 |
| 3. Relinquished by | Date | Time | 3. Received by | Date | Time |
| 4. Relinquished by | 12/6/13 | 1130 | 4. Laboratory Received by: Kelly W | 12-6-13 | 1130 |

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY: Received on Ice (Circle): ☐Yes ☐No ☐Ice Pack | Receipt Temp.: 0.3 °C | Temp Blank: Y / N

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## Chain of Custody Record

Number 26775

| | | | |
|---|---|---|---|
| Client: MCI | Report to Contact: B. Shane | Sampler (Printed Name): RYAN ADAIR | Quote No. |
| Address: 251 Dooley Rd | Telephone No. / Fax No. / Email: 803-808-2043 / jlcenci.net | Waybill No. | Page: 3 of 3 |
| City: Lexington State: SC Zip Code: 29073 | Preservative: 1. Unpres. 2. NaOH/ZnA 3. H2SO4 4. HNO3 5. HCL 6. Na Thio 7. NaOH | | Number of Containers / Bottle (See Instructions on back) / Preservative |
| Project Name: Crawfords Country Store | | | Lot No. 0000074 |
| Project Number | P.O. Number | Matrix: GW DW WW S Other | Analysis: Benzene, MTBE, Ethylbenzene |

| Sample ID / Description (Containers for each sample may be combined on one line) | Date | Time | Sealed (S) Composite (C) | GW | DW | WW | S | Other | Analysis | Remarks / Cooler ID |
|---|---|---|---|---|---|---|---|---|---|---|
| GPW-47 | 12/4 | 1455 | G | X | | | | | X | |
| GPW-48 | " | 1546 | " | " | | | | | " | |
| GPW-49 | | 1614 | " | " | | | | | " | |
| GPW-50 | ↓ | 1647 | ↓ | ↓ | | | | | G | |
| GPW-51 | 12/4 | 1710 | G | X | | | | | X | |
| | | | | | | | | | | Field Screening |

Turn Around Time Requested (Prior lab approval required for expedited TAT): ☐ Standard ☐ Rush (Please Specify)

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab

QC Requirements (Specify):

Possible Hazard Identification: ☐ Non-hazard ☐ Flammable ☐ Skin Irritant ☐ Poison ☐ Unknown

| | Relinquished by / Sampler | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|---|
| 1. | Ryan Adair | 12/4/13 | 2026 | | 12/4/13 | 2026 |
| 2. | | 12/5/13 | 1017 | | 12/6/13 | 1017 |
| 3. | | 12/6/13 | 1630 | | Date | Time |
| 4. | Relinquished by | Date | Time | 4. Laboratory Received by | Date | Time |
| | | | | | 12-6-13 | 1630 |

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

LAB USE ONLY — Received on Ice (Circle): Y (Yes) N (No) Ice Pack — Receipt Temp: 0.3 °C — Temp Blank: (Y) N

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# SHEALY ENVIRONMENTAL SERVICES, INC.



## Sample Receipt Checklist (SRC)

Client: MeCl Cooler Inspected by/date: BWP 12-6-13 Lot #: D000874

Means of receipt: ☑ SESI ☐ Client ☐ UPS ☐ FedEx ☐ Airborne Exp ☐ Other

| | | | |
|---|---|---|---|
| Yes ☐ | No ☑ | | 1. Were custody seals present on the cooler? |
| Yes ☐ | No ☐ | | 2. If custody seals were present, were they intact and unbroken? |

Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt:
10@10.3 °C / / °C / / °C / / °C

Method: ☐ Temperature Blank ☑ Against Bottles IR Gun ID: #3 IR Gun Correction Factor: 0.3 °C
Method of coolant: ☑ Wet Ice ☐ Blue Ice ☐ Dry Ice ☐ None

If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.

| | | | |
|---|---|---|---|
| Yes ☐ | No ☐ | NA ☑ | 3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: _____. (For coolers received via commercial courier, PMs are to be notified immediately. |
| Yes ☐ | No ☐ | NA ☑ | 4. Is the commercial courier's packing slip attached to this form? |
| Yes ☑ | No ☐ | | 5. Were proper custody procedures (relinquished/received) followed? |
| Yes ☐ | No ☐ | NA ☑ | 5a Were samples relinquished by client to commercial courier? |
| Yes ☑ | No ☐ | | 6. Were sample IDs listed? |
| Yes ☑ | No ☐ | | 7. Was collection date & time listed? |
| Yes ☑ | No ☐ | | 8. Were tests to be performed listed on the COC? |
| Yes ☑ | No ☐ | | 9. Did all samples arrive in the proper containers for each test? |
| Yes ☑ | No ☐ | | 10. Did all container label information (ID, date, time) agree with COC? |
| Yes ☑ | No ☐ | | 11. Did all containers arrive in good condition (unbroken, lids on, etc.)? |
| Yes ☑ | No ☐ | | 12. Was adequate sample volume available? |
| Yes ☑ | No ☐ | | 13. Were all samples received within ½ the holding time or 48 hours, whichever comes first? |
| Yes ☐ | No ☑ | | 14. Were any samples containers missing? |
| Yes ☐ | No ☑ | | 15. Were there any excess samples not listed on COC? |
| Yes ☐ | No ☑ | NA ☐ | 16. Were bubbles present >"pea-size" (¼"or 6mm in diameter) in any VOA vials? |
| Yes ☐ | No ☐ | NA ☑ | 17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2? |
| Yes ☐ | No ☐ | NA ☑ | 18. Were all cyanide and/or sulfide samples received at a pH >12? |
| Yes ☐ | No ☐ | NA ☑ | 19. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine? |
| Yes ☐ | No ☐ | NA ☑ | 20. Were collection temperatures documented on the COC for NC samples? |
| Yes ☐ | No ☐ | NA ☑ | 21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS? |

**Sample Preservation** (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ ($H_2SO_4$,$HNO_3$,HCl,NaOH) with the SR # (number)

Sample(s) _____ were received with bubbles >6 mm in diameter.

Sample(s) _____ were received with TRC >0.2 mg/L for NH3/TKN/cyanide/phenol

Sample labels verified by: _____ Date: _____

**Corrective Action taken, if necessary:**

Was client notified: Yes ☐ No ☐ Did client respond: Yes ☐ No ☐

SESI employee: _____ Date of response: _____

Comments: _____

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Report of Analysis

**Midlands Environmental Consultants, Inc.**
235 Dooley Rd
Lexington, SC 29073
Attention: Bryan Shane

Project Name: **Crawfords Country Store**

Project Number: **13-4650**

Lot Number: **PB20024**

Date Completed: **02/26/2014**

**Kelly M. Maberry**
Project Manager

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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

## Case Narrative

## Midlands Environmental Consultants, Inc.

### Lot Number: PB20024

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Sample Receiving
Samples -046 and -050 for volatiles analysis contained vials with air bubbles greater than ¼" or 6mm in diameter. The laboratory uses these vials for screening and the vials without bubbles for analysis whenever possible. Condition of samples is documented on the Sample Receipt Checklist (SRC).

GC/MS Volatiles
Batch 40814 did not include a MS/MSD. A LCS/LCSD was analyzed in its place.

The MS/MSD associated with sample -004 had several compounds recovered outside of the acceptance limits and several RPDs exceeded method control limits. The LCS/LCSD were recovered within the required acceptance limits; therefore, this demonstrates a matrix effect and data quality is not impacted.

The MS/MSD associated with sample -047 had tert-butyl formate recovered outside of the acceptance limits. The LCS/LCSD were recovered within the required acceptance limits; therefore, this demonstrates a matrix effect and data quality is not impacted.

EDB/DBCP
The method blank associated with batch 40856 had the surrogate recovered above the acceptance limits. This reflects a high bias for compounds associated with this surrogate. There were no detections in the samples associated with this method blank; therefore, there is no impact on data quality and no corrective action is required.

The sample results for -002, -003 and -034 have a P qualifier because the relative percent difference (RPD) between the two dissimilar phase GC columns exceeds 40%. Section 7.10.4 of SW-846 method 8000B states the higher of the two results is reported; however the lower results are reported for these samples. The higher result for sample -002 was 1.2 ug/L. The higher result for sample -003 was 0.95 ug/L. The higher result for sample -034 was 0.25 ug/L.

## Sample Summary

## Midlands Environmental Consultants, Inc.

**Lot Number: PB20024**

| Sample Number | Sample ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| 001 | OMW-1 | Aqueous | 02/18/2014 1623 | 02/19/2014 |
| 002 | MW-1R | Aqueous | 02/18/2014 1555 | 02/19/2014 |
| 003 | MW-2 | Aqueous | 02/18/2014 1505 | 02/19/2014 |
| 004 | MW-4 | Aqueous | 02/18/2014 1444 | 02/19/2014 |
| 005 | MW-5 | Aqueous | 02/18/2014 1553 | 02/19/2014 |
| 006 | MW-7 | Aqueous | 02/18/2014 1453 | 02/19/2014 |
| 007 | MW-8 | Aqueous | 02/18/2014 1443 | 02/19/2014 |
| 008 | MW-9 | Aqueous | 02/18/2014 1542 | 02/19/2014 |
| 009 | MW-10 | Aqueous | 02/18/2014 1459 | 02/19/2014 |
| 010 | MW-11 | Aqueous | 02/18/2014 1330 | 02/19/2014 |
| 011 | MW-12R | Aqueous | 02/18/2014 1424 | 02/19/2014 |
| 012 | MW-13R | Aqueous | 02/18/2014 1244 | 02/19/2014 |
| 013 | MW-14 | Aqueous | 02/18/2014 1535 | 02/19/2014 |
| 014 | MW-15 | Aqueous | 02/18/2014 1133 | 02/19/2014 |
| 015 | MW-16 | Aqueous | 02/18/2014 1106 | 02/19/2014 |
| 016 | DMW-17 | Aqueous | 02/18/2014 1520 | 02/19/2014 |
| 017 | MW-18 | Aqueous | 02/18/2014 1515 | 02/19/2014 |
| 018 | MW-19 | Aqueous | 02/18/2014 1418 | 02/19/2014 |
| 019 | MW-20 | Aqueous | 02/18/2014 1234 | 02/19/2014 |
| 020 | MW-21 | Aqueous | 02/18/2014 1308 | 02/19/2014 |
| 021 | MW-22 | Aqueous | 02/18/2014 1228 | 02/19/2014 |
| 022 | MW-23 | Aqueous | 02/18/2014 1225 | 02/19/2014 |
| 023 | MW-24 | Aqueous | 02/18/2014 1014 | 02/19/2014 |
| 024 | MW-25 | Aqueous | 02/18/2014 1030 | 02/19/2014 |
| 025 | MW-26 | Aqueous | 02/18/2014 1044 | 02/19/2014 |
| 026 | MW-27 | Aqueous | 02/18/2014 1055 | 02/19/2014 |
| 027 | MW-28 | Aqueous | 02/18/2014 1122 | 02/19/2014 |
| 028 | MW-29 | Aqueous | 02/18/2014 1212 | 02/19/2014 |
| 029 | MW-30 | Aqueous | 02/18/2014 1308 | 02/19/2014 |
| 030 | MW-31 | Aqueous | 02/18/2014 1252 | 02/19/2014 |
| 031 | MW-32 | Aqueous | 02/18/2014 1407 | 02/19/2014 |
| 032 | MW-33 | Aqueous | 02/18/2014 1422 | 02/19/2014 |
| 033 | MW-34 | Aqueous | 02/18/2014 1208 | 02/19/2014 |
| 034 | MW-35 | Aqueous | 02/18/2014 1238 | 02/19/2014 |
| 035 | DMW-36 | Aqueous | 02/18/2014 1201 | 02/19/2014 |
| 036 | DMW-37 | Aqueous | 02/18/2014 1225 | 02/19/2014 |
| 037 | DMW-38 | Aqueous | 02/18/2014 1435 | 02/19/2014 |
| 038 | DMW-39 | Aqueous | 02/18/2014 1253 | 02/19/2014 |
| 039 | DMW-40 | Aqueous | 02/18/2014 1315 | 02/19/2014 |
| 040 | CK-1 | Aqueous | 02/18/2014 1000 | 02/19/2014 |
| 041 | CK-2 | Aqueous | 02/18/2014 1005 | 02/19/2014 |
| 042 | CLS-WW | Aqueous | 02/18/2014 1625 | 02/19/2014 |
| 043 | CP-WW2 | Aqueous | 02/18/2014 1325 | 02/19/2014 |
| 044 | EMS-WW | Aqueous | 02/18/2014 1415 | 02/19/2014 |
| 045 | McCOLLOUGH WW | Aqueous | 02/18/2014 1130 | 02/19/2014 |

## Sample Summary (Continued)

**Lot Number: PB20024**

| Sample Number | Sample ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| 046 | MW-2 Dup. | Aqueous | 02/18/2014 1505 | 02/19/2014 |
| 047 | MW-9 Dup. | Aqueous | 02/18/2014 1542 | 02/19/2014 |
| 048 | MW-10 Dup. | Aqueous | 02/18/2014 1459 | 02/19/2014 |
| 049 | Field Blank | Aqueous | 02/18/2014 1605 | 02/19/2014 |
| 050 | Trip Blank | Aqueous | 02/18/2014 1608 | 02/19/2014 |
| 051 | Cafe-WW | Aqueous | 02/18/2014 1643 | 02/19/2014 |
| 052 | Old Service Station - WW | Aqueous | 02/18/2014 1540 | 02/19/2014 |
| 053 | Scott-WW | Aqueous | 02/18/2014 1445 | 02/19/2014 |
| 054 | Farm-WW | Aqueous | 02/18/2014 1511 | 02/19/2014 |
| 055 | Major-WW | Aqueous | 02/18/2014 1520 | 02/19/2014 |
| 056 | Driver-WW | Aqueous | 02/18/2014 1530 | 02/19/2014 |

(56 samples)

## Executive Summary

## Midlands Environmental Consultants, Inc.

**Lot Number: PB20024**

| Sample | Sample ID | Matrix | Parameter | Method | Result | Q | Units | Page |
|---|---|---|---|---|---|---|---|---|
| 001 | OMW-1 | Aqueous | tert-Amyl alcohol (TAA) | 8260B | 53000 | | ug/L | 9 |
| 001 | OMW-1 | Aqueous | tert-Amyl methyl ether (TAME) | 8260B | 740 | J | ug/L | 9 |
| 001 | OMW-1 | Aqueous | Benzene | 8260B | 4300 | | ug/L | 9 |
| 001 | OMW-1 | Aqueous | Diisopropyl ether (IPE) | 8260B | 2900 | J | ug/L | 9 |
| 001 | OMW-1 | Aqueous | Ethylbenzene | 8260B | 2900 | | ug/L | 9 |
| 001 | OMW-1 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 380 | J | ug/L | 9 |
| 001 | OMW-1 | Aqueous | Naphthalene | 8260B | 2700 | | ug/L | 9 |
| 001 | OMW-1 | Aqueous | Toluene | 8260B | 39000 | | ug/L | 9 |
| 001 | OMW-1 | Aqueous | Xylenes (total) | 8260B | 21000 | | ug/L | 9 |
| 001 | OMW-1 | Aqueous | 1,2-Dibromoethane (EDB) | 8011 | 3.2 | | ug/L | 9 |
| 002 | MW-1R | Aqueous | tert-Amyl alcohol (TAA) | 8260B | 110000 | | ug/L | 10 |
| 002 | MW-1R | Aqueous | tert-Amyl methyl ether (TAME) | 8260B | 990 | J | ug/L | 10 |
| 002 | MW-1R | Aqueous | Benzene | 8260B | 9300 | | ug/L | 10 |
| 002 | MW-1R | Aqueous | Diisopropyl ether (IPE) | 8260B | 8100 | J | ug/L | 10 |
| 002 | MW-1R | Aqueous | Ethylbenzene | 8260B | 4500 | J | ug/L | 10 |
| 002 | MW-1R | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 2500 | J | ug/L | 10 |
| 002 | MW-1R | Aqueous | Naphthalene | 8260B | 6000 | | ug/L | 10 |
| 002 | MW-1R | Aqueous | Toluene | 8260B | 58000 | | ug/L | 10 |
| 002 | MW-1R | Aqueous | Xylenes (total) | 8260B | 27000 | | ug/L | 10 |
| 002 | MW-1R | Aqueous | 1,2-Dibromoethane (EDB) | 8011 | 0.22 | P | ug/L | 10 |
| 003 | MW-2 | Aqueous | tert-Amyl alcohol (TAA) | 8260B | 620 | J | ug/L | 11 |
| 003 | MW-2 | Aqueous | tert-Amyl methyl ether (TAME) | 8260B | 240 | J | ug/L | 11 |
| 003 | MW-2 | Aqueous | Benzene | 8260B | 3100 | | ug/L | 11 |
| 003 | MW-2 | Aqueous | Diisopropyl ether (IPE) | 8260B | 1800 | | ug/L | 11 |
| 003 | MW-2 | Aqueous | Ethylbenzene | 8260B | 2100 | | ug/L | 11 |
| 003 | MW-2 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 280 | | ug/L | 11 |
| 003 | MW-2 | Aqueous | Naphthalene | 8260B | 330 | | ug/L | 11 |
| 003 | MW-2 | Aqueous | Toluene | 8260B | 1000 | | ug/L | 11 |
| 003 | MW-2 | Aqueous | Xylenes (total) | 8260B | 3700 | | ug/L | 11 |
| 003 | MW-2 | Aqueous | 1,2-Dibromoethane (EDB) | 8011 | 0.041 | P | ug/L | 11 |
| 004 | MW-4 | Aqueous | tert-Amyl alcohol (TAA) | 8260B | 1200 | | ug/L | 12 |
| 004 | MW-4 | Aqueous | tert-Amyl methyl ether (TAME) | 8260B | 4.2 | J | ug/L | 12 |
| 004 | MW-4 | Aqueous | Benzene | 8260B | 160 | | ug/L | 12 |
| 004 | MW-4 | Aqueous | Diisopropyl ether (IPE) | 8260B | 92 | | ug/L | 12 |
| 004 | MW-4 | Aqueous | Ethylbenzene | 8260B | 24 | J | ug/L | 12 |
| 004 | MW-4 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 180 | | ug/L | 12 |
| 004 | MW-4 | Aqueous | Naphthalene | 8260B | 190 | | ug/L | 12 |
| 004 | MW-4 | Aqueous | tert-butyl alcohol (TBA) | 8260B | 310 | J | ug/L | 12 |
| 004 | MW-4 | Aqueous | Toluene | 8260B | 14 | J | ug/L | 12 |
| 004 | MW-4 | Aqueous | Xylenes (total) | 8260B | 20 | J | ug/L | 12 |
| 004 | MW-4 | Aqueous | 1,2-Dibromoethane (EDB) | 8011 | 0.16 | | ug/L | 12 |
| 005 | MW-5 | Aqueous | tert-Amyl alcohol (TAA) | 8260B | 110 | | ug/L | 13 |
| 005 | MW-5 | Aqueous | Benzene | 8260B | 3.9 | J | ug/L | 13 |
| 005 | MW-5 | Aqueous | Ethylbenzene | 8260B | 34 | | ug/L | 13 |
| 005 | MW-5 | Aqueous | Naphthalene | 8260B | 9.3 | | ug/L | 13 |

| Sample | Sample ID | Matrix | Parameter | Method | Result | Q | Units | Page |
|---|---|---|---|---|---|---|---|---|
| 005 | MW-5 | Aqueous | Toluene | 8260B | 19 | | ug/L | 13 |
| 005 | MW-5 | Aqueous | Xylenes (total) | 8260B | 82 | | ug/L | 13 |
| 006 | MW-7 | Aqueous | Naphthalene | 8260B | 4.7 | J | ug/L | 14 |
| 008 | MW-9 | Aqueous | Benzene | 8260B | 1.3 | J | ug/L | 16 |
| 008 | MW-9 | Aqueous | Diisopropyl ether (IPE) | 8260B | 5.0 | J | ug/L | 16 |
| 008 | MW-9 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 4.1 | J | ug/L | 16 |
| 008 | MW-9 | Aqueous | Naphthalene | 8260B | 2.7 | J | ug/L | 16 |
| 008 | MW-9 | Aqueous | Toluene | 8260B | 3.2 | J | ug/L | 16 |
| 008 | MW-9 | Aqueous | Xylenes (total) | 8260B | 17 | | ug/L | 16 |
| 009 | MW-10 | Aqueous | tert-Amyl alcohol (TAA) | 8260B | 11000 | | ug/L | 17 |
| 009 | MW-10 | Aqueous | tert-Amyl methyl ether (TAME) | 8260B | 1100 | | ug/L | 17 |
| 009 | MW-10 | Aqueous | Benzene | 8260B | 4700 | | ug/L | 17 |
| 009 | MW-10 | Aqueous | Diisopropyl ether (IPE) | 8260B | 7000 | | ug/L | 17 |
| 009 | MW-10 | Aqueous | Ethylbenzene | 8260B | 1800 | | ug/L | 17 |
| 009 | MW-10 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 4200 | | ug/L | 17 |
| 009 | MW-10 | Aqueous | tert-butyl alcohol (TBA) | 8260B | 1400 | J | ug/L | 17 |
| 009 | MW-10 | Aqueous | Toluene | 8260B | 5000 | | ug/L | 17 |
| 009 | MW-10 | Aqueous | Xylenes (total) | 8260B | 8100 | | ug/L | 17 |
| 009 | MW-10 | Aqueous | 1,2-Dibromoethane (EDB) | 8011 | 1.2 | | ug/L | 17 |
| 010 | MW-11 | Aqueous | tert-Amyl alcohol (TAA) | 8260B | 2200 | | ug/L | 18 |
| 010 | MW-11 | Aqueous | tert-Amyl methyl ether (TAME) | 8260B | 120 | J | ug/L | 18 |
| 010 | MW-11 | Aqueous | Benzene | 8260B | 150 | | ug/L | 18 |
| 010 | MW-11 | Aqueous | Diisopropyl ether (IPE) | 8260B | 1300 | | ug/L | 18 |
| 010 | MW-11 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 1800 | | ug/L | 18 |
| 010 | MW-11 | Aqueous | tert-butyl alcohol (TBA) | 8260B | 1000 | J | ug/L | 18 |
| 012 | MW-13R | Aqueous | tert-Amyl alcohol (TAA) | 8260B | 790 | J | ug/L | 20 |
| 012 | MW-13R | Aqueous | tert-Amyl methyl ether (TAME) | 8260B | 130 | J | ug/L | 20 |
| 012 | MW-13R | Aqueous | Benzene | 8260B | 86 | J | ug/L | 20 |
| 012 | MW-13R | Aqueous | Diisopropyl ether (IPE) | 8260B | 1200 | | ug/L | 20 |
| 012 | MW-13R | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 3700 | | ug/L | 20 |
| 012 | MW-13R | Aqueous | tert-butyl alcohol (TBA) | 8260B | 220 | J | ug/L | 20 |
| 015 | MW-16 | Aqueous | Ethylbenzene | 8260B | 2.9 | J | ug/L | 23 |
| 015 | MW-16 | Aqueous | Toluene | 8260B | 32 | | ug/L | 23 |
| 018 | MW-19 | Aqueous | tert-Amyl methyl ether (TAME) | 8260B | 0.41 | J | ug/L | 26 |
| 018 | MW-19 | Aqueous | Diisopropyl ether (IPE) | 8260B | 15 | | ug/L | 26 |
| 018 | MW-19 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 100 | | ug/L | 26 |
| 019 | MW-20 | Aqueous | tert-Amyl methyl ether (TAME) | 8260B | 5.4 | J | ug/L | 27 |
| 019 | MW-20 | Aqueous | Diisopropyl ether (IPE) | 8260B | 66 | | ug/L | 27 |
| 019 | MW-20 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 280 | | ug/L | 27 |
| 020 | MW-21 | Aqueous | Diisopropyl ether (IPE) | 8260B | 1.1 | J | ug/L | 28 |
| 020 | MW-21 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 27 | | ug/L | 28 |
| 021 | MW-22 | Aqueous | tert-Amyl alcohol (TAA) | 8260B | 2300 | | ug/L | 29 |
| 021 | MW-22 | Aqueous | tert-Amyl methyl ether (TAME) | 8260B | 34 | J | ug/L | 29 |
| 021 | MW-22 | Aqueous | Benzene | 8260B | 110 | | ug/L | 29 |
| 021 | MW-22 | Aqueous | Diisopropyl ether (IPE) | 8260B | 620 | | ug/L | 29 |
| 021 | MW-22 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 1700 | | ug/L | 29 |
| 022 | MW-23 | Aqueous | tert-Amyl alcohol (TAA) | 8260B | 110 | | ug/L | 30 |
| 022 | MW-23 | Aqueous | Diisopropyl ether (IPE) | 8260B | 8.1 | J | ug/L | 30 |

| Sample | Sample ID | Matrix | Parameter | Method | Result | Q | Units | Page |
|---|---|---|---|---|---|---|---|---|
| 022 | MW-23 | Aqueous | Ethanol | 8260B | 80 | J | ug/L | 30 |
| 022 | MW-23 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 11 | | ug/L | 30 |
| 024 | MW-25 | Aqueous | Benzene | 8260B | 0.30 | J | ug/L | 32 |
| 024 | MW-25 | Aqueous | Diisopropyl ether (IPE) | 8260B | 13 | | ug/L | 32 |
| 024 | MW-25 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 96 | | ug/L | 32 |
| 025 | MW-26 | Aqueous | Diisopropyl ether (IPE) | 8260B | 1.5 | J | ug/L | 33 |
| 025 | MW-26 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 0.81 | J | ug/L | 33 |
| 026 | MW-27 | Aqueous | Diisopropyl ether (IPE) | 8260B | 5.2 | J | ug/L | 34 |
| 026 | MW-27 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 11 | | ug/L | 34 |
| 028 | MW-29 | Aqueous | Diisopropyl ether (IPE) | 8260B | 0.70 | J | ug/L | 36 |
| 028 | MW-29 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 1.4 | J | ug/L | 36 |
| 030 | MW-31 | Aqueous | tert-Amyl alcohol (TAA) | 8260B | 130 | | ug/L | 38 |
| 030 | MW-31 | Aqueous | tert-Amyl methyl ether (TAME) | 8260B | 4.9 | J | ug/L | 38 |
| 030 | MW-31 | Aqueous | Benzene | 8260B | 7.7 | | ug/L | 38 |
| 030 | MW-31 | Aqueous | Diisopropyl ether (IPE) | 8260B | 67 | | ug/L | 38 |
| 030 | MW-31 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 220 | | ug/L | 38 |
| 030 | MW-31 | Aqueous | tert-butyl alcohol (TBA) | 8260B | 12 | J | ug/L | 38 |
| 032 | MW-33 | Aqueous | Diisopropyl ether (IPE) | 8260B | 0.82 | J | ug/L | 40 |
| 032 | MW-33 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 0.99 | J | ug/L | 40 |
| 033 | MW-34 | Aqueous | Ethanol | 8260B | 1900 | | ug/L | 41 |
| 033 | MW-34 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 0.73 | J | ug/L | 41 |
| 034 | MW-35 | Aqueous | tert-Amyl alcohol (TAA) | 8260B | 5600 | | ug/L | 42 |
| 034 | MW-35 | Aqueous | tert-Amyl methyl ether (TAME) | 8260B | 85 | J | ug/L | 42 |
| 034 | MW-35 | Aqueous | Benzene | 8260B | 320 | | ug/L | 42 |
| 034 | MW-35 | Aqueous | Diisopropyl ether (IPE) | 8260B | 1600 | | ug/L | 42 |
| 034 | MW-35 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 8000 | | ug/L | 42 |
| 034 | MW-35 | Aqueous | 1,2-Dibromoethane (EDB) | 8011 | 0.031 | P | ug/L | 42 |
| 035 | DMW-36 | Aqueous | Diisopropyl ether (IPE) | 8260B | 1.4 | J | ug/L | 43 |
| 035 | DMW-36 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 0.63 | J | ug/L | 43 |
| 036 | DMW-37 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 1.1 | J | ug/L | 44 |
| 038 | DMW-39 | Aqueous | tert-Amyl alcohol (TAA) | 8260B | 120 | | ug/L | 46 |
| 038 | DMW-39 | Aqueous | tert-Amyl methyl ether (TAME) | 8260B | 4.7 | J | ug/L | 46 |
| 038 | DMW-39 | Aqueous | Benzene | 8260B | 1.6 | J | ug/L | 46 |
| 038 | DMW-39 | Aqueous | Diisopropyl ether (IPE) | 8260B | 47 | | ug/L | 46 |
| 038 | DMW-39 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 150 | | ug/L | 46 |
| 038 | DMW-39 | Aqueous | tert-butyl alcohol (TBA) | 8260B | 33 | J | ug/L | 46 |
| 039 | DMW-40 | Aqueous | tert-Amyl alcohol (TAA) | 8260B | 280 | J | ug/L | 47 |
| 039 | DMW-40 | Aqueous | tert-Amyl methyl ether (TAME) | 8260B | 24 | J | ug/L | 47 |
| 039 | DMW-40 | Aqueous | Benzene | 8260B | 98 | | ug/L | 47 |
| 039 | DMW-40 | Aqueous | Diisopropyl ether (IPE) | 8260B | 320 | | ug/L | 47 |
| 039 | DMW-40 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 490 | | ug/L | 47 |
| 039 | DMW-40 | Aqueous | tert-butyl alcohol (TBA) | 8260B | 41 | J | ug/L | 47 |
| 040 | CK-1 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 1.5 | | ug/L | 48 |
| 041 | CK-2 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 1.4 | | ug/L | 49 |
| 045 | McCOLLOUGH WW | Aqueous | Diisopropyl ether (IPE) | 8260B | 3.5 | J | ug/L | 53 |
| 045 | McCOLLOUGH WW | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 1.8 | | ug/L | 53 |
| 046 | MW-2 Dup. | Aqueous | tert-Amyl alcohol (TAA) | 8260B | 570 | J | ug/L | 54 |
| 046 | MW-2 Dup. | Aqueous | tert-Amyl methyl ether (TAME) | 8260B | 250 | J | ug/L | 54 |

## Executive Summary (Continued)

**Lot Number: PB20024**

| Sample | Sample ID | Matrix | Parameter | Method | Result | Q | Units | Page |
|---|---|---|---|---|---|---|---|---|
| 046 | MW-2 Dup. | Aqueous | Benzene | 8260B | 3200 | | ug/L | 54 |
| 046 | MW-2 Dup. | Aqueous | Diisopropyl ether (IPE) | 8260B | 1800 | | ug/L | 54 |
| 046 | MW-2 Dup. | Aqueous | Ethylbenzene | 8260B | 2000 | | ug/L | 54 |
| 046 | MW-2 Dup. | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 290 | | ug/L | 54 |
| 046 | MW-2 Dup. | Aqueous | Naphthalene | 8260B | 350 | | ug/L | 54 |
| 046 | MW-2 Dup. | Aqueous | Toluene | 8260B | 1000 | | ug/L | 54 |
| 046 | MW-2 Dup. | Aqueous | Xylenes (total) | 8260B | 3600 | | ug/L | 54 |
| 047 | MW-9 Dup. | Aqueous | Benzene | 8260B | 2.2 | J | ug/L | 55 |
| 047 | MW-9 Dup. | Aqueous | Diisopropyl ether (IPE) | 8260B | 5.4 | J | ug/L | 55 |
| 047 | MW-9 Dup. | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 3.9 | J | ug/L | 55 |
| 047 | MW-9 Dup. | Aqueous | Naphthalene | 8260B | 2.5 | J | ug/L | 55 |
| 047 | MW-9 Dup. | Aqueous | Toluene | 8260B | 4.7 | J | ug/L | 55 |
| 047 | MW-9 Dup. | Aqueous | Xylenes (total) | 8260B | 46 | | ug/L | 55 |
| 048 | MW-10 Dup. | Aqueous | tert-Amyl alcohol (TAA) | 8260B | 8600 | | ug/L | 56 |
| 048 | MW-10 Dup. | Aqueous | tert-Amyl methyl ether (TAME) | 8260B | 1000 | | ug/L | 56 |
| 048 | MW-10 Dup. | Aqueous | Benzene | 8260B | 4700 | | ug/L | 56 |
| 048 | MW-10 Dup. | Aqueous | Diisopropyl ether (IPE) | 8260B | 5800 | | ug/L | 56 |
| 048 | MW-10 Dup. | Aqueous | Ethylbenzene | 8260B | 1700 | | ug/L | 56 |
| 048 | MW-10 Dup. | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 3700 | | ug/L | 56 |
| 048 | MW-10 Dup. | Aqueous | Naphthalene | 8260B | 260 | | ug/L | 56 |
| 048 | MW-10 Dup. | Aqueous | tert-butyl alcohol (TBA) | 8260B | 1100 | J | ug/L | 56 |
| 048 | MW-10 Dup. | Aqueous | Toluene | 8260B | 4400 | | ug/L | 56 |
| 048 | MW-10 Dup. | Aqueous | Xylenes (total) | 8260B | 7300 | | ug/L | 56 |
| 048 | MW-10 Dup. | Aqueous | 1,2-Dibromoethane (EDB) | 8011 | 0.97 | | ug/L | 56 |

(165 detections)

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **PB20024-001**

Description: **OMW-1** Matrix: Aqueous

Date Sampled: **02/18/2014 1623**

Date Received: **02/19/2014**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 500 | 02/21/2014 0507 | PMM2 | | 40815 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **tert-Amyl alcohol (TAA)** | **75-85-4** | **8260B** | **53000** | | **50000** | **3400** | **ug/L** | **1** |
| **tert-Amyl methyl ether (TAME)** | **994-05-8** | **8260B** | **740** | **J** | **5000** | **100** | **ug/L** | **1** |
| **Benzene** | **71-43-2** | **8260B** | **4300** | | **2500** | **100** | **ug/L** | **1** |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 50000 | 500 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 2500 | 150 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **2900** | **J** | **5000** | **200** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 50000 | 500 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 500000 | 17000 | ug/L | 1 |
| **Ethylbenzene** | **100-41-4** | **8260B** | **2900** | | **2500** | **850** | **ug/L** | **1** |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 50000 | 100 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **380** | **J** | **2500** | **200** | **ug/L** | **1** |
| **Naphthalene** | **91-20-3** | **8260B** | **2700** | | **2500** | **850** | **ug/L** | **1** |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 50000 | 3400 | ug/L | 1 |
| **Toluene** | **108-88-3** | **8260B** | **39000** | | **2500** | **850** | **ug/L** | **1** |
| **Xylenes (total)** | **1330-20-7** | **8260B** | **21000** | | **2500** | **850** | **ug/L** | **1** |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 80 | 70-130 |
| Bromofluorobenzene | | 83 | 70-130 |
| Toluene-d8 | | 85 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 2 | 8011 | 8011 | 5 | 02/24/2014 1319 | JCG | 02/21/2014 0848 | 40821 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **1,2-Dibromoethane (EDB)** | **106-93-4** | **8011** | **3.2** | | **0.097** | **0.097** | **ug/L** | **2** |

| Surrogate | Q | Run 2 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 80 | 57-137 |

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time

ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **PB20024-002**
Description: **MW-1R** Matrix: Aqueous
Date Sampled: **02/18/2014 1555**
Date Received: **02/19/2014**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1000 | 02/21/2014 0530 | PMM2 | | 40815 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **tert-Amyl alcohol (TAA)** | **75-85-4** | **8260B** | **110000** | | **100000** | **6700** | **ug/L** | 1 |
| **tert-Amyl methyl ether (TAME)** | **994-05-8** | **8260B** | **990** | J | **10000** | **200** | **ug/L** | 1 |
| **Benzene** | **71-43-2** | **8260B** | **9300** | | **5000** | **200** | **ug/L** | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100000 | 1000 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5000 | 300 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **8100** | J | **10000** | **400** | **ug/L** | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100000 | 1000 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000000 | 33000 | ug/L | 1 |
| **Ethylbenzene** | **100-41-4** | **8260B** | **4500** | J | **5000** | **1700** | **ug/L** | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100000 | 200 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **2500** | J | **5000** | **400** | **ug/L** | 1 |
| **Naphthalene** | **91-20-3** | **8260B** | **6000** | | **5000** | **1700** | **ug/L** | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100000 | 6700 | ug/L | 1 |
| **Toluene** | **108-88-3** | **8260B** | **58000** | | **5000** | **1700** | **ug/L** | 1 |
| **Xylenes (total)** | **1330-20-7** | **8260B** | **27000** | | **5000** | **1700** | **ug/L** | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 79 | 70-130 |
| Bromofluorobenzene | | 82 | 70-130 |
| Toluene-d8 | | 86 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/21/2014 1958 | JCG | 02/21/2014 0848 | 40821 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **1,2-Dibromoethane (EDB)** | **106-93-4** | **8011** | **0.22** | P | **0.019** | **0.019** | **ug/L** | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 80 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **PB20024-003**

Description: **MW-2** Matrix: **Aqueous**

Date Sampled: **02/18/2014 1505**

Date Received: **02/19/2014**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 2 | 5030B | 8260B | 50 | 02/26/2014 0315 | ALL | | 41083 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **tert-Amyl alcohol (TAA)** | **75-85-4** | **8260B** | **620** | **J** | **5000** | **340** | **ug/L** | **2** |
| **tert-Amyl methyl ether (TAME)** | **994-05-8** | **8260B** | **240** | **J** | **500** | **10** | **ug/L** | **2** |
| **Benzene** | **71-43-2** | **8260B** | **3100** | | **250** | **10** | **ug/L** | **2** |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 5000 | 50 | ug/L | 2 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 250 | 15 | ug/L | 2 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **1800** | | **500** | **20** | **ug/L** | **2** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 5000 | 50 | ug/L | 2 |
| Ethanol | 64-17-5 | 8260B | ND | | 50000 | 1700 | ug/L | 2 |
| **Ethylbenzene** | **100-41-4** | **8260B** | **2100** | | **250** | **85** | **ug/L** | **2** |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 5000 | 10 | ug/L | 2 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **280** | | **250** | **20** | **ug/L** | **2** |
| **Naphthalene** | **91-20-3** | **8260B** | **330** | | **250** | **85** | **ug/L** | **2** |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 5000 | 340 | ug/L | 2 |
| **Toluene** | **108-88-3** | **8260B** | **1000** | | **250** | **85** | **ug/L** | **2** |
| **Xylenes (total)** | **1330-20-7** | **8260B** | **3700** | | **250** | **85** | **ug/L** | **2** |

| Surrogate | Q | Run 2 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 95 | 70-130 |
| Bromofluorobenzene | | 98 | 70-130 |
| Toluene-d8 | | 99 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/21/2014 2009 | JCG | 02/21/2014 0848 | 40821 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **1,2-Dibromoethane (EDB)** | **106-93-4** | **8011** | **0.041** | **P** | **0.019** | **0.019** | **ug/L** | **1** |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 79 | 57-137 |

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time

ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **PB20024-004**
Description: **MW-4** Matrix: **Aqueous**
Date Sampled: **02/18/2014 1444**
Date Received: **02/19/2014**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 5 | 02/21/2014 0615 | PMM2 | | 40815 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **tert-Amyl alcohol (TAA)** | **75-85-4** | **8260B** | **1200** | | **500** | **34** | ug/L | 1 |
| **tert-Amyl methyl ether (TAME)** | **994-05-8** | **8260B** | **4.2** | **J** | **50** | **1.0** | ug/L | 1 |
| **Benzene** | **71-43-2** | **8260B** | **160** | | **25** | **1.0** | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 500 | 5.0 | ug/L | 1 |
| **1,2-Dichloroethane** | 107-06-2 | 8260B | ND | | 25 | 1.5 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **92** | | **50** | **2.0** | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 500 | 5.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 5000 | 170 | ug/L | 1 |
| **Ethylbenzene** | **100-41-4** | **8260B** | **24** | **J** | **25** | **8.5** | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 500 | 1.0 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **180** | | **25** | **2.0** | ug/L | 1 |
| **Naphthalene** | **91-20-3** | **8260B** | **190** | | **25** | **8.5** | ug/L | 1 |
| **tert-butyl alcohol (TBA)** | **75-65-0** | **8260B** | **310** | **J** | **500** | **34** | ug/L | 1 |
| **Toluene** | **108-88-3** | **8260B** | **14** | **J** | **25** | **8.5** | ug/L | 1 |
| **Xylenes (total)** | **1330-20-7** | **8260B** | **20** | **J** | **25** | **8.5** | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 78 | 70-130 |
| Bromofluorobenzene | | 82 | 70-130 |
| Toluene-d8 | | 87 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/21/2014 2019 | JCG | 02/21/2014 0848 | 40821 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **1,2-Dibromoethane (EDB)** | **106-93-4** | **8011** | **0.16** | | **0.020** | **0.020** | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 93 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: Midlands Environmental Consultants, Inc. | Laboratory ID: PB20024-005
Description: MW-5 | Matrix: Aqueous
Date Sampled: 02/18/2014 1553
Date Received: 02/19/2014

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 0339 | PMM2 | | 40815 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **tert-Amyl alcohol (TAA)** | **75-85-4** | **8260B** | **110** | | **100** | **6.7** | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| **Benzene** | **71-43-2** | **8260B** | **3.9** | **J** | **5.0** | **0.20** | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| **Ethylbenzene** | **100-41-4** | **8260B** | **34** | | **5.0** | **1.7** | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| **Naphthalene** | **91-20-3** | **8260B** | **9.3** | | **5.0** | **1.7** | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| **Toluene** | **108-88-3** | **8260B** | **19** | | **5.0** | **1.7** | ug/L | 1 |
| **Xylenes (total)** | **1330-20-7** | **8260B** | **82** | | **5.0** | **1.7** | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 80 | 70-130 |
| Bromofluorobenzene | | 83 | 70-130 |
| Toluene-d8 | | 87 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/21/2014 2029 | JCG | 02/21/2014 0848 | 40821 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 124 | 57-137 |

PQL = Practical quantitation limit | B = Detected in the method blank | E = Quantitation of compound exceeded the calibration range | H = Out of holding time
ND = Not detected at or above the MDL | J = Estimated result < PQL and ≥ MDL | P = The RPD between two GC columns exceeds 40% | N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW-7**
Date Sampled: **02/18/2014 1453**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-006**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 0401 | PMM2 | | 40815 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| **Naphthalene** | **91-20-3** | **8260B** | **4.7** | **J** | **5.0** | **1.7** | **ug/L** | **1** |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 81 | 70-130 |
| Bromofluorobenzene | | 79 | 70-130 |
| Toluene-d8 | | 86 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/21/2014 2040 | JCG | 02/21/2014 0848 | 40821 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 99 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW-8**
Date Sampled: **02/18/2014 1443**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-007**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/20/2014 2358 | PMM2 | | 40814 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 101 | 70-130 |
| Bromofluorobenzene | | 99 | 70-130 |
| Toluene-d8 | | 103 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/21/2014 2050 | JCG | 02/21/2014 0848 | 40821 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.019 | 0.019 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 115 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **PB20024-008**
Description: **MW-9** Matrix: **Aqueous**
Date Sampled: **02/18/2014 1542**
Date Received: **02/19/2014**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 3 | 5030B | 8260B | 1 | 02/25/2014 2250 | ALL | | 41083 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 3 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 3 |
| **Benzene** | **71-43-2** | **8260B** | **1.3** | **J** | **5.0** | **0.20** | **ug/L** | **3** |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 3 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 3 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **5.0** | **J** | **10** | **0.40** | **ug/L** | **3** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 3 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 3 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 3 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 3 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **4.1** | **J** | **5.0** | **0.40** | **ug/L** | **3** |
| **Naphthalene** | **91-20-3** | **8260B** | **2.7** | **J** | **5.0** | **1.7** | **ug/L** | **3** |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 3 |
| **Toluene** | **108-88-3** | **8260B** | **3.2** | **J** | **5.0** | **1.7** | **ug/L** | **3** |
| **Xylenes (total)** | **1330-20-7** | **8260B** | **17** | | **5.0** | **1.7** | **ug/L** | **3** |

| Surrogate | Q | Run 3 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 94 | 70-130 |
| Bromofluorobenzene | | 95 | 70-130 |
| Toluene-d8 | | 99 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/21/2014 2121 | JCG | 02/21/2014 0848 | 40821 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 120 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW-10**
Date Sampled: **02/18/2014 1459**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-009**
Matrix: Aqueous

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 2 | 5030B | 8260B | 50 | 02/21/2014 1711 | ALL | | 40825 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **tert-Amyl alcohol (TAA)** | **75-85-4** | **8260B** | **11000** | | **5000** | **340** | **ug/L** | **2** |
| **tert-Amyl methyl ether (TAME)** | **994-05-8** | **8260B** | **1100** | | **500** | **10** | **ug/L** | **2** |
| **Benzene** | **71-43-2** | **8260B** | **4700** | | **250** | **10** | **ug/L** | **2** |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 5000 | 50 | ug/L | 2 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 250 | 15 | ug/L | 2 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **7000** | | **500** | **20** | **ug/L** | **2** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 5000 | 50 | ug/L | 2 |
| Ethanol | 64-17-5 | 8260B | ND | | 50000 | 1700 | ug/L | 2 |
| **Ethylbenzene** | **100-41-4** | **8260B** | **1800** | | **250** | **85** | **ug/L** | **2** |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 5000 | 10 | ug/L | 2 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **4200** | | **250** | **20** | **ug/L** | **2** |
| Naphthalene | 91-20-3 | 8260B | ND | | 250 | 85 | ug/L | 2 |
| **tert-butyl alcohol (TBA)** | **75-65-0** | **8260B** | **1400** | **J** | **5000** | **340** | **ug/L** | **2** |
| **Toluene** | **108-88-3** | **8260B** | **5000** | | **250** | **85** | **ug/L** | **2** |
| **Xylenes (total)** | **1330-20-7** | **8260B** | **8100** | | **250** | **85** | **ug/L** | **2** |

| Surrogate | Q | Run 2 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 77 | 70-130 |
| Bromofluorobenzene | | 84 | 70-130 |
| Toluene-d8 | | 86 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 2 | 8011 | 8011 | 2 | 02/24/2014 1329 | JCG | 02/21/2014 0848 | 40821 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **1,2-Dibromoethane (EDB)** | **106-93-4** | **8011** | **1.2** | | **0.040** | **0.040** | **ug/L** | **2** |

| Surrogate | Q | Run 2 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 116 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW-11**
Date Sampled: **02/18/2014 1330**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-010**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 20 | 02/21/2014 0329 | PMM2 | | 40814 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **tert-Amyl alcohol (TAA)** | **75-85-4** | **8260B** | **2200** | | **2000** | **130** | **ug/L** | **1** |
| **tert-Amyl methyl ether (TAME)** | **994-05-8** | **8260B** | **120** | **J** | **200** | **4.0** | **ug/L** | **1** |
| **Benzene** | **71-43-2** | **8260B** | **150** | | **100** | **4.0** | **ug/L** | **1** |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 2000 | 20 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 100 | 6.0 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **1300** | | **200** | **8.0** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 2000 | 20 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 20000 | 660 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 100 | 34 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 2000 | 4.0 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **1800** | | **100** | **8.0** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 100 | 34 | ug/L | 1 |
| **tert-butyl alcohol (TBA)** | **75-65-0** | **8260B** | **1000** | **J** | **2000** | **130** | **ug/L** | **1** |
| Toluene | 108-88-3 | 8260B | ND | | 100 | 34 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 100 | 34 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 113 | 70-130 |
| Bromofluorobenzene | | 113 | 70-130 |
| Toluene-d8 | | 115 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/21/2014 2142 | JCG | 02/21/2014 0848 | 40821 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 112 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW-12R**
Date Sampled: **02/18/2014 1424**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-011**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 0019 | PMM2 | | 40814 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 118 | 70-130 |
| Bromofluorobenzene | | 118 | 70-130 |
| Toluene-d8 | | 121 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/21/2014 2152 | JCG | 02/21/2014 0848 | 40821 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 115 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW-13R**
Date Sampled: **02/18/2014 1244**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-012**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 20 | 02/21/2014 0350 | PMM2 | | 40814 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **tert-Amyl alcohol (TAA)** | **75-85-4** | **8260B** | **790** | **J** | **2000** | **130** | **ug/L** | 1 |
| **tert-Amyl methyl ether (TAME)** | **994-05-8** | **8260B** | **130** | **J** | **200** | **4.0** | **ug/L** | 1 |
| **Benzene** | **71-43-2** | **8260B** | **86** | **J** | **100** | **4.0** | **ug/L** | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 2000 | 20 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 100 | 6.0 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **1200** | | **200** | **8.0** | **ug/L** | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 2000 | 20 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 20000 | 660 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 100 | 34 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 2000 | 4.0 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **3700** | | **100** | **8.0** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 100 | 34 | ug/L | 1 |
| **tert-butyl alcohol (TBA)** | **75-65-0** | **8260B** | **220** | **J** | **2000** | **130** | **ug/L** | **1** |
| Toluene | 108-88-3 | 8260B | ND | | 100 | 34 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 100 | 34 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 120 | 70-130 |
| Bromofluorobenzene | | 120 | 70-130 |
| Toluene-d8 | | 123 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/21/2014 2202 | JCG | 02/21/2014 0848 | 40821 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.019 | 0.019 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 99 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: Midlands Environmental Consultants, Inc.
Description: MW-14
Date Sampled: 02/18/2014 1535
Date Received: 02/19/2014

Laboratory ID: PB20024-013
Matrix: Aqueous

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 0040 | PMM2 | | 40814 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 99 | 70-130 |
| Bromofluorobenzene | | 100 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/21/2014 2244 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 111 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: Midlands Environmental Consultants, Inc.
Description: MW-15
Date Sampled: 02/18/2014 1133
Date Received: 02/19/2014

Laboratory ID: PB20024-014
Matrix: Aqueous

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 0101 | PMM2 | | 40814 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 113 | 70-130 |
| Bromofluorobenzene | | 115 | 70-130 |
| Toluene-d8 | | 116 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/21/2014 2315 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 108 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **PB20024-015**

Description: **MW-16** Matrix: **Aqueous**

Date Sampled: **02/18/2014 1106**

Date Received: **02/19/2014**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 0122 | PMM2 | | 40814 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| **Ethylbenzene** | **100-41-4** | **8260B** | **2.9** | **J** | **5.0** | **1.7** | **ug/L** | **1** |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| **Toluene** | **108-88-3** | **8260B** | **32** | | **5.0** | **1.7** | **ug/L** | **1** |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 99 | 70-130 |
| Bromofluorobenzene | | 99 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/21/2014 2326 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.019 | 0.019 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 107 | 57-137 |

PQL = Practical quantitation limit B = Detected in the method blank E = Quantitation of compound exceeded the calibration range H = Out of holding time

ND = Not detected at or above the MDL J = Estimated result < PQL and ≥ MDL P = The RPD between two GC columns exceeds 40% N = Recovery is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **DMW-17**
Date Sampled: **02/18/2014 1520**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-016**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 0143 | PMM2 | | 40814 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 101 | 70-130 |
| Bromofluorobenzene | | 100 | 70-130 |
| Toluene-d8 | | 102 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/21/2014 2336 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.019 | 0.019 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 108 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: Midlands Environmental Consultants, Inc.
Description: MW-18
Date Sampled: 02/18/2014 1515
Date Received: 02/19/2014

Laboratory ID: PB20024-017
Matrix: Aqueous

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 0205 | PMM2 | | 40814 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 101 | 70-130 |
| Bromofluorobenzene | | 99 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/21/2014 2346 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.019 | 0.019 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 113 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW-19**
Date Sampled: **02/18/2014 1418**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-018**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 0226 | PMM2 | | 40814 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| **tert-Amyl methyl ether (TAME)** | **994-05-8** | **8260B** | **0.41** | **J** | **10** | **0.20** | **ug/L** | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **15** | | **10** | **0.40** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **100** | | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 124 | 70-130 |
| Bromofluorobenzene | | 128 | 70-130 |
| Toluene-d8 | | 128 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/21/2014 2357 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.019 | 0.019 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 110 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW-20**
Date Sampled: **02/18/2014 1234**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-019**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 0246 | PMM2 | | 40814 |
| 2 | 5030B | 8260B | 5 | 02/21/2014 1648 | ALL | | 40825 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| **tert-Amyl methyl ether (TAME)** | **994-05-8** | **8260B** | **5.4** | **J** | **10** | **0.20** | **ug/L** | **1** |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **66** | | **10** | **0.40** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **280** | | **25** | **2.0** | **ug/L** | **2** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits | Q | Run 2 % Recovery | Acceptance Limits |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 100 | 70-130 | | 82 | 70-130 |
| Bromofluorobenzene | | 100 | 70-130 | | 81 | 70-130 |
| Toluene-d8 | | 102 | 70-130 | | 87 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0007 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 108 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW-21**
Date Sampled: **02/18/2014 1308**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-020**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1132 | ALL | | 40825 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **1.1** | **J** | **10** | **0.40** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **27** | | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 75 | 70-130 |
| Bromofluorobenzene | | 79 | 70-130 |
| Toluene-d8 | | 81 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0017 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.019 | 0.019 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 94 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW-22**
Date Sampled: **02/18/2014 1228**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-021**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 20 | 02/21/2014 1733 | ALL | | 40825 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **tert-Amyl alcohol (TAA)** | **75-85-4** | **8260B** | **2300** | | **2000** | **130** | **ug/L** | **1** |
| **tert-Amyl methyl ether (TAME)** | **994-05-8** | **8260B** | **34** | **J** | **200** | **4.0** | **ug/L** | **1** |
| **Benzene** | **71-43-2** | **8260B** | **110** | | **100** | **4.0** | **ug/L** | **1** |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 2000 | 20 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 100 | 6.0 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **620** | | **200** | **8.0** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 2000 | 20 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 20000 | 660 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 100 | 34 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 2000 | 4.0 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **1700** | | **100** | **8.0** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 100 | 34 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 2000 | 130 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 100 | 34 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 100 | 34 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 80 | 70-130 |
| Bromofluorobenzene | | 82 | 70-130 |
| Toluene-d8 | | 87 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0028 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 106 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW-23**
Date Sampled: **02/18/2014 1225**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-022**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1159 | ALL | | 40825 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **tert-Amyl alcohol (TAA)** | **75-85-4** | **8260B** | **110** | | 100 | **6.7** | **ug/L** | **1** |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **8.1** | **J** | **10** | **0.40** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| **Ethanol** | **64-17-5** | **8260B** | **80** | **J** | **1000** | **33** | **ug/L** | **1** |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **11** | | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 78 | 70-130 |
| Bromofluorobenzene | | 81 | 70-130 |
| Toluene-d8 | | 85 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0038 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.019 | 0.019 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 93 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: Midlands Environmental Consultants, Inc.
Description: MW-24
Date Sampled: 02/18/2014 1014
Date Received: 02/19/2014

Laboratory ID: PB20024-023
Matrix: Aqueous

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1221 | ALL | | 40825 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 78 | 70-130 |
| Bromofluorobenzene | | 79 | 70-130 |
| Toluene-d8 | | 85 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0048 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.024 | 0.024 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 105 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW-25**
Date Sampled: **02/18/2014 1030**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-024**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1243 | ALL | | 40825 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| **Benzene** | **71-43-2** | **8260B** | **0.30** | **J** | **5.0** | **0.20** | **ug/L** | **1** |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **13** | | **10** | **0.40** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **96** | | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 77 | 70-130 |
| Bromofluorobenzene | | 81 | 70-130 |
| Toluene-d8 | | 83 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0059 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 110 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: Midlands Environmental Consultants, Inc.
Description: MW-26
Date Sampled: 02/18/2014 1044
Date Received: 02/19/2014

Laboratory ID: PB20024-025
Matrix: Aqueous

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1306 | ALL | | 40825 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **1.5** | **J** | **10** | **0.40** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **0.81** | **J** | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 79 | 70-130 |
| Bromofluorobenzene | | 79 | 70-130 |
| Toluene-d8 | | 85 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0109 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.021 | 0.021 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 106 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW-27**
Date Sampled: **02/18/2014 1055**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-026**
Matrix: Aqueous

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1327 | ALL | | 40825 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **5.2** | **J** | **10** | **0.40** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **11** | | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 79 | 70-130 |
| Bromofluorobenzene | | 81 | 70-130 |
| Toluene-d8 | | 85 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0119 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.021 | 0.021 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 105 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW-28**
Date Sampled: **02/18/2014 1122**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-027**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1350 | ALL | | 40825 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 78 | 70-130 |
| Bromofluorobenzene | | 80 | 70-130 |
| Toluene-d8 | | 84 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0129 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 111 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **PB20024-028**
Description: **MW-29** Matrix: **Aqueous**
Date Sampled: **02/18/2014 1212**
Date Received: **02/19/2014**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1412 | ALL | | 40825 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **0.70** | **J** | **10** | **0.40** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **1.4** | **J** | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 79 | 70-130 |
| Bromofluorobenzene | | 80 | 70-130 |
| Toluene-d8 | | 84 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0140 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 107 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: Midlands Environmental Consultants, Inc.
Description: MW-30
Date Sampled: 02/18/2014 1308
Date Received: 02/19/2014

Laboratory ID: PB20024-029
Matrix: Aqueous

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1435 | ALL | | 40825 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 79 | 70-130 |
| Bromofluorobenzene | | 80 | 70-130 |
| Toluene-d8 | | 83 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0150 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 133 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **PB20024-030**
Description: **MW-31** Matrix: **Aqueous**
Date Sampled: **02/18/2014 1252**
Date Received: **02/19/2014**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1457 | ALL | | 40825 |
| 2 | 5030B | 8260B | 5 | 02/24/2014 1705 | ALL | | 40916 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **tert-Amyl alcohol (TAA)** | **75-85-4** | **8260B** | **130** | | 100 | **6.7** | ug/L | 1 |
| **tert-Amyl methyl ether (TAME)** | **994-05-8** | **8260B** | **4.9** | J | **10** | **0.20** | ug/L | 1 |
| **Benzene** | **71-43-2** | **8260B** | **7.7** | | **5.0** | **0.20** | **ug/L** | **1** |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **67** | | **10** | **0.40** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **220** | | **25** | **2.0** | **ug/L** | **2** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **tert-butyl alcohol (TBA)** | **75-65-0** | **8260B** | **12** | J | **100** | **6.7** | **ug/L** | **1** |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits | Q | Run 2 % Recovery | Acceptance Limits |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 78 | 70-130 | | 97 | 70-130 |
| Bromofluorobenzene | | 80 | 70-130 | | 97 | 70-130 |
| Toluene-d8 | | 83 | 70-130 | | 100 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0200 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 120 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW-32**
Date Sampled: **02/18/2014 1407**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-031**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1519 | ALL | | 40825 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 80 | 70-130 |
| Bromofluorobenzene | | 80 | 70-130 |
| Toluene-d8 | | 84 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0210 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 112 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW-33**
Date Sampled: **02/18/2014 1422**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-032**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1541 | ALL | | 40825 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **0.82** | **J** | **10** | **0.40** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **0.99** | **J** | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 81 | 70-130 |
| Bromofluorobenzene | | 82 | 70-130 |
| Toluene-d8 | | 86 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 1704 | JCG | 02/21/2014 0848 | 40822 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 107 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW-34**
Date Sampled: **02/18/2014 1208**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-033**
Matrix: Aqueous

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1603 | ALL | | 40825 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| **Ethanol** | **64-17-5** | **8260B** | **1900** | | **1000** | 33 | **ug/L** | **1** |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **0.73** | **J** | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 81 | 70-130 |
| Bromofluorobenzene | | 81 | 70-130 |
| Toluene-d8 | | 85 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0847 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.021 | 0.021 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 101 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **MW-35**
Date Sampled: **02/18/2014 1238**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-034**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 50 | 02/21/2014 1755 | ALL | | 40825 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **tert-Amyl alcohol (TAA)** | **75-85-4** | **8260B** | **5600** | | **5000** | **340** | ug/L | 1 |
| **tert-Amyl methyl ether (TAME)** | **994-05-8** | **8260B** | **85** | **J** | **500** | **10** | ug/L | 1 |
| **Benzene** | **71-43-2** | **8260B** | **320** | | **250** | **10** | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 5000 | 50 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 250 | 15 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **1600** | | **500** | **20** | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 5000 | 50 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 50000 | 1700 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 250 | 85 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 5000 | 10 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **8000** | | **250** | **20** | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 250 | 85 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 5000 | 340 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 250 | 85 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 250 | 85 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 80 | 70-130 |
| Bromofluorobenzene | | 81 | 70-130 |
| Toluene-d8 | | 87 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 2 | 8011 | 8011 | 1 | 02/24/2014 1835 | JCG | 02/24/2014 1210 | 40937 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **1,2-Dibromoethane (EDB)** | **106-93-4** | **8011** | **0.031** | **P** | **0.020** | **0.020** | ug/L | 2 |

| Surrogate | Q | Run 2 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 123 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **DMW-36**
Date Sampled: **02/18/2014 1201**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-035**
Matrix: Aqueous

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1626 | ALL | | 40825 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **1.4** | **J** | **10** | **0.40** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **0.63** | **J** | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 81 | 70-130 |
| Bromofluorobenzene | | 81 | 70-130 |
| Toluene-d8 | | 85 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0907 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 89 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: Midlands Environmental Consultants, Inc.
Description: DMW-37
Date Sampled: 02/18/2014 1225
Date Received: 02/19/2014

Laboratory ID: PB20024-036
Matrix: Aqueous

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1052 | ALL | | 40826 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **1.1** | **J** | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 100 | 70-130 |
| Bromofluorobenzene | | 98 | 70-130 |
| Toluene-d8 | | 102 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0918 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 118 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **DMW-38**
Date Sampled: **02/18/2014 1435**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-037**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1114 | ALL | | 40826 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 98 | 70-130 |
| Bromofluorobenzene | | 98 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0928 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 102 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **DMW-39**
Date Sampled: **02/18/2014 1253**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-038**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1136 | ALL | | 40826 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **tert-Amyl alcohol (TAA)** | **75-85-4** | **8260B** | **120** | | **100** | **6.7** | **ug/L** | **1** |
| **tert-Amyl methyl ether (TAME)** | **994-05-8** | **8260B** | **4.7** | **J** | **10** | **0.20** | **ug/L** | **1** |
| **Benzene** | **71-43-2** | **8260B** | **1.6** | **J** | **5.0** | **0.20** | **ug/L** | **1** |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **47** | | **10** | **0.40** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **150** | | **5.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| **tert-butyl alcohol (TBA)** | **75-65-0** | **8260B** | **33** | **J** | **100** | **6.7** | **ug/L** | **1** |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 99 | 70-130 |
| Bromofluorobenzene | | 95 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0938 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 104 | 57-137 |

POL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **DMW-40**
Date Sampled: **02/18/2014 1315**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-039**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 5 | 02/21/2014 1644 | ALL | | 40826 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **tert-Amyl alcohol (TAA)** | **75-85-4** | **8260B** | **280** | **J** | **500** | **34** | **ug/L** | **1** |
| **tert-Amyl methyl ether (TAME)** | **994-05-8** | **8260B** | **24** | **J** | **50** | **1.0** | **ug/L** | **1** |
| **Benzene** | **71-43-2** | **8260B** | **98** | | **25** | **1.0** | **ug/L** | **1** |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 500 | 5.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 25 | 1.5 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **320** | | **50** | **2.0** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 500 | 5.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 5000 | 170 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 25 | 8.5 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 500 | 1.0 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **490** | | **25** | **2.0** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 25 | 8.5 | ug/L | 1 |
| **tert-butyl alcohol (TBA)** | **75-65-0** | **8260B** | **41** | **J** | **500** | **34** | **ug/L** | **1** |
| Toluene | 108-88-3 | 8260B | ND | | 25 | 8.5 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 25 | 8.5 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 99 | 70-130 |
| Bromofluorobenzene | | 98 | 70-130 |
| Toluene-d8 | | 102 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| **1** | 8011 | 8011 | 1 | 02/22/2014 0948 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 106 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **CK-1**
Date Sampled: **02/18/2014 1000**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-040**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1158 | ALL | | 40826 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **1.5** | | **1.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 99 | 70-130 |
| Bromofluorobenzene | | 97 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0959 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 99 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **CK-2**
Date Sampled: **02/18/2014 1005**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-041**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1220 | ALL | | 40826 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **1.4** | | **1.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 100 | 70-130 |
| Bromofluorobenzene | | 97 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 1009 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.019 | 0.019 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 124 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **CLS-WW**
Date Sampled: **02/18/2014 1625**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-042**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1242 | ALL | | 40826 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 98 | 70-130 |
| Bromofluorobenzene | | 97 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 1020 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 103 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **CP-WW2**
Date Sampled: **02/18/2014 1325**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-043**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1303 | ALL | | 40826 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 97 | 70-130 |
| Bromofluorobenzene | | 96 | 70-130 |
| Toluene-d8 | | 99 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 1030 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 108 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **EMS-WW**
Date Sampled: **02/18/2014 1415**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-044**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1325 | ALL | | 40826 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 98 | 70-130 |
| Bromofluorobenzene | | 96 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 1101 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 110 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **McCOLLOUGH WW**
Date Sampled: **02/18/2014 1130**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-045**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1348 | ALL | | 40826 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **3.5** | **J** | **10** | **0.40** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **1.8** | | **1.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 96 | 70-130 |
| Bromofluorobenzene | | 99 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 1112 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 112 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: Midlands Environmental Consultants, Inc.
Description: MW-2 Dup.
Date Sampled: 02/18/2014 1505
Date Received: 02/19/2014

Laboratory ID: PB20024-046
Matrix: Aqueous

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 2 | 5030B | 8260B | 50 | 02/26/2014 0337 | ALL | | 41083 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **tert-Amyl alcohol (TAA)** | **75-85-4** | **8260B** | **570** | **J** | **5000** | **340** | ug/L | 2 |
| **tert-Amyl methyl ether (TAME)** | **994-05-8** | **8260B** | **250** | **J** | **500** | 10 | ug/L | 2 |
| **Benzene** | **71-43-2** | **8260B** | **3200** | | **250** | 10 | ug/L | 2 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 5000 | 50 | ug/L | 2 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 250 | 15 | ug/L | 2 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **1800** | | **500** | **20** | ug/L | 2 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 5000 | 50 | ug/L | 2 |
| Ethanol | 64-17-5 | 8260B | ND | | 50000 | 1700 | ug/L | 2 |
| **Ethylbenzene** | **100-41-4** | **8260B** | **2000** | | **250** | **85** | ug/L | 2 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 5000 | 10 | ug/L | 2 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **290** | | **250** | **20** | ug/L | 2 |
| **Naphthalene** | **91-20-3** | **8260B** | **350** | | **250** | **85** | ug/L | 2 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 5000 | 340 | ug/L | 2 |
| **Toluene** | **108-88-3** | **8260B** | **1000** | | **250** | **85** | ug/L | 2 |
| **Xylenes (total)** | **1330-20-7** | **8260B** | **3600** | | **250** | **85** | ug/L | 2 |

| Surrogate | Q | Run 2 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 95 | 70-130 |
| Bromofluorobenzene | | 95 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 1122 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 120 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: Midlands Environmental Consultants, Inc.
Description: MW-9 Dup.
Date Sampled: 02/18/2014 1542
Date Received: 02/19/2014

Laboratory ID: PB20024-047
Matrix: Aqueous

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 3 | 5030B | 8260B | 1 | 02/25/2014 2312 | ALL | | 41083 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 3 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 3 |
| **Benzene** | **71-43-2** | **8260B** | **2.2** | **J** | **5.0** | **0.20** | ug/L | **3** |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 3 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 3 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **5.4** | **J** | **10** | **0.40** | ug/L | **3** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 3 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 3 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 3 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 3 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **3.9** | **J** | **5.0** | **0.40** | ug/L | **3** |
| **Naphthalene** | **91-20-3** | **8260B** | **2.5** | **J** | **5.0** | 1.7 | ug/L | **3** |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 3 |
| **Toluene** | **108-88-3** | **8260B** | **4.7** | **J** | **5.0** | 1.7 | ug/L | **3** |
| **Xylenes (total)** | **1330-20-7** | **8260B** | **46** | | **5.0** | 1.7 | ug/L | **3** |

| Surrogate | Q | Run 3 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 94 | 70-130 |
| Bromofluorobenzene | | 97 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 1132 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 100 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: Midlands Environmental Consultants, Inc.
Description: MW-10 Dup.
Date Sampled: 02/18/2014 1459
Date Received: 02/19/2014

Laboratory ID: PB20024-048
Matrix: Aqueous

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 50 | 02/21/2014 1622 | ALL | | 40826 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **tert-Amyl alcohol (TAA)** | **75-85-4** | **8260B** | **8600** | | **5000** | **340** | **ug/L** | **1** |
| **tert-Amyl methyl ether (TAME)** | **994-05-8** | **8260B** | **1000** | | **500** | **10** | **ug/L** | **1** |
| **Benzene** | **71-43-2** | **8260B** | **4700** | | **250** | **10** | **ug/L** | **1** |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 5000 | 50 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 250 | 15 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **5800** | | **500** | **20** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 5000 | 50 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 50000 | 1700 | ug/L | 1 |
| **Ethylbenzene** | **100-41-4** | **8260B** | **1700** | | **250** | **85** | **ug/L** | **1** |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 5000 | 10 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **3700** | | **250** | **20** | **ug/L** | **1** |
| **Naphthalene** | **91-20-3** | **8260B** | **260** | | **250** | **85** | **ug/L** | **1** |
| **tert-butyl alcohol (TBA)** | **75-65-0** | **8260B** | **1100** | **J** | **5000** | **340** | **ug/L** | **1** |
| **Toluene** | **108-88-3** | **8260B** | **4400** | | **250** | **85** | **ug/L** | **1** |
| **Xylenes (total)** | **1330-20-7** | **8260B** | **7300** | | **250** | **85** | **ug/L** | **1** |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 101 | 70-130 |
| Bromofluorobenzene | | 101 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 2 | 8011 | 8011 | 2 | 02/24/2014 1845 | JCG | 02/24/2014 1210 | 40937 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| **1,2-Dibromoethane (EDB)** | **106-93-4** | **8011** | **0.97** | | **0.039** | **0.039** | **ug/L** | **2** |

| Surrogate | Q | Run 2 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 78 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: Field Blank
Date Sampled: **02/18/2014 1605**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-049**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/20/2014 2317 | PMM2 | | 40814 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 108 | 70-130 |
| Bromofluorobenzene | | 109 | 70-130 |
| Toluene-d8 | | 109 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 1153 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 110 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **Trip Blank**
Date Sampled: **02/18/2014 1608**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-050**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/20/2014 2338 | PMM2 | | 40814 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 5.0 | 0.20 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 5.0 | 0.30 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 5.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 5.0 | 1.7 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 104 | 70-130 |
| Bromofluorobenzene | | 104 | 70-130 |
| Toluene-d8 | | 107 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **Cafe-WW**
Date Sampled: **02/18/2014 1643**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-051**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1409 | ALL | | 40826 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 98 | 70-130 |
| Bromofluorobenzene | | 97 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 1203 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.019 | 0.019 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 102 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **Old Service Station - WW**
Date Sampled: **02/18/2014 1540**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-052**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1432 | ALL | | 40826 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 99 | 70-130 |
| Bromofluorobenzene | | 97 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 1213 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.019 | 0.019 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 109 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.** Laboratory ID: **PB20024-053**
Description: **Scott-WW** Matrix: **Aqueous**
Date Sampled: **02/18/2014 1445**
Date Received: **02/19/2014**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1453 | ALL | | 40826 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 99 | 70-130 |
| Bromofluorobenzene | | 98 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 1224 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.019 | 0.019 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 107 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **Farm-WW**
Date Sampled: **02/18/2014 1511**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-054**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1515 | ALL | | 40826 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 97 | 70-130 |
| Bromofluorobenzene | | 98 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 1306 | JCG | 02/21/2014 1456 | 40857 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.019 | 0.019 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 109 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **Major-WW**
Date Sampled: **02/18/2014 1520**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-055**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1538 | ALL | | 40826 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 100 | 70-130 |
| Bromofluorobenzene | | 98 | 70-130 |
| Toluene-d8 | | 103 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 1316 | JCG | 02/21/2014 1456 | 40857 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 111 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **Driver-WW**
Date Sampled: **02/18/2014 1530**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-056**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/24/2014 1159 | ALL | | 40916 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 101 | 70-130 |
| Bromofluorobenzene | | 99 | 70-130 |
| Toluene-d8 | | 102 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 1326 | JCG | 02/21/2014 1456 | 40857 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 107 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# QC Summary

## Volatile Organic Compounds by GC/MS - MB

**Sample ID:** PQ40814-001
**Batch:** 40814
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Result | Q | Dil | PQL | MDL | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | ND | | 1 | 100 | 6.7 | ug/L | 02/20/2014 2256 |
| tert-Amyl methyl ether (TAME) | ND | | 1 | 10 | 0.20 | ug/L | 02/20/2014 2256 |
| Benzene | ND | | 1 | 5.0 | 0.20 | ug/L | 02/20/2014 2256 |
| tert-Butyl formate (TBF) | ND | | 1 | 100 | 1.0 | ug/L | 02/20/2014 2256 |
| 1,2-Dichloroethane | ND | | 1 | 5.0 | 0.30 | ug/L | 02/20/2014 2256 |
| Diisopropyl ether (IPE) | ND | | 1 | 10 | 0.40 | ug/L | 02/20/2014 2256 |
| 3,3-Dimethyl-1-butanol | ND | | 1 | 100 | 1.0 | ug/L | 02/20/2014 2256 |
| Ethanol | ND | | 1 | 1000 | 33 | ug/L | 02/20/2014 2256 |
| Ethylbenzene | ND | | 1 | 5.0 | 1.7 | ug/L | 02/20/2014 2256 |
| Ethyl-tert-butyl ether (ETBE) | ND | | 1 | 100 | 0.20 | ug/L | 02/20/2014 2256 |
| Methyl tertiary butyl ether (MTBE) | ND | | 1 | 5.0 | 0.40 | ug/L | 02/20/2014 2256 |
| Naphthalene | ND | | 1 | 5.0 | 1.7 | ug/L | 02/20/2014 2256 |
| tert-butyl alcohol (TBA) | ND | | 1 | 100 | 6.7 | ug/L | 02/20/2014 2256 |
| Toluene | ND | | 1 | 5.0 | 1.7 | ug/L | 02/20/2014 2256 |
| Xylenes (total) | ND | | 1 | 5.0 | 1.7 | ug/L | 02/20/2014 2256 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 99 | 70-130 |
| 1,2-Dichloroethane-d4 | | 100 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

## Volatile Organic Compounds by GC/MS - LCS

**Sample ID:** PQ40814-002
**Batch:** 40814
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 1000 | 1000 | | 1 | 101 | 70-130 | 02/20/2014 2130 |
| tert-Amyl methyl ether (TAME) | 50 | 47 | | 1 | 93 | 70-130 | 02/20/2014 2130 |
| Benzene | 50 | 45 | | 1 | 90 | 70-130 | 02/20/2014 2130 |
| tert-Butyl formate (TBF) | 250 | 240 | | 1 | 96 | 70-130 | 02/20/2014 2130 |
| 1,2-Dichloroethane | 50 | 46 | | 1 | 92 | 70-130 | 02/20/2014 2130 |
| Diisopropyl ether (IPE) | 50 | 46 | | 1 | 92 | 70-130 | 02/20/2014 2130 |
| 3,3-Dimethyl-1-butanol | 1000 | 1000 | | 1 | 102 | 70-130 | 02/20/2014 2130 |
| Ethanol | 5000 | 5100 | | 1 | 101 | 60-140 | 02/20/2014 2130 |
| Ethylbenzene | 50 | 45 | | 1 | 90 | 70-130 | 02/20/2014 2130 |
| Ethyl-tert-butyl ether (ETBE) | 50 | 46 | | 1 | 93 | 70-130 | 02/20/2014 2130 |
| Methyl tertiary butyl ether (MTBE) | 50 | 47 | | 1 | 93 | 70-130 | 02/20/2014 2130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - LCS

**Sample ID:** PQ40814-002
**Batch:** 40814
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| Naphthalene | 50 | 47 | | 1 | 95 | 70-130 | 02/20/2014 2130 |
| tert-butyl alcohol (TBA) | 1000 | 1000 | | 1 | 100 | 70-130 | 02/20/2014 2130 |
| Toluene | 50 | 45 | | 1 | 90 | 70-130 | 02/20/2014 2130 |
| Xylenes (total) | 100 | 92 | | 1 | 92 | 70-130 | 02/20/2014 2130 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 105 | 70-130 |
| 1,2-Dichloroethane-d4 | | 104 | 70-130 |
| Toluene-d8 | | 106 | 70-130 |

## Volatile Organic Compounds by GC/MS - LCSD

**Sample ID:** PQ40814-003
**Batch:** 40814
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % RPD | % Rec Limit | % RPD Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 1000 | 1000 | | 1 | 103 | 1.7 | 70-130 | 20 | 02/20/2014 2152 |
| tert-Amyl methyl ether (TAME) | 50 | 51 | | 1 | 102 | 9.1 | 70-130 | 20 | 02/20/2014 2152 |
| Benzene | 50 | 49 | | 1 | 98 | 8.6 | 70-130 | 20 | 02/20/2014 2152 |
| tert-Butyl formate (TBF) | 250 | 260 | | 1 | 104 | 7.7 | 70-130 | 20 | 02/20/2014 2152 |
| 1,2-Dichloroethane | 50 | 50 | | 1 | 100 | 7.7 | 70-130 | 20 | 02/20/2014 2152 |
| Diisopropyl ether (IPE) | 50 | 50 | | 1 | 100 | 7.7 | 70-130 | 20 | 02/20/2014 2152 |
| 3,3-Dimethyl-1-butanol | 1000 | 1000 | | 1 | 104 | 2.2 | 70-130 | 20 | 02/20/2014 2152 |
| Ethanol | 5000 | 5600 | | 1 | 112 | 10 | 60-140 | 20 | 02/20/2014 2152 |
| Ethylbenzene | 50 | 49 | | 1 | 98 | 8.4 | 70-130 | 20 | 02/20/2014 2152 |
| Ethyl-tert-butyl ether (ETBE) | 50 | 50 | | 1 | 101 | 8.5 | 70-130 | 20 | 02/20/2014 2152 |
| Methyl tertiary butyl ether (MTBE) | 50 | 50 | | 1 | 101 | 7.9 | 70-130 | 20 | 02/20/2014 2152 |
| Naphthalene | 50 | 51 | | 1 | 102 | 7.5 | 70-130 | 20 | 02/20/2014 2152 |
| tert-butyl alcohol (TBA) | 1000 | 1000 | | 1 | 104 | 3.6 | 70-130 | 20 | 02/20/2014 2152 |
| Toluene | 50 | 49 | | 1 | 98 | 8.6 | 70-130 | 20 | 02/20/2014 2152 |
| Xylenes (total) | 100 | 100 | | 1 | 100 | 8.5 | 70-130 | 20 | 02/20/2014 2152 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 100 | 70-130 |
| 1,2-Dichloroethane-d4 | | 100 | 70-130 |
| Toluene-d8 | | 103 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - MB

**Sample ID:** PQ40815-001
**Batch:** 40815
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Result | Q | Dil | PQL | MDL | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | ND | | 1 | 100 | 6.7 | ug/L | 02/20/2014 2251 |
| tert-Amyl methyl ether (TAME) | ND | | 1 | 10 | 0.20 | ug/L | 02/20/2014 2251 |
| Benzene | ND | | 1 | 5.0 | 0.20 | ug/L | 02/20/2014 2251 |
| tert-Butyl formate (TBF) | ND | | 1 | 100 | 1.0 | ug/L | 02/20/2014 2251 |
| 1,2-Dichloroethane | ND | | 1 | 5.0 | 0.30 | ug/L | 02/20/2014 2251 |
| Diisopropyl ether (IPE) | ND | | 1 | 10 | 0.40 | ug/L | 02/20/2014 2251 |
| 3,3-Dimethyl-1-butanol | ND | | 1 | 100 | 1.0 | ug/L | 02/20/2014 2251 |
| Ethanol | ND | | 1 | 1000 | 33 | ug/L | 02/20/2014 2251 |
| Ethylbenzene | ND | | 1 | 5.0 | 1.7 | ug/L | 02/20/2014 2251 |
| Ethyl-tert-butyl ether (ETBE) | ND | | 1 | 100 | 0.20 | ug/L | 02/20/2014 2251 |
| Methyl tertiary butyl ether (MTBE) | ND | | 1 | 5.0 | 0.40 | ug/L | 02/20/2014 2251 |
| Naphthalene | ND | | 1 | 5.0 | 1.7 | ug/L | 02/20/2014 2251 |
| tert-butyl alcohol (TBA) | ND | | 1 | 100 | 6.7 | ug/L | 02/20/2014 2251 |
| Toluene | ND | | 1 | 5.0 | 1.7 | ug/L | 02/20/2014 2251 |
| Xylenes (total) | ND | | 1 | 5.0 | 1.7 | ug/L | 02/20/2014 2251 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 79 | 70-130 |
| 1,2-Dichloroethane-d4 | | 82 | 70-130 |
| Toluene-d8 | | 87 | 70-130 |

## Volatile Organic Compounds by GC/MS - LCS

**Sample ID:** PQ40815-002
**Batch:** 40815
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 1000 | 820 | | 1 | 82 | 70-130 | 02/20/2014 2051 |
| tert-Amyl methyl ether (TAME) | 50 | 53 | | 1 | 107 | 70-130 | 02/20/2014 2051 |
| Benzene | 50 | 51 | | 1 | 102 | 70-130 | 02/20/2014 2051 |
| tert-Butyl formate (TBF) | 250 | 230 | | 1 | 93 | 70-130 | 02/20/2014 2051 |
| 1,2-Dichloroethane | 50 | 50 | | 1 | 99 | 70-130 | 02/20/2014 2051 |
| Diisopropyl ether (IPE) | 50 | 53 | | 1 | 107 | 70-130 | 02/20/2014 2051 |
| 3,3-Dimethyl-1-butanol | 1000 | 820 | | 1 | 82 | 70-130 | 02/20/2014 2051 |
| Ethanol | 5000 | 5000 | | 1 | 100 | 60-140 | 02/20/2014 2051 |
| Ethylbenzene | 50 | 53 | | 1 | 107 | 70-130 | 02/20/2014 2051 |
| Ethyl-tert-butyl ether (ETBE) | 50 | 53 | | 1 | 107 | 70-130 | 02/20/2014 2051 |
| Methyl tertiary butyl ether (MTBE) | 50 | 55 | | 1 | 109 | 70-130 | 02/20/2014 2051 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - LCS

**Sample ID:** PQ40815-002
**Batch:** 40815
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| Naphthalene | 50 | 46 | | 1 | 92 | 70-130 | 02/20/2014 2051 |
| tert-butyl alcohol (TBA) | 1000 | 910 | | 1 | 91 | 70-130 | 02/20/2014 2051 |
| Toluene | 50 | 53 | | 1 | 105 | 70-130 | 02/20/2014 2051 |
| Xylenes (total) | 100 | 110 | | 1 | 108 | 70-130 | 02/20/2014 2051 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 81 | 70-130 |
| 1,2-Dichloroethane-d4 | | 76 | 70-130 |
| Toluene-d8 | | 81 | 70-130 |

## Volatile Organic Compounds by GC/MS - LCSD

**Sample ID:** PQ40815-003
**Batch:** 40815
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % RPD | % Rec Limit | % RPD Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 1000 | 840 | | 1 | 84 | 1.9 | 70-130 | 20 | 02/20/2014 2113 |
| tert-Amyl methyl ether (TAME) | 50 | 54 | | 1 | 107 | 0.062 | 70-130 | 20 | 02/20/2014 2113 |
| Benzene | 50 | 51 | | 1 | 103 | 0.59 | 70-130 | 20 | 02/20/2014 2113 |
| tert-Butyl formate (TBF) | 250 | 230 | | 1 | 92 | 1.1 | 70-130 | 20 | 02/20/2014 2113 |
| 1,2-Dichloroethane | 50 | 49 | | 1 | 99 | 0.55 | 70-130 | 20 | 02/20/2014 2113 |
| Diisopropyl ether (IPE) | 50 | 53 | | 1 | 105 | 1.4 | 70-130 | 20 | 02/20/2014 2113 |
| 3,3-Dimethyl-1-butanol | 1000 | 840 | | 1 | 84 | 2.1 | 70-130 | 20 | 02/20/2014 2113 |
| Ethanol | 5000 | 5000 | | 1 | 99 | 0.58 | 60-140 | 20 | 02/20/2014 2113 |
| Ethylbenzene | 50 | 54 | | 1 | 108 | 0.77 | 70-130 | 20 | 02/20/2014 2113 |
| Ethyl-tert-butyl ether (ETBE) | 50 | 53 | | 1 | 106 | 0.53 | 70-130 | 20 | 02/20/2014 2113 |
| Methyl tertiary butyl ether (MTBE) | 50 | 53 | | 1 | 107 | 2.2 | 70-130 | 20 | 02/20/2014 2113 |
| Naphthalene | 50 | 46 | | 1 | 93 | 0.58 | 70-130 | 20 | 02/20/2014 2113 |
| tert-butyl alcohol (TBA) | 1000 | 940 | | 1 | 94 | 3.9 | 70-130 | 20 | 02/20/2014 2113 |
| Toluene | 50 | 53 | | 1 | 105 | 0.013 | 70-130 | 20 | 02/20/2014 2113 |
| Xylenes (total) | 100 | 110 | | 1 | 109 | 0.72 | 70-130 | 20 | 02/20/2014 2113 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 80 | 70-130 |
| 1,2-Dichloroethane-d4 | | 76 | 70-130 |
| Toluene-d8 | | 81 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - MS

**Sample ID:** PB20024-004MS
**Batch:** 40815
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Sample Amount (ug/L) | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 1200 | 5000 | 3700 | N | 5 | 49 | 70-130 | 02/21/2014 0637 |
| tert-Amyl methyl ether (TAME) | 4.2 | 250 | 180 | N | 5 | 69 | 70-130 | 02/21/2014 0637 |
| Benzene | 160 | 250 | 340 | | 5 | 73 | 70-130 | 02/21/2014 0637 |
| tert-Butyl formate (TBF) | ND | 1300 | 190 | N | 5 | 15 | 70-130 | 02/21/2014 0637 |
| 1,2-Dichloroethane | ND | 250 | 170 | | 5 | 70 | 70-130 | 02/21/2014 0637 |
| Diisopropyl ether (IPE) | 92 | 250 | 280 | | 5 | 73 | 70-130 | 02/21/2014 0637 |
| 3,3-Dimethyl-1-butanol | ND | 5000 | 2800 | N | 5 | 56 | 70-130 | 02/21/2014 0637 |
| Ethanol | ND | 25000 | 16000 | N | 5 | 66 | 70-130 | 02/21/2014 0637 |
| Ethylbenzene | 24 | 250 | 200 | | 5 | 70 | 70-130 | 02/21/2014 0637 |
| Ethyl-tert-butyl ether (ETBE) | ND | 250 | 170 | N | 5 | 69 | 70-130 | 02/21/2014 0637 |
| Methyl tertiary butyl ether (MTBE) | 180 | 250 | 370 | | 5 | 74 | 70-130 | 02/21/2014 0637 |
| Naphthalene | 190 | 250 | 330 | N | 5 | 56 | 70-130 | 02/21/2014 0637 |
| tert-butyl alcohol (TBA) | 310 | 5000 | 3900 | | 5 | 72 | 70-130 | 02/21/2014 0637 |
| Toluene | 14 | 250 | 190 | | 5 | 70 | 70-130 | 02/21/2014 0637 |
| Xylenes (total) | 20 | 500 | 370 | N | 5 | 69 | 70-130 | 02/21/2014 0637 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 77 | 70-130 |
| Bromofluorobenzene | | 83 | 70-130 |
| Toluene-d8 | | 86 | 70-130 |

## Volatile Organic Compounds by GC/MS - MSD

**Sample ID:** PB20024-004MD
**Batch:** 40815
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Sample Amount (ug/L) | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % RPD | % Rec Limit | % RPD Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 1200 | 5000 | 4200 | N | 5 | 60 | 14 | 70-130 | 20 | 02/21/2014 0659 |
| tert-Amyl methyl ether (TAME) | 4.2 | 250 | 220 | + | 5 | 86 | 22 | 70-130 | 20 | 02/21/2014 0659 |
| Benzene | 160 | 250 | 380 | | 5 | 88 | 11 | 70-130 | 20 | 02/21/2014 0659 |
| tert-Butyl formate (TBF) | ND | 1300 | 200 | N | 5 | 16 | 4.6 | 70-130 | 20 | 02/21/2014 0659 |
| 1,2-Dichloroethane | ND | 250 | 210 | | 5 | 85 | 20 | 70-130 | 20 | 02/21/2014 0659 |
| Diisopropyl ether (IPE) | 92 | 250 | 320 | | 5 | 89 | 14 | 70-130 | 20 | 02/21/2014 0659 |
| 3,3-Dimethyl-1-butanol | ND | 5000 | 3400 | N | 5 | 68 | 19 | 70-130 | 20 | 02/21/2014 0659 |
| Ethanol | ND | 25000 | 20000 | | 5 | 79 | 18 | 70-130 | 20 | 02/21/2014 0659 |
| Ethylbenzene | 24 | 250 | 250 | + | 5 | 91 | 24 | 70-130 | 20 | 02/21/2014 0659 |
| Ethyl-tert-butyl ether (ETBE) | ND | 250 | 220 | + | 5 | 87 | 22 | 70-130 | 20 | 02/21/2014 0659 |
| Methyl tertiary butyl ether (MTBE) | 180 | 250 | 400 | | 5 | 88 | 9.2 | 70-130 | 20 | 02/21/2014 0659 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - MSD

**Sample ID:** PB20024-004MD
**Batch:** 40815
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Sample Amount (ug/L) | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % RPD | % Rec Limit | % RPD Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | 190 | 250 | 370 | | 5 | 72 | 11 | 70-130 | 20 | 02/21/2014 0659 |
| tert-butyl alcohol (TBA) | 310 | 5000 | 4700 | | 5 | 87 | 18 | 70-130 | 20 | 02/21/2014 0659 |
| Toluene | 14 | 250 | 230 | + | 5 | 88 | 21 | 70-130 | 20 | 02/21/2014 0659 |
| Xylenes (total) | 20 | 500 | 470 | + | 5 | 90 | 24 | 70-130 | 20 | 02/21/2014 0659 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 76 | 70-130 |
| Bromofluorobenzene | | 80 | 70-130 |
| Toluene-d8 | | 83 | 70-130 |

## Volatile Organic Compounds by GC/MS - MB

**Sample ID:** PQ40825-001
**Batch:** 40825
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Result | Q | Dil | PQL | MDL | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | ND | | 1 | 100 | 6.7 | ug/L | 02/21/2014 1025 |
| tert-Amyl methyl ether (TAME) | ND | | 1 | 10 | 0.20 | ug/L | 02/21/2014 1025 |
| Benzene | ND | | 1 | 5.0 | 0.20 | ug/L | 02/21/2014 1025 |
| tert-Butyl formate (TBF) | ND | | 1 | 100 | 1.0 | ug/L | 02/21/2014 1025 |
| 1,2-Dichloroethane | ND | | 1 | 5.0 | 0.30 | ug/L | 02/21/2014 1025 |
| Diisopropyl ether (IPE) | ND | | 1 | 10 | 0.40 | ug/L | 02/21/2014 1025 |
| 3,3-Dimethyl-1-butanol | ND | | 1 | 100 | 1.0 | ug/L | 02/21/2014 1025 |
| Ethanol | ND | | 1 | 1000 | 33 | ug/L | 02/21/2014 1025 |
| Ethylbenzene | ND | | 1 | 5.0 | 1.7 | ug/L | 02/21/2014 1025 |
| Ethyl-tert-butyl ether (ETBE) | ND | | 1 | 100 | 0.20 | ug/L | 02/21/2014 1025 |
| Methyl tertiary butyl ether (MTBE) | ND | | 1 | 5.0 | 0.40 | ug/L | 02/21/2014 1025 |
| Naphthalene | ND | | 1 | 5.0 | 1.7 | ug/L | 02/21/2014 1025 |
| tert-butyl alcohol (TBA) | ND | | 1 | 100 | 6.7 | ug/L | 02/21/2014 1025 |
| Toluene | ND | | 1 | 5.0 | 1.7 | ug/L | 02/21/2014 1025 |
| Xylenes (total) | ND | | 1 | 5.0 | 1.7 | ug/L | 02/21/2014 1025 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 80 | 70-130 |
| 1,2-Dichloroethane-d4 | | 79 | 70-130 |
| Toluene-d8 | | 84 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - LCS

**Sample ID:** PQ40825-002
**Batch:** 40825
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 1000 | 830 | | 1 | 83 | 70-130 | 02/21/2014 0856 |
| tert-Amyl methyl ether (TAME) | 50 | 51 | | 1 | 103 | 70-130 | 02/21/2014 0856 |
| Benzene | 50 | 49 | | 1 | 97 | 70-130 | 02/21/2014 0856 |
| tert-Butyl formate (TBF) | 250 | 220 | | 1 | 89 | 70-130 | 02/21/2014 0856 |
| 1,2-Dichloroethane | 50 | 46 | | 1 | 92 | 70-130 | 02/21/2014 0856 |
| Diisopropyl ether (IPE) | 50 | 49 | | 1 | 99 | 70-130 | 02/21/2014 0856 |
| 3,3-Dimethyl-1-butanol | 1000 | 810 | | 1 | 81 | 70-130 | 02/21/2014 0856 |
| Ethanol | 5000 | 4800 | | 1 | 96 | 60-140 | 02/21/2014 0856 |
| Ethylbenzene | 50 | 55 | | 1 | 109 | 70-130 | 02/21/2014 0856 |
| Ethyl-tert-butyl ether (ETBE) | 50 | 50 | | 1 | 99 | 70-130 | 02/21/2014 0856 |
| Methyl tertiary butyl ether (MTBE) | 50 | 49 | | 1 | 98 | 70-130 | 02/21/2014 0856 |
| Naphthalene | 50 | 47 | | 1 | 94 | 70-130 | 02/21/2014 0856 |
| tert-butyl alcohol (TBA) | 1000 | 920 | | 1 | 92 | 70-130 | 02/21/2014 0856 |
| Toluene | 50 | 51 | | 1 | 103 | 70-130 | 02/21/2014 0856 |
| Xylenes (total) | 100 | 110 | | 1 | 111 | 70-130 | 02/21/2014 0856 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 81 | 70-130 |
| 1,2-Dichloroethane-d4 | | 74 | 70-130 |
| Toluene-d8 | | 81 | 70-130 |

## Volatile Organic Compounds by GC/MS - LCSD

**Sample ID:** PQ40825-003
**Batch:** 40825
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % RPD | % Rec Limit | % RPD Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 1000 | 830 | | 1 | 83 | 0.069 | 70-130 | 20 | 02/21/2014 0918 |
| tert-Amyl methyl ether (TAME) | 50 | 49 | | 1 | 99 | 3.8 | 70-130 | 20 | 02/21/2014 0918 |
| Benzene | 50 | 47 | | 1 | 95 | 2.4 | 70-130 | 20 | 02/21/2014 0918 |
| tert-Butyl formate (TBF) | 250 | 220 | | 1 | 88 | 1.4 | 70-130 | 20 | 02/21/2014 0918 |
| 1,2-Dichloroethane | 50 | 46 | | 1 | 91 | 1.3 | 70-130 | 20 | 02/21/2014 0918 |
| Diisopropyl ether (IPE) | 50 | 48 | | 1 | 96 | 2.5 | 70-130 | 20 | 02/21/2014 0918 |
| 3,3-Dimethyl-1-butanol | 1000 | 810 | | 1 | 81 | 0.13 | 70-130 | 20 | 02/21/2014 0918 |
| Ethanol | 5000 | 4700 | | 1 | 94 | 1.5 | 60-140 | 20 | 02/21/2014 0918 |
| Ethylbenzene | 50 | 53 | | 1 | 106 | 3.3 | 70-130 | 20 | 02/21/2014 0918 |
| Ethyl-tert-butyl ether (ETBE) | 50 | 49 | | 1 | 97 | 1.8 | 70-130 | 20 | 02/21/2014 0918 |
| Methyl tertiary butyl ether (MTBE) | 50 | 48 | | 1 | 96 | 1.8 | 70-130 | 20 | 02/21/2014 0918 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - LCSD

**Sample ID:** PQ40825-003
**Batch:** 40825
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % RPD | % Rec Limit | % RPD Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| Naphthalene | 50 | 48 | | 1 | 95 | 1.3 | 70-130 | 20 | 02/21/2014 0918 |
| tert-butyl alcohol (TBA) | 1000 | 880 | | 1 | 88 | 4.8 | 70-130 | 20 | 02/21/2014 0918 |
| Toluene | 50 | 50 | | 1 | 101 | 2.0 | 70-130 | 20 | 02/21/2014 0918 |
| Xylenes (total) | 100 | 110 | | 1 | 106 | 4.0 | 70-130 | 20 | 02/21/2014 0918 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 79 | 70-130 |
| 1,2-Dichloroethane-d4 | | 74 | 70-130 |
| Toluene-d8 | | 81 | 70-130 |

## Volatile Organic Compounds by GC/MS - MS

**Sample ID:** PB20024-034MS
**Batch:** 40825
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Sample Amount (ug/L) | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 5600 | 50000 | 44000 | | 50 | 78 | 70-130 | 02/21/2014 1817 |
| tert-Amyl methyl ether (TAME) | 85 | 2500 | 2800 | | 50 | 109 | 70-130 | 02/21/2014 1817 |
| Benzene | 320 | 2500 | 3100 | | 50 | 110 | 70-130 | 02/21/2014 1817 |
| tert-Butyl formate (TBF) | ND | 13000 | 9600 | | 50 | 77 | 70-130 | 02/21/2014 1817 |
| 1,2-Dichloroethane | ND | 2500 | 2600 | | 50 | 102 | 70-130 | 02/21/2014 1817 |
| Diisopropyl ether (IPE) | 1600 | 2500 | 4300 | | 50 | 105 | 70-130 | 02/21/2014 1817 |
| 3,3-Dimethyl-1-butanol | ND | 50000 | 45000 | | 50 | 89 | 70-130 | 02/21/2014 1817 |
| Ethanol | ND | 250000 | 260000 | | 50 | 104 | 70-130 | 02/21/2014 1817 |
| Ethylbenzene | ND | 2500 | 2800 | | 50 | 114 | 70-130 | 02/21/2014 1817 |
| Ethyl-tert-butyl ether (ETBE) | ND | 2500 | 2700 | | 50 | 107 | 70-130 | 02/21/2014 1817 |
| Methyl tertiary butyl ether (MTBE) | 8000 | 2500 | 10000 | | 50 | 81 | 70-130 | 02/21/2014 1817 |
| Naphthalene | ND | 2500 | 2400 | | 50 | 95 | 70-130 | 02/21/2014 1817 |
| tert-butyl alcohol (TBA) | ND | 50000 | 49000 | | 50 | 97 | 70-130 | 02/21/2014 1817 |
| Toluene | ND | 2500 | 2800 | | 50 | 113 | 70-130 | 02/21/2014 1817 |
| Xylenes (total) | ND | 5000 | 5900 | | 50 | 117 | 70-130 | 02/21/2014 1817 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 78 | 70-130 |
| Bromofluorobenzene | | 83 | 70-130 |
| Toluene-d8 | | 84 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - MSD

**Sample ID:** PB20024-034MD
**Batch:** 40825
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Sample Amount (ug/L) | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % RPD | % Rec Limit | % RPD Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 5600 | 50000 | 45000 | | 50 | 80 | 2.4 | 70-130 | 20 | 02/21/2014 1839 |
| tert-Amyl methyl ether (TAME) | 85 | 2500 | 2800 | | 50 | 109 | 0.55 | 70-130 | 20 | 02/21/2014 1839 |
| Benzene | 320 | 2500 | 3100 | | 50 | 110 | 0.00090 | 70-130 | 20 | 02/21/2014 1839 |
| tert-Butyl formate (TBF) | ND | 13000 | 9800 | | 50 | 79 | 2.0 | 70-130 | 20 | 02/21/2014 1839 |
| 1,2-Dichloroethane | ND | 2500 | 2600 | | 50 | 103 | 0.90 | 70-130 | 20 | 02/21/2014 1839 |
| Diisopropyl ether (IPE) | 1600 | 2500 | 4300 | | 50 | 108 | 2.0 | 70-130 | 20 | 02/21/2014 1839 |
| 3,3-Dimethyl-1-butanol | ND | 50000 | 46000 | | 50 | 91 | 2.5 | 70-130 | 20 | 02/21/2014 1839 |
| Ethanol | ND | 250000 | 270000 | | 50 | 107 | 3.1 | 70-130 | 20 | 02/21/2014 1839 |
| Ethylbenzene | ND | 2500 | 2800 | | 50 | 113 | 0.73 | 70-130 | 20 | 02/21/2014 1839 |
| Ethyl-tert-butyl ether (ETBE) | ND | 2500 | 2700 | | 50 | 108 | 1.4 | 70-130 | 20 | 02/21/2014 1839 |
| Methyl tertiary butyl ether (MTBE) | 8000 | 2500 | 10000 | E | 50 | 85 | 1.1 | 70-130 | 20 | 02/21/2014 1839 |
| Naphthalene | ND | 2500 | 2500 | | 50 | 99 | 4.1 | 70-130 | 20 | 02/21/2014 1839 |
| tert-butyl alcohol (TBA) | ND | 50000 | 50000 | | 50 | 99 | 1.8 | 70-130 | 20 | 02/21/2014 1839 |
| Toluene | ND | 2500 | 2800 | | 50 | 113 | 0.70 | 70-130 | 20 | 02/21/2014 1839 |
| Xylenes (total) | ND | 5000 | 5800 | | 50 | 116 | 0.53 | 70-130 | 20 | 02/21/2014 1839 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 76 | 70-130 |
| Bromofluorobenzene | | 80 | 70-130 |
| Toluene-d8 | | 81 | 70-130 |

## Volatile Organic Compounds by GC/MS - MB

**Sample ID:** PQ40826-001
**Batch:** 40826
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Result | Q | Dil | PQL | MDL | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | ND | | 1 | 100 | 6.7 | ug/L | 02/21/2014 1030 |
| tert-Amyl methyl ether (TAME) | ND | | 1 | 10 | 0.20 | ug/L | 02/21/2014 1030 |
| Benzene | ND | | 1 | 5.0 | 0.20 | ug/L | 02/21/2014 1030 |
| tert-Butyl formate (TBF) | ND | | 1 | 100 | 1.0 | ug/L | 02/21/2014 1030 |
| 1,2-Dichloroethane | ND | | 1 | 5.0 | 0.30 | ug/L | 02/21/2014 1030 |
| Diisopropyl ether (IPE) | ND | | 1 | 10 | 0.40 | ug/L | 02/21/2014 1030 |
| 3,3-Dimethyl-1-butanol | ND | | 1 | 100 | 1.0 | ug/L | 02/21/2014 1030 |
| Ethanol | ND | | 1 | 1000 | 33 | ug/L | 02/21/2014 1030 |
| Ethylbenzene | ND | | 1 | 5.0 | 1.7 | ug/L | 02/21/2014 1030 |
| Ethyl-tert-butyl ether (ETBE) | ND | | 1 | 100 | 0.20 | ug/L | 02/21/2014 1030 |
| Methyl tertiary butyl ether (MTBE) | ND | | 1 | 5.0 | 0.40 | ug/L | 02/21/2014 1030 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - MB

**Sample ID:** PQ40826-001
**Batch:** 40826
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Result | Q | Dil | PQL | MDL | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| Naphthalene | ND | | 1 | 5.0 | 1.7 | ug/L | 02/21/2014 1030 |
| tert-butyl alcohol (TBA) | ND | | 1 | 100 | 6.7 | ug/L | 02/21/2014 1030 |
| Toluene | ND | | 1 | 5.0 | 1.7 | ug/L | 02/21/2014 1030 |
| Xylenes (total) | ND | | 1 | 5.0 | 1.7 | ug/L | 02/21/2014 1030 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 98 | 70-130 |
| 1,2-Dichloroethane-d4 | | 100 | 70-130 |
| Toluene-d8 | | 99 | 70-130 |

## Volatile Organic Compounds by GC/MS - LCS

**Sample ID:** PQ40826-002
**Batch:** 40826
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 1000 | 1000 | | 1 | 103 | 70-130 | 02/21/2014 0901 |
| tert-Amyl methyl ether (TAME) | 50 | 51 | | 1 | 103 | 70-130 | 02/21/2014 0901 |
| Benzene | 50 | 52 | | 1 | 104 | 70-130 | 02/21/2014 0901 |
| tert-Butyl formate (TBF) | 250 | 260 | | 1 | 102 | 70-130 | 02/21/2014 0901 |
| 1,2-Dichloroethane | 50 | 51 | | 1 | 102 | 70-130 | 02/21/2014 0901 |
| Diisopropyl ether (IPE) | 50 | 52 | | 1 | 104 | 70-130 | 02/21/2014 0901 |
| 3,3-Dimethyl-1-butanol | 1000 | 1100 | | 1 | 105 | 70-130 | 02/21/2014 0901 |
| Ethanol | 5000 | 5500 | | 1 | 110 | 60-140 | 02/21/2014 0901 |
| Ethylbenzene | 50 | 54 | | 1 | 109 | 70-130 | 02/21/2014 0901 |
| Ethyl-tert-butyl ether (ETBE) | 50 | 51 | | 1 | 101 | 70-130 | 02/21/2014 0901 |
| Methyl tertiary butyl ether (MTBE) | 50 | 49 | | 1 | 99 | 70-130 | 02/21/2014 0901 |
| Naphthalene | 50 | 50 | | 1 | 100 | 70-130 | 02/21/2014 0901 |
| tert-butyl alcohol (TBA) | 1000 | 1100 | | 1 | 105 | 70-130 | 02/21/2014 0901 |
| Toluene | 50 | 53 | | 1 | 106 | 70-130 | 02/21/2014 0901 |
| Xylenes (total) | 100 | 110 | | 1 | 109 | 70-130 | 02/21/2014 0901 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 99 | 70-130 |
| 1,2-Dichloroethane-d4 | | 97 | 70-130 |
| Toluene-d8 | | 102 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - LCSD

**Sample ID:** PQ40826-003
**Batch:** 40826
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % RPD | % Rec Limit | % RPD Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 1000 | 1000 | | 1 | 102 | 0.56 | 70-130 | 20 | 02/21/2014 0923 |
| tert-Amyl methyl ether (TAME) | 50 | 51 | | 1 | 102 | 0.75 | 70-130 | 20 | 02/21/2014 0923 |
| Benzene | 50 | 51 | | 1 | 102 | 1.8 | 70-130 | 20 | 02/21/2014 0923 |
| tert-Butyl formate (TBF) | 250 | 250 | | 1 | 101 | 1.1 | 70-130 | 20 | 02/21/2014 0923 |
| 1,2-Dichloroethane | 50 | 52 | | 1 | 103 | 0.96 | 70-130 | 20 | 02/21/2014 0923 |
| Diisopropyl ether (IPE) | 50 | 50 | | 1 | 101 | 2.8 | 70-130 | 20 | 02/21/2014 0923 |
| 3,3-Dimethyl-1-butanol | 1000 | 1000 | | 1 | 105 | 0.25 | 70-130 | 20 | 02/21/2014 0923 |
| Ethanol | 5000 | 5500 | | 1 | 109 | 0.64 | 60-140 | 20 | 02/21/2014 0923 |
| Ethylbenzene | 50 | 52 | | 1 | 105 | 3.4 | 70-130 | 20 | 02/21/2014 0923 |
| Ethyl-tert-butyl ether (ETBE) | 50 | 50 | | 1 | 100 | 1.5 | 70-130 | 20 | 02/21/2014 0923 |
| Methyl tertiary butyl ether (MTBE) | 50 | 49 | | 1 | 99 | 0.18 | 70-130 | 20 | 02/21/2014 0923 |
| Naphthalene | 50 | 51 | | 1 | 102 | 2.9 | 70-130 | 20 | 02/21/2014 0923 |
| tert-butyl alcohol (TBA) | 1000 | 1000 | | 1 | 102 | 2.9 | 70-130 | 20 | 02/21/2014 0923 |
| Toluene | 50 | 51 | | 1 | 102 | 4.0 | 70-130 | 20 | 02/21/2014 0923 |
| Xylenes (total) | 100 | 110 | | 1 | 107 | 2.0 | 70-130 | 20 | 02/21/2014 0923 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 98 | 70-130 |
| 1,2-Dichloroethane-d4 | | 97 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

## Volatile Organic Compounds by GC/MS - MS

**Sample ID:** PB20024-047MS
**Batch:** 40826
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Sample Amount (ug/L) | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | ND | 20000 | 20000 | | 20 | 98 | 70-130 | 02/21/2014 1728 |
| tert-Amyl methyl ether (TAME) | ND | 1000 | 1100 | | 20 | 106 | 70-130 | 02/21/2014 1728 |
| Benzene | 2.2 | 1000 | 1100 | | 20 | 112 | 70-130 | 02/21/2014 1728 |
| tert-Butyl formate (TBF) | ND | 5000 | 3200 | N | 20 | 64 | 70-130 | 02/21/2014 1728 |
| 1,2-Dichloroethane | ND | 1000 | 1100 | | 20 | 107 | 70-130 | 02/21/2014 1728 |
| Diisopropyl ether (IPE) | 5.4 | 1000 | 1100 | | 20 | 108 | 70-130 | 02/21/2014 1728 |
| 3,3-Dimethyl-1-butanol | ND | 20000 | 20000 | | 20 | 99 | 70-130 | 02/21/2014 1728 |
| Ethanol | ND | 100000 | 110000 | | 20 | 111 | 70-130 | 02/21/2014 1728 |
| Ethylbenzene | ND | 1000 | 1100 | | 20 | 112 | 70-130 | 02/21/2014 1728 |
| Ethyl-tert-butyl ether (ETBE) | ND | 1000 | 1100 | | 20 | 105 | 70-130 | 02/21/2014 1728 |
| Methyl tertiary butyl ether (MTBE) | 3.9 | 1000 | 1100 | | 20 | 105 | 70-130 | 02/21/2014 1728 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - MS

**Sample ID:** PB20024-047MS
**Batch:** 40826
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Sample Amount (ug/L) | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| Naphthalene | 2.5 | 1000 | 950 | | 20 | 94 | 70-130 | 02/21/2014 1728 |
| tert-butyl alcohol (TBA) | ND | 20000 | 21000 | | 20 | 106 | 70-130 | 02/21/2014 1728 |
| Toluene | 4.7 | 1000 | 1100 | | 20 | 113 | 70-130 | 02/21/2014 1728 |
| Xylenes (total) | 46 | 2000 | 2300 | | 20 | 113 | 70-130 | 02/21/2014 1728 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 98 | 70-130 |
| Bromofluorobenzene | | 98 | 70-130 |
| Toluene-d8 | | 103 | 70-130 |

## Volatile Organic Compounds by GC/MS - MSD

**Sample ID:** PB20024-047MD
**Batch:** 40826
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Sample Amount (ug/L) | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % RPD | % Rec Limit | % RPD Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | ND | 20000 | 21000 | | 20 | 103 | 5.2 | 70-130 | 20 | 02/21/2014 1751 |
| tert-Amyl methyl ether (TAME) | ND | 1000 | 1100 | | 20 | 106 | 0.22 | 70-130 | 20 | 02/21/2014 1751 |
| Benzene | 2.2 | 1000 | 1100 | | 20 | 111 | 1.4 | 70-130 | 20 | 02/21/2014 1751 |
| tert-Butyl formate (TBF) | ND | 5000 | 3200 | N | 20 | 64 | 0.55 | 70-130 | 20 | 02/21/2014 1751 |
| 1,2-Dichloroethane | ND | 1000 | 1100 | | 20 | 107 | 0.076 | 70-130 | 20 | 02/21/2014 1751 |
| Diisopropyl ether (IPE) | 5.4 | 1000 | 1100 | | 20 | 107 | 0.45 | 70-130 | 20 | 02/21/2014 1751 |
| 3,3-Dimethyl-1-butanol | ND | 20000 | 21000 | | 20 | 105 | 6.1 | 70-130 | 20 | 02/21/2014 1751 |
| Ethanol | ND | 100000 | 110000 | | 20 | 106 | 3.8 | 70-130 | 20 | 02/21/2014 1751 |
| Ethylbenzene | ND | 1000 | 1100 | | 20 | 114 | 1.2 | 70-130 | 20 | 02/21/2014 1751 |
| Ethyl-tert-butyl ether (ETBE) | ND | 1000 | 1000 | | 20 | 102 | 3.0 | 70-130 | 20 | 02/21/2014 1751 |
| Methyl tertiary butyl ether (MTBE) | 3.9 | 1000 | 1000 | | 20 | 104 | 1.2 | 70-130 | 20 | 02/21/2014 1751 |
| Naphthalene | 2.5 | 1000 | 1100 | | 20 | 114 | 19 | 70-130 | 20 | 02/21/2014 1751 |
| tert-butyl alcohol (TBA) | ND | 20000 | 22000 | | 20 | 111 | 4.8 | 70-130 | 20 | 02/21/2014 1751 |
| Toluene | 4.7 | 1000 | 1100 | | 20 | 110 | 3.1 | 70-130 | 20 | 02/21/2014 1751 |
| Xylenes (total) | 46 | 2000 | 2400 | | 20 | 113 | 0.77 | 70-130 | 20 | 02/21/2014 1751 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 97 | 70-130 |
| Bromofluorobenzene | | 98 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - MB

**Sample ID:** PQ40826-001
**Batch:** 40826
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Result | Q | Dil | PQL | MDL | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | ND | | 1 | 100 | 6.7 | ug/L | 02/21/2014 1030 |
| tert-Amyl methyl ether (TAME) | ND | | 1 | 10 | 0.20 | ug/L | 02/21/2014 1030 |
| Benzene | ND | | 1 | 1.0 | 0.13 | ug/L | 02/21/2014 1030 |
| tert-Butyl formate (TBF) | ND | | 1 | 100 | 1.0 | ug/L | 02/21/2014 1030 |
| 1,2-Dichloroethane | ND | | 1 | 1.0 | 0.15 | ug/L | 02/21/2014 1030 |
| Diisopropyl ether (IPE) | ND | | 1 | 10 | 0.40 | ug/L | 02/21/2014 1030 |
| 3,3-Dimethyl-1-butanol | ND | | 1 | 100 | 1.0 | ug/L | 02/21/2014 1030 |
| Ethanol | ND | | 1 | 1000 | 33 | ug/L | 02/21/2014 1030 |
| Ethylbenzene | ND | | 1 | 1.0 | 0.33 | ug/L | 02/21/2014 1030 |
| Ethyl-tert-butyl ether (ETBE) | ND | | 1 | 100 | 0.20 | ug/L | 02/21/2014 1030 |
| Methyl tertiary butyl ether (MTBE) | ND | | 1 | 1.0 | 0.40 | ug/L | 02/21/2014 1030 |
| Naphthalene | ND | | 1 | 1.0 | 0.40 | ug/L | 02/21/2014 1030 |
| tert-butyl alcohol (TBA) | ND | | 1 | 100 | 6.7 | ug/L | 02/21/2014 1030 |
| Toluene | ND | | 1 | 1.0 | 0.33 | ug/L | 02/21/2014 1030 |
| Xylenes (total) | ND | | 1 | 1.0 | 0.33 | ug/L | 02/21/2014 1030 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 98 | 70-130 |
| 1,2-Dichloroethane-d4 | | 100 | 70-130 |
| Toluene-d8 | | 99 | 70-130 |

## Volatile Organic Compounds by GC/MS - LCS

**Sample ID:** PQ40826-002
**Batch:** 40826
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 1000 | 1000 | | 1 | 103 | 70-130 | 02/21/2014 0901 |
| tert-Amyl methyl ether (TAME) | 50 | 51 | | 1 | 103 | 70-130 | 02/21/2014 0901 |
| Benzene | 50 | 52 | | 1 | 104 | 70-130 | 02/21/2014 0901 |
| tert-Butyl formate (TBF) | 250 | 260 | | 1 | 102 | 70-130 | 02/21/2014 0901 |
| 1,2-Dichloroethane | 50 | 51 | | 1 | 102 | 70-130 | 02/21/2014 0901 |
| Diisopropyl ether (IPE) | 50 | 52 | | 1 | 104 | 70-130 | 02/21/2014 0901 |
| 3,3-Dimethyl-1-butanol | 1000 | 1100 | | 1 | 105 | 70-130 | 02/21/2014 0901 |
| Ethanol | 5000 | 5500 | | 1 | 110 | 60-140 | 02/21/2014 0901 |
| Ethylbenzene | 50 | 54 | | 1 | 109 | 70-130 | 02/21/2014 0901 |
| Ethyl-tert-butyl ether (ETBE) | 50 | 51 | | 1 | 101 | 70-130 | 02/21/2014 0901 |
| Methyl tertiary butyl ether (MTBE) | 50 | 49 | | 1 | 99 | 70-130 | 02/21/2014 0901 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - LCS

**Sample ID:** PQ40826-002
**Batch:** 40826
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| Naphthalene | 50 | 50 | | 1 | 100 | 70-130 | 02/21/2014 0901 |
| tert-butyl alcohol (TBA) | 1000 | 1100 | | 1 | 105 | 70-130 | 02/21/2014 0901 |
| Toluene | 50 | 53 | | 1 | 106 | 70-130 | 02/21/2014 0901 |
| Xylenes (total) | 100 | 110 | | 1 | 109 | 70-130 | 02/21/2014 0901 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 99 | 70-130 |
| 1,2-Dichloroethane-d4 | | 97 | 70-130 |
| Toluene-d8 | | 102 | 70-130 |

## Volatile Organic Compounds by GC/MS - LCSD

**Sample ID:** PQ40826-003
**Batch:** 40826
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % RPD | % Rec Limit | % RPD Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 1000 | 1000 | | 1 | 102 | 0.56 | 70-130 | 20 | 02/21/2014 0923 |
| tert-Amyl methyl ether (TAME) | 50 | 51 | | 1 | 102 | 0.75 | 70-130 | 20 | 02/21/2014 0923 |
| Benzene | 50 | 51 | | 1 | 102 | 1.8 | 70-130 | 20 | 02/21/2014 0923 |
| tert-Butyl formate (TBF) | 250 | 250 | | 1 | 101 | 1.1 | 70-130 | 20 | 02/21/2014 0923 |
| 1,2-Dichloroethane | 50 | 52 | | 1 | 103 | 0.96 | 70-130 | 20 | 02/21/2014 0923 |
| Diisopropyl ether (IPE) | 50 | 50 | | 1 | 101 | 2.8 | 70-130 | 20 | 02/21/2014 0923 |
| 3,3-Dimethyl-1-butanol | 1000 | 1000 | | 1 | 105 | 0.25 | 70-130 | 20 | 02/21/2014 0923 |
| Ethanol | 5000 | 5500 | | 1 | 109 | 0.64 | 60-140 | 20 | 02/21/2014 0923 |
| Ethylbenzene | 50 | 52 | | 1 | 105 | 3.4 | 70-130 | 20 | 02/21/2014 0923 |
| Ethyl-tert-butyl ether (ETBE) | 50 | 50 | | 1 | 100 | 1.5 | 70-130 | 20 | 02/21/2014 0923 |
| Methyl tertiary butyl ether (MTBE) | 50 | 49 | | 1 | 99 | 0.18 | 70-130 | 20 | 02/21/2014 0923 |
| Naphthalene | 50 | 51 | | 1 | 102 | 2.9 | 70-130 | 20 | 02/21/2014 0923 |
| tert-butyl alcohol (TBA) | 1000 | 1000 | | 1 | 102 | 2.9 | 70-130 | 20 | 02/21/2014 0923 |
| Toluene | 50 | 51 | | 1 | 102 | 4.0 | 70-130 | 20 | 02/21/2014 0923 |
| Xylenes (total) | 100 | 110 | | 1 | 107 | 2.0 | 70-130 | 20 | 02/21/2014 0923 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 98 | 70-130 |
| 1,2-Dichloroethane-d4 | | 97 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - MB

**Sample ID:** PQ40916-001
**Batch:** 40916
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Result | Q | Dil | PQL | MDL | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| Methyl tertiary butyl ether (MTBE) | ND | | 1 | 5.0 | 0.40 | ug/L | 02/24/2014 0947 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 99 | 70-130 |
| 1,2-Dichloroethane-d4 | | 99 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

## Volatile Organic Compounds by GC/MS - LCS

**Sample ID:** PQ40916-002
**Batch:** 40916
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| Methyl tertiary butyl ether (MTBE) | 50 | 48 | | 1 | 96 | 70-130 | 02/24/2014 0819 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 98 | 70-130 |
| 1,2-Dichloroethane-d4 | | 98 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

## Volatile Organic Compounds by GC/MS - LCSD

**Sample ID:** PQ40916-003
**Batch:** 40916
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % RPD | % Rec Limit | % RPD Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| Methyl tertiary butyl ether (MTBE) | 50 | 47 | | 1 | 95 | 1.9 | 70-130 | 20 | 02/24/2014 0841 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 98 | 70-130 |
| 1,2-Dichloroethane-d4 | | 96 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - MB

**Sample ID:** PQ40916-001
**Batch:** 40916
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Result | Q | Dil | PQL | MDL | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | ND | | 1 | 100 | 6.7 | ug/L | 02/24/2014 0947 |
| tert-Amyl methyl ether (TAME) | ND | | 1 | 10 | 0.20 | ug/L | 02/24/2014 0947 |
| Benzene | ND | | 1 | 1.0 | 0.13 | ug/L | 02/24/2014 0947 |
| tert-Butyl formate (TBF) | ND | | 1 | 100 | 1.0 | ug/L | 02/24/2014 0947 |
| 1,2-Dichloroethane | ND | | 1 | 1.0 | 0.15 | ug/L | 02/24/2014 0947 |
| Diisopropyl ether (IPE) | ND | | 1 | 10 | 0.40 | ug/L | 02/24/2014 0947 |
| 3,3-Dimethyl-1-butanol | ND | | 1 | 100 | 1.0 | ug/L | 02/24/2014 0947 |
| Ethanol | ND | | 1 | 1000 | 33 | ug/L | 02/24/2014 0947 |
| Ethylbenzene | ND | | 1 | 1.0 | 0.33 | ug/L | 02/24/2014 0947 |
| Ethyl-tert-butyl ether (ETBE) | ND | | 1 | 100 | 0.20 | ug/L | 02/24/2014 0947 |
| Methyl tertiary butyl ether (MTBE) | ND | | 1 | 1.0 | 0.40 | ug/L | 02/24/2014 0947 |
| Naphthalene | ND | | 1 | 1.0 | 0.40 | ug/L | 02/24/2014 0947 |
| tert-butyl alcohol (TBA) | ND | | 1 | 100 | 6.7 | ug/L | 02/24/2014 0947 |
| Toluene | ND | | 1 | 1.0 | 0.33 | ug/L | 02/24/2014 0947 |
| Xylenes (total) | ND | | 1 | 1.0 | 0.33 | ug/L | 02/24/2014 0947 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 99 | 70-130 |
| 1,2-Dichloroethane-d4 | | 99 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

## Volatile Organic Compounds by GC/MS - LCS

**Sample ID:** PQ40916-002
**Batch:** 40916
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 1000 | 990 | | 1 | 99 | 70-130 | 02/24/2014 0819 |
| tert-Amyl methyl ether (TAME) | 50 | 50 | | 1 | 100 | 70-130 | 02/24/2014 0819 |
| Benzene | 50 | 53 | | 1 | 105 | 70-130 | 02/24/2014 0819 |
| tert-Butyl formate (TBF) | 250 | 250 | | 1 | 100 | 70-130 | 02/24/2014 0819 |
| 1,2-Dichloroethane | 50 | 50 | | 1 | 100 | 70-130 | 02/24/2014 0819 |
| Diisopropyl ether (IPE) | 50 | 50 | | 1 | 100 | 70-130 | 02/24/2014 0819 |
| 3,3-Dimethyl-1-butanol | 1000 | 990 | | 1 | 99 | 70-130 | 02/24/2014 0819 |
| Ethanol | 5000 | 5300 | | 1 | 106 | 60-140 | 02/24/2014 0819 |
| Ethylbenzene | 50 | 55 | | 1 | 110 | 70-130 | 02/24/2014 0819 |
| Ethyl-tert-butyl ether (ETBE) | 50 | 48 | | 1 | 97 | 70-130 | 02/24/2014 0819 |
| Methyl tertiary butyl ether (MTBE) | 50 | 48 | | 1 | 96 | 70-130 | 02/24/2014 0819 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - LCS

**Sample ID:** PQ40916-002
**Batch:** 40916
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| Naphthalene | 50 | 56 | | 1 | 112 | 70-130 | 02/24/2014 0819 |
| tert-butyl alcohol (TBA) | 1000 | 960 | | 1 | 96 | 70-130 | 02/24/2014 0819 |
| Toluene | 50 | 53 | | 1 | 106 | 70-130 | 02/24/2014 0819 |
| Xylenes (total) | 100 | 110 | | 1 | 111 | 70-130 | 02/24/2014 0819 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 98 | 70-130 |
| 1,2-Dichloroethane-d4 | | 98 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

## Volatile Organic Compounds by GC/MS - LCSD

**Sample ID:** PQ40916-003
**Batch:** 40916
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % RPD | % Rec Limit | % RPD Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 1000 | 950 | | 1 | 95 | 3.4 | 70-130 | 20 | 02/24/2014 0841 |
| tert-Amyl methyl ether (TAME) | 50 | 48 | | 1 | 96 | 4.3 | 70-130 | 20 | 02/24/2014 0841 |
| Benzene | 50 | 51 | | 1 | 102 | 3.6 | 70-130 | 20 | 02/24/2014 0841 |
| tert-Butyl formate (TBF) | 250 | 240 | | 1 | 98 | 2.6 | 70-130 | 20 | 02/24/2014 0841 |
| 1,2-Dichloroethane | 50 | 51 | | 1 | 101 | 1.3 | 70-130 | 20 | 02/24/2014 0841 |
| Diisopropyl ether (IPE) | 50 | 50 | | 1 | 99 | 1.1 | 70-130 | 20 | 02/24/2014 0841 |
| 3,3-Dimethyl-1-butanol | 1000 | 960 | | 1 | 96 | 3.9 | 70-130 | 20 | 02/24/2014 0841 |
| Ethanol | 5000 | 5300 | | 1 | 106 | 0.27 | 60-140 | 20 | 02/24/2014 0841 |
| Ethylbenzene | 50 | 53 | | 1 | 106 | 4.3 | 70-130 | 20 | 02/24/2014 0841 |
| Ethyl-tert-butyl ether (ETBE) | 50 | 47 | | 1 | 94 | 2.5 | 70-130 | 20 | 02/24/2014 0841 |
| Methyl tertiary butyl ether (MTBE) | 50 | 47 | | 1 | 95 | 1.9 | 70-130 | 20 | 02/24/2014 0841 |
| Naphthalene | 50 | 50 | | 1 | 99 | 12 | 70-130 | 20 | 02/24/2014 0841 |
| tert-butyl alcohol (TBA) | 1000 | 980 | | 1 | 98 | 1.3 | 70-130 | 20 | 02/24/2014 0841 |
| Toluene | 50 | 52 | | 1 | 103 | 2.5 | 70-130 | 20 | 02/24/2014 0841 |
| Xylenes (total) | 100 | 110 | | 1 | 107 | 3.9 | 70-130 | 20 | 02/24/2014 0841 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 98 | 70-130 |
| 1,2-Dichloroethane-d4 | | 96 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - MB

**Sample ID:** PQ41083-001
**Batch:** 41083
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Result | Q | Dil | PQL | MDL | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | ND | | 1 | 100 | 6.7 | ug/L | 02/25/2014 2207 |
| tert-Amyl methyl ether (TAME) | ND | | 1 | 10 | 0.20 | ug/L | 02/25/2014 2207 |
| Benzene | ND | | 1 | 5.0 | 0.20 | ug/L | 02/25/2014 2207 |
| tert-Butyl formate (TBF) | ND | | 1 | 100 | 1.0 | ug/L | 02/25/2014 2207 |
| 1,2-Dichloroethane | ND | | 1 | 5.0 | 0.30 | ug/L | 02/25/2014 2207 |
| Diisopropyl ether (IPE) | ND | | 1 | 10 | 0.40 | ug/L | 02/25/2014 2207 |
| 3,3-Dimethyl-1-butanol | ND | | 1 | 100 | 1.0 | ug/L | 02/25/2014 2207 |
| Ethanol | ND | | 1 | 1000 | 33 | ug/L | 02/25/2014 2207 |
| Ethylbenzene | ND | | 1 | 5.0 | 1.7 | ug/L | 02/25/2014 2207 |
| Ethyl-tert-butyl ether (ETBE) | ND | | 1 | 100 | 0.20 | ug/L | 02/25/2014 2207 |
| Methyl tertiary butyl ether (MTBE) | ND | | 1 | 5.0 | 0.40 | ug/L | 02/25/2014 2207 |
| Naphthalene | ND | | 1 | 5.0 | 1.7 | ug/L | 02/25/2014 2207 |
| tert-butyl alcohol (TBA) | ND | | 1 | 100 | 6.7 | ug/L | 02/25/2014 2207 |
| Toluene | ND | | 1 | 5.0 | 1.7 | ug/L | 02/25/2014 2207 |
| Xylenes (total) | ND | | 1 | 5.0 | 1.7 | ug/L | 02/25/2014 2207 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 97 | 70-130 |
| 1,2-Dichloroethane-d4 | | 95 | 70-130 |
| Toluene-d8 | | 101 | 70-130 |

## Volatile Organic Compounds by GC/MS - LCS

**Sample ID:** PQ41083-002
**Batch:** 41083
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 1000 | 840 | | 1 | 84 | 70-130 | 02/25/2014 2036 |
| tert-Amyl methyl ether (TAME) | 50 | 47 | | 1 | 94 | 70-130 | 02/25/2014 2036 |
| Benzene | 50 | 50 | | 1 | 100 | 70-130 | 02/25/2014 2036 |
| tert-Butyl formate (TBF) | 250 | 210 | | 1 | 85 | 70-130 | 02/25/2014 2036 |
| 1,2-Dichloroethane | 50 | 47 | | 1 | 95 | 70-130 | 02/25/2014 2036 |
| Diisopropyl ether (IPE) | 50 | 47 | | 1 | 93 | 70-130 | 02/25/2014 2036 |
| 3,3-Dimethyl-1-butanol | 1000 | 880 | | 1 | 88 | 70-130 | 02/25/2014 2036 |
| Ethanol | 5000 | 4200 | | 1 | 84 | 60-140 | 02/25/2014 2036 |
| Ethylbenzene | 50 | 53 | | 1 | 105 | 70-130 | 02/25/2014 2036 |
| Ethyl-tert-butyl ether (ETBE) | 50 | 44 | | 1 | 88 | 70-130 | 02/25/2014 2036 |
| Methyl tertiary butyl ether (MTBE) | 50 | 45 | | 1 | 90 | 70-130 | 02/25/2014 2036 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - LCS

**Sample ID:** PQ41083-002
**Batch:** 41083
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| Naphthalene | 50 | 50 | | 1 | 100 | 70-130 | 02/25/2014 2036 |
| tert-butyl alcohol (TBA) | 1000 | 800 | | 1 | 80 | 70-130 | 02/25/2014 2036 |
| Toluene | 50 | 51 | | 1 | 102 | 70-130 | 02/25/2014 2036 |
| Xylenes (total) | 100 | 110 | | 1 | 106 | 70-130 | 02/25/2014 2036 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 96 | 70-130 |
| 1,2-Dichloroethane-d4 | | 94 | 70-130 |
| Toluene-d8 | | 99 | 70-130 |

## Volatile Organic Compounds by GC/MS - LCSD

**Sample ID:** PQ41083-003
**Batch:** 41083
**Analytical Method:** 8260B

**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % RPD | % Rec Limit | % RPD Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 1000 | 830 | | 1 | 83 | 0.85 | 70-130 | 20 | 02/25/2014 2058 |
| tert-Amyl methyl ether (TAME) | 50 | 46 | | 1 | 92 | 1.4 | 70-130 | 20 | 02/25/2014 2058 |
| Benzene | 50 | 49 | | 1 | 99 | 1.1 | 70-130 | 20 | 02/25/2014 2058 |
| tert-Butyl formate (TBF) | 250 | 210 | | 1 | 84 | 1.6 | 70-130 | 20 | 02/25/2014 2058 |
| 1,2-Dichlorcethane | 50 | 48 | | 1 | 96 | 0.80 | 70-130 | 20 | 02/25/2014 2058 |
| Diisopropyl ether (IPE) | 50 | 46 | | 1 | 92 | 1.5 | 70-130 | 20 | 02/25/2014 2058 |
| 3,3-Dimethyl-1-butanol | 1000 | 860 | | 1 | 86 | 1.9 | 70-130 | 20 | 02/25/2014 2058 |
| Ethanol | 5000 | 4400 | | 1 | 87 | 3.9 | 60-140 | 20 | 02/25/2014 2058 |
| Ethylbenzene | 50 | 52 | | 1 | 104 | 0.74 | 70-130 | 20 | 02/25/2014 2058 |
| Ethyl-tert-butyl ether (ETBE) | 50 | 43 | | 1 | 87 | 1.9 | 70-130 | 20 | 02/25/2014 2058 |
| Methyl tertiary butyl ether (MTBE) | 50 | 44 | | 1 | 88 | 2.3 | 70-130 | 20 | 02/25/2014 2058 |
| Naphthalene | 50 | 48 | | 1 | 97 | 3.6 | 70-130 | 20 | 02/25/2014 2058 |
| tert-butyl alcohol (TBA) | 1000 | 840 | | 1 | 84 | 5.7 | 70-130 | 20 | 02/25/2014 2058 |
| Toluene | 50 | 50 | | 1 | 100 | 1.9 | 70-130 | 20 | 02/25/2014 2058 |
| Xylenes (total) | 100 | 100 | | 1 | 104 | 1.8 | 70-130 | 20 | 02/25/2014 2058 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 97 | 70-130 |
| 1,2-Dichloroethane-d4 | | 95 | 70-130 |
| Toluene-d8 | | 99 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## EDB & DBCP by Microextraction - MB

**Sample ID:** PQ40821-001 **Matrix:** Aqueous
**Batch:** 40821 **Prep Method:** 8011
**Analytical Method:** 8011 **Prep Date:** 02/21/2014 848

| Parameter | Result | Q | Dil | PQL | MDL | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ND | | 1 | 0.020 | 0.020 | ug/L | 02/21/2014 1804 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 112 | 57-137 |

## EDB & DBCP by Microextraction - LCS

**Sample ID:** PQ40821-002 **Matrix:** Aqueous
**Batch:** 40821 **Prep Method:** 8011
**Analytical Method:** 8011 **Prep Date:** 02/21/2014 848

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 0.25 | 0.34 | | 1 | 138 | 60-140 | 02/21/2014 1814 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 117 | 57-137 |

## EDB & DBCP by Microextraction - MS

**Sample ID:** PB20024-007MS **Matrix:** Aqueous
**Batch:** 40821 **Prep Method:** 8011
**Analytical Method:** 8011 **Prep Date:** 02/21/2014 848

| Parameter | Sample Amount (ug/L) | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ND | 0.24 | 0.32 | | 1 | 131 | 60-140 | 02/21/2014 2100 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 108 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## EDB & DBCP by Microextraction - MSD

**Sample ID:** PB20024-007MD
**Batch:** 40821
**Analytical Method:** 8011
**Matrix:** Aqueous
**Prep Method:** 8011
**Prep Date:** 02/21/2014 848

| Parameter | Sample Amount (ug/L) | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % RPD | % Rec Limit | % RPD Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ND | 0.24 | 0.32 | | 1 | 132 | 1.3 | 60-140 | 20 | 02/21/2014 2111 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 109 | 57-137 |

## EDB & DBCP by Microextraction - MB

**Sample ID:** PQ40822-001
**Batch:** 40822
**Analytical Method:** 8011
**Matrix:** Aqueous
**Prep Method:** 8011
**Prep Date:** 02/21/2014 848

| Parameter | Result | Q | Dil | PQL | MDL | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ND | | 1 | 0.020 | 0.020 | ug/L | 02/21/2014 2223 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 110 | 57-137 |

## EDB & DBCP by Microextraction - LCS

**Sample ID:** PQ40822-002
**Batch:** 40822
**Analytical Method:** 8011
**Matrix:** Aqueous
**Prep Method:** 8011
**Prep Date:** 02/21/2014 848

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 0.25 | 0.33 | | 1 | 131 | 60-140 | 02/21/2014 2234 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 109 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## EDB & DBCP by Microextraction - MS

**Sample ID:** PB20024-013MS
**Batch:** 40822
**Analytical Method:** 8011
**Matrix:** Aqueous
**Prep Method:** 8011
**Prep Date:** 02/21/2014 848

| Parameter | Sample Amount (ug/L) | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ND | 0.24 | 0.32 | | 1 | 130 | 60-140 | 02/21/2014 2254 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 109 | 57-137 |

## EDB & DBCP by Microextraction - MSD

**Sample ID:** PB20024-013MD
**Batch:** 40822
**Analytical Method:** 8011
**Matrix:** Aqueous
**Prep Method:** 8011
**Prep Date:** 02/21/2014 848

| Parameter | Sample Amount (ug/L) | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % RPD | % Rec Limit | % RPD Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ND | 0.25 | 0.32 | | 1 | 127 | 0.28 | 60-140 | 20 | 02/21/2014 2305 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 109 | 57-137 |

## EDB & DBCP by Microextraction - MB

**Sample ID:** PQ40856-001
**Batch:** 40856
**Analytical Method:** 8011
**Matrix:** Aqueous
**Prep Method:** 8011
**Prep Date:** 02/21/2014 1456

| Parameter | Result | Q | Dil | PQL | MDL | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ND | | 1 | 0.020 | 0.020 | ug/L | 02/22/2014 0826 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | N | 142 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## EDB & DBCP by Microextraction - LCS

**Sample ID:** PQ40856-002 **Matrix:** Aqueous
**Batch:** 40856 **Prep Method:** 8011
**Analytical Method:** 8011 **Prep Date:** 02/21/2014 1456

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 0.25 | 0.33 | | 1 | 133 | 60-140 | 02/22/2014 0837 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 107 | 57-137 |

## EDB & DBCP by Microextraction - MS

**Sample ID:** PB20024-043MS **Matrix:** Aqueous
**Batch:** 40856 **Prep Method:** 8011
**Analytical Method:** 8011 **Prep Date:** 02/21/2014 1456

| Parameter | Sample Amount (ug/L) | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ND | 0.25 | 0.32 | | 1 | 128 | 60-140 | 02/22/2014 1040 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachlorcethane | | 106 | 57-137 |

## EDB & DBCP by Microextraction - MSD

**Sample ID:** PB20024-043MD **Matrix:** Aqueous
**Batch:** 40856 **Prep Method:** 8011
**Analytical Method:** 8011 **Prep Date:** 02/21/2014 1456

| Parameter | Sample Amount (ug/L) | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % RPD | % Rec Limit | % RPD Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ND | 0.24 | 0.32 | | 1 | 131 | 0.82 | 60-140 | 20 | 02/22/2014 1051 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 111 | 57-137 |

POL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria

Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## EDB & DBCP by Microextraction - MB

**Sample ID:** PQ40857-001 **Matrix:** Aqueous
**Batch:** 40857 **Prep Method:** 8011
**Analytical Method:** 8011 **Prep Date:** 02/21/2014 1456

| Parameter | Result | Q | Dil | PQL | MDL | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ND | | 1 | 0.020 | 0.020 | ug/L | 02/22/2014 1245 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 108 | 57-137 |

## EDB & DBCP by Microextraction - LCS

**Sample ID:** PQ40857-002 **Matrix:** Aqueous
**Batch:** 40857 **Prep Method:** 8011
**Analytical Method:** 8011 **Prep Date:** 02/21/2014 1456

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 0.25 | 0.33 | | 1 | 134 | 60-140 | 02/22/2014 1255 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 110 | 57-137 |

## EDB & DBCP by Microextraction - MS

**Sample ID:** PB20024-056MS **Matrix:** Aqueous
**Batch:** 40857 **Prep Method:** 8011
**Analytical Method:** 8011 **Prep Date:** 02/21/2014 1456

| Parameter | Sample Amount (ug/L) | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ND | 0.24 | 0.32 | | 1 | 133 | 60-140 | 02/22/2014 1336 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 109 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## EDB & DBCP by Microextraction - MSD

Sample ID: PB20024-056MD
Batch: 40857
Analytical Method: 8011
Matrix: Aqueous
Prep Method: 8011
Prep Date: 02/21/2014 1456

| Parameter | Sample Amount (ug/L) | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % RPD | % Rec Limit | % RPD Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ND | 0.26 | 0.34 | | 1 | 131 | 4.2 | 60-140 | 20 | 02/22/2014 1347 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 108 | 57-137 |

## EDB & DBCP by Microextraction - MB

Sample ID: PQ40937-001
Batch: 40937
Analytical Method: 8011
Matrix: Aqueous
Prep Method: 8011
Prep Date: 02/24/2014 1210

| Parameter | Result | Q | Dil | PQL | MDL | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ND | | 1 | 0.020 | 0.020 | ug/L | 02/24/2014 1804 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 100 | 57-137 |

## EDB & DBCP by Microextraction - LCS

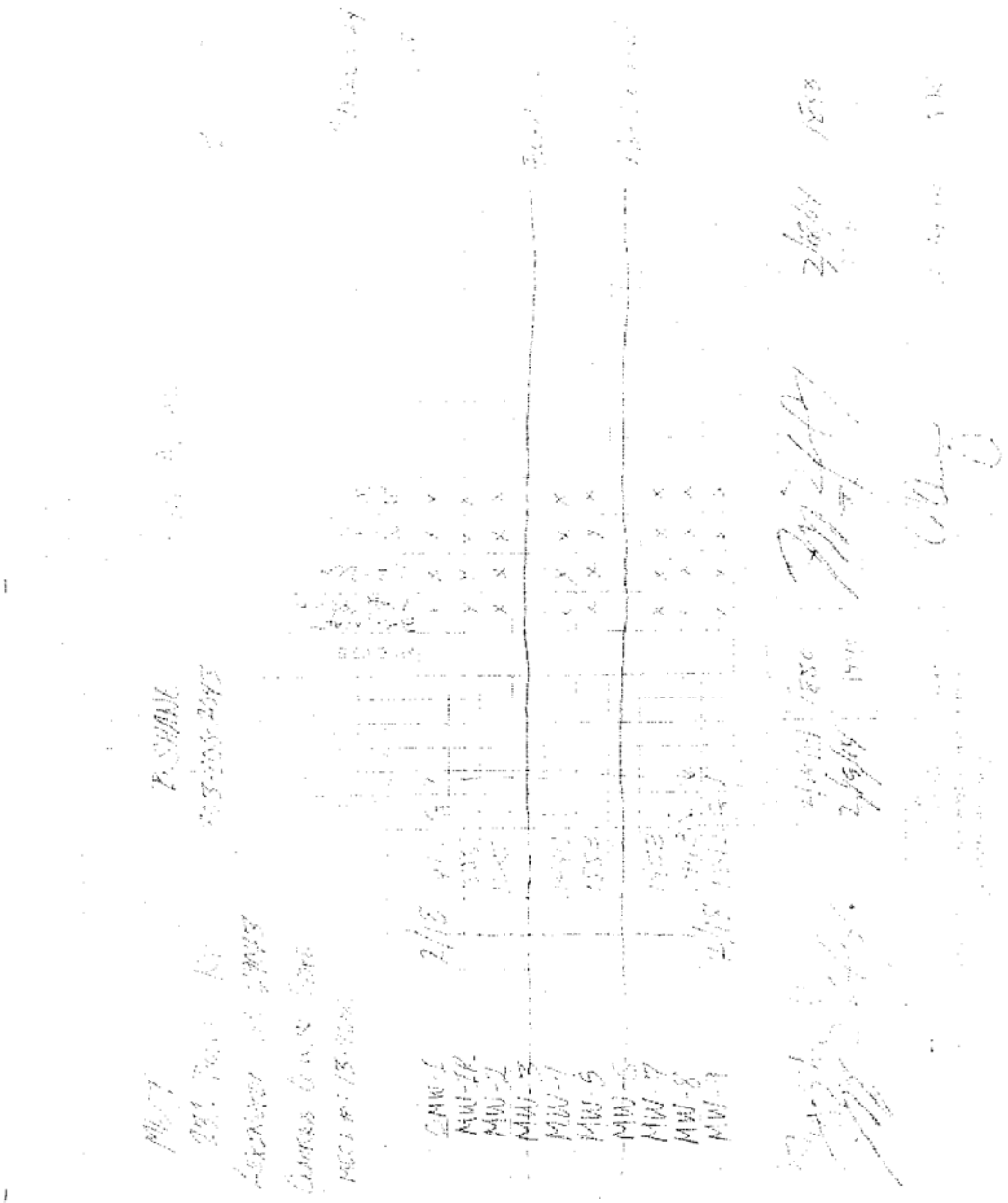
Sample ID: PQ40937-002
Batch: 40937
Analytical Method: 8011
Matrix: Aqueous
Prep Method: 8011
Prep Date: 02/24/2014 1210

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 0.25 | 0.31 | | 1 | 124 | 60-140 | 02/24/2014 1814 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 108 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**



Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

MACTEC
232 Johnny Dodd Rd.
Lexington SC 29073
Crawfords Country Store
MECZ # 18-1630

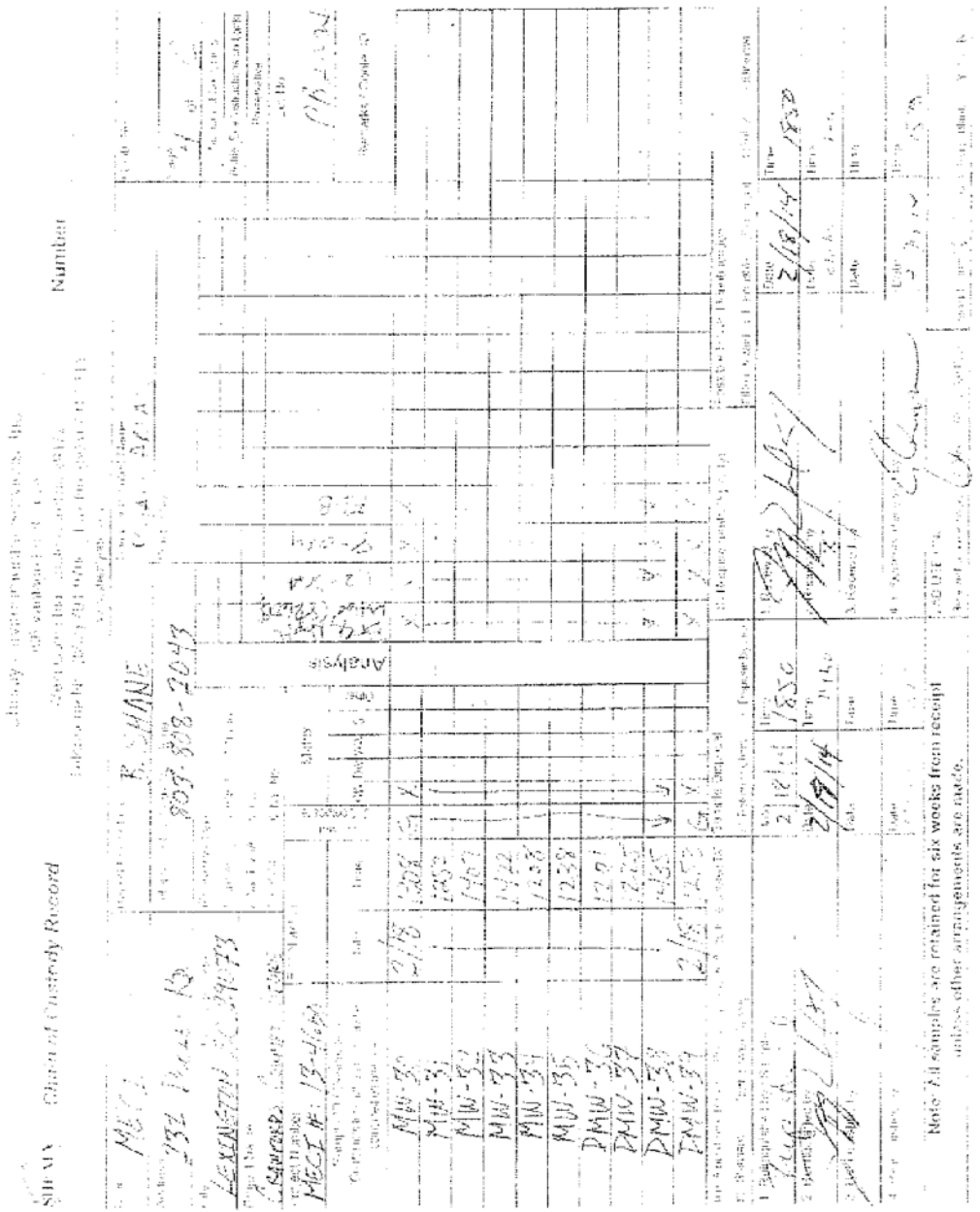
B. CHANG
803-808-2043

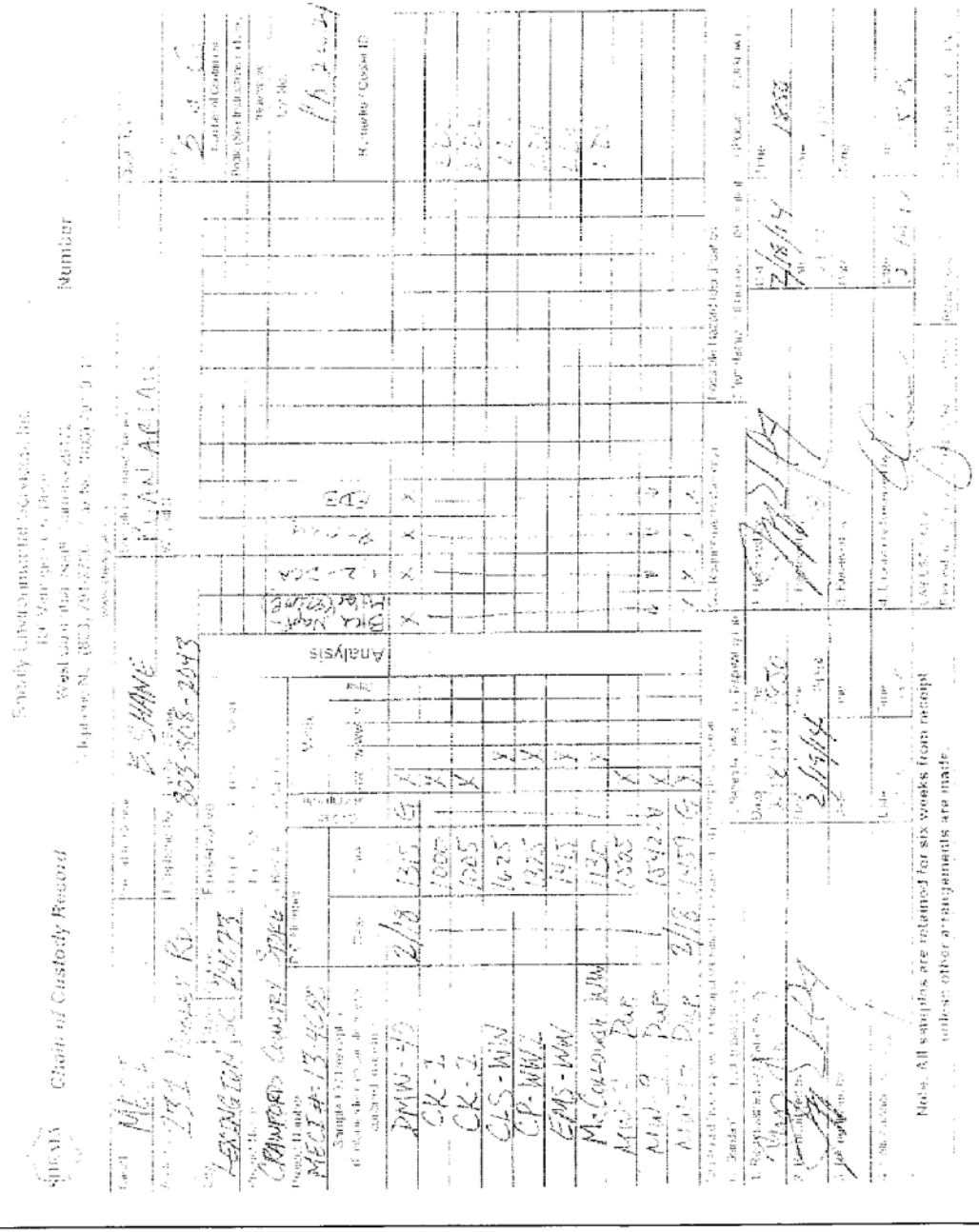
MW-20 2/13
MW-21
MW-22
MW-23
MW-24
MW-25
MW-26
MW-27
MW-28
MW-29 2/13

2/14/14 1450
2/14/14

2/14/14 1600

Shealy Environmental Services, Inc.
105 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com





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# SHEALY ENVIRONMENTAL SERVICES, INC.

SHEALY **Chain of Custody Record**

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina
Telephone No. (803) [illegible] Fax No. (803) [illegible]

Number [illegible]

Client: MECI
Report to Contact: B. SHANE
Sampler's Name: [illegible] ARIAH
Address: 231 TROLLEY RD.
Telephone No.: 803-808-2043
City / State / Zip Code: LEXINGTON SC 29073
Project Name: CRAWFORDS COUNTRY STORE
Project Number: MECI #: 17-4650
Page: [illegible]
Lot No.: PB 2 [illegible]

| Sample ID / Description | Date | Time | G/C | Matrix | Analysis 1 | Analysis 2 | Analysis 3 | EDB | Remarks / Cooler ID |
|---|---|---|---|---|---|---|---|---|---|
| FIELD BLANK | 2/18 | 1605 | G | X (Other) | X | X | X | X | |
| TRIP BLANK | \| | 1[illegible] | \| | X (Other) | X | X | X | | |
| Cafe - Well | | [illegible] | | X | X | X | X | X | [illegible] |
| Old Service Station - Well | | 1540 | | X | \| | \| | \| | \| | [illegible] |
| Scott - Well | | 1445 | | X | \| | \| | \| | \| | [illegible] |
| Farm - Well | | 1511 | | X | \| | \| | \| | \| | [illegible] |
| Main - Well | V | 1520 | V | X | V | V | V | V | [illegible] |
| DRIVER - Well | 2/18 | 1530 | G | X | X | X | X | X | [illegible] |
| ~~Gin House - Well~~ | | | | | | | | | Not Sampled |

Turn around Time Required / Sample Disposal / QC Requirements / Possible Hazard Identification

Note: All samples are retained for six weeks from receipt unless other arrangements are made.

| Relinquished by | Date | Time | Received by | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished by Sampler: [signature] | 2/18/14 | 1850 | 1. Received by: [signature] | 2/18/14 | 1850 |
| 2. Relinquished by: [signature] | 2/19/14 | [illegible] | 2. Received by: [signature] | [illegible] | [illegible] |
| 3. Relinquished by: | | | 3. Received by: | | |
| 4. Relinquished by: | | | 4. Laboratory Received by: [signature] | 2/19/14 | [illegible] |

# SHEALY ENVIRONMENTAL SERVICES, INC.



## Sample Receipt Checklist (SRC)

Client: ____ Cooler Inspected by/date: ECC / 2/20/14 Lot #: PB20___

Means of receipt: ☐ SESI ☐ Client ☐ UPS ☐ FedEx ☐ Airborne Exp ☐ Other

| | | | |
|---|---|---|---|
| Yes ☐ | No ☐ | | 1. Were custody seals present on the cooler? |
| Yes ☐ | No ☐ | | 2. If custody seals were present, were they intact and unbroken? |

Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt:
___ / ___ °C ___ / ___ °C ___ / ___ °C ___ / ___ °C

Method: ☐ Temperature Blank ☐ Against Bottles IR Gun ID: #3 IR Gun Correction Factor: +0.1°C
Method of coolant: ☐ Wet Ice ☐ Blue Ice ☐ Dry Ice ☐ None

If response is No (or Yes for 14, 15, 16), an explanation/resolution must be provided.

| | | | |
|---|---|---|---|
| Yes ☐ | No ☐ | NA ☐ | 3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other: ____. (For coolers received via commercial courier, PMs are to be notified immediately.) |
| Yes ☐ | No ☐ | NA ☐ | 4. Is the commercial courier's packing slip attached to this form? |
| Yes ☐ | No ☐ | | 5. Were proper custody procedures (relinquished/received) followed? |
| Yes ☐ | No ☐ | NA ☐ | 5a Were samples relinquished by client to commercial courier? |
| Yes ☐ | No ☐ | | 6. Were sample IDs listed? |
| Yes ☐ | No ☐ | | 7. Was collection date & time listed? |
| Yes ☐ | No ☐ | | 8. Were tests to be performed listed on the COC? |
| Yes ☐ | No ☐ | | 9. Did all samples arrive in the proper containers for each test? |
| Yes ☐ | No ☐ | | 10. Did all container label information (ID, date, time) agree with COC? |
| Yes ☐ | No ☐ | | 11. Did all containers arrive in good condition (unbroken, lids on, etc.)? |
| Yes ☐ | No ☐ | | 12. Was adequate sample volume available? |
| Yes ☐ | No ☐ | | 13. Were all samples received within ½ the holding time or 48 hours, whichever comes first? |
| Yes ☐ | No ☐ | | 14. Were any samples containers missing? |
| Yes ☐ | No ☐ | | 15. Were there any excess samples not listed on COC? |
| Yes ☐ | No ☐ | NA ☐ | 16. Were bubbles present >"pea-size" (¼" or 6mm in diameter) in any VOA vials? |
| Yes ☐ | No ☐ | NA ☐ | 17. Were all metals/O&G/HEM/nutrient samples received at a pH of <2? |
| Yes ☐ | No ☐ | NA ☐ | 18. Were all cyanide and/or sulfide samples received at a pH >12? |
| Yes ☐ | No ☐ | NA ☐ | 19. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine? |
| Yes ☐ | No ☐ | NA ☐ | 20. Were collection temperatures documented on the COC for NC samples? |
| Yes ☐ | No ☐ | NA ☐ | 21. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc...) correctly transcribed from the COC into the comment section in LIMS? |

**Sample Preservation** (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) ____ were received incorrectly preserved and were adjusted accordingly in sample receiving with ____ ($H_2SO_4$, $HNO_3$, HCl, NaOH) with the SR # (number)

Sample(s) ___ were received with bubbles >6 mm in diameter.

Sample(s) ____ were received with TRC >0.2 mg/L for NH3/TKN/cyanide/phenol ____

Sample labels verified by: ____ Date: 2/20/14

**Corrective Action taken, if necessary:**

Was client notified: Yes ☐ No ☐ Did client respond: Yes ☐ No ☐

SESI employee: ____ Date of response: ____

Comments: ____

**APPENDIX C:**

**TAX MAP**

**This appendix is not applicable to the scope of services presented in the subject report, however this page has been included in order to conform to the SCDHEC UST Management Division Programmatic QAPP and provide report continuity**

**APPENDIX D:**

**SOIL BORING/FIELD SCREENING LOGS & 1903 FORMS**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-1

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 14.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 14.0 | 14.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/13/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-1

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 14.0 ft. Date Started: 11/13/2013 Date Completed: 11/13/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. NOTE: MULTIPLE SCREENS
____ ft. and ____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 14.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker CERT. NO.: 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-2

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 15.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 15.0 | 15.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/13/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-2

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 15.0 ft. Date Started: 11/13/2013 Date Completed: 11/13/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. NOTE: MULTIPLE SCREENS
____ ft. and ____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 15.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) **COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-3

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 14.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 14.0 | 14.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/13/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-3

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 14.0 ft. Date Started: 11/13/2013 Date Completed: 11/13/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. NOTE: MULTIPLE SCREENS
____ ft. and ____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 14.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker CERT. NO.: 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-4

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 12.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 12.0 | 12.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/13/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** GPW-4 | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 11/13/2013
12.0 ft. Date Completed: 11/13/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 12.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-5

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 50.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 50.0 | 50.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/13/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-5

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 50.0 ft. Date Started: 11/13/2013 Date Completed: 11/13/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 50.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker CERT. NO.: 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-6

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 45.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 45.0 | 45.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/13/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-6

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 45.0 ft. Date Started: 11/13/2013 Date Completed: 11/13/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. NOTE: MULTIPLE SCREENS
____ ft. and ____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 45.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker CERT. NO.: 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-7

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 24.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 24.0 | 24.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/13/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** GPW-7 | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 24.0 ft. Date Started: 11/13/2013 Date Completed: 11/13/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 24.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) **COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

D H E C — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-8

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 24.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 24.0 | 24.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/13/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-8

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 24.0 ft. Date Started: 11/13/2013 Date Completed: 11/13/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. **NOTE: MULTIPLE SCREENS**
____ ft. and ____ ft. **USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 24.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ (Well Driller) Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004)

COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-9

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 24.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 24.0 | 24.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/13/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-9

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 24.0 ft. Date Started: 11/13/2013 Date Completed: 11/13/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 24.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-10

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 24.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 24.0 | 24.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/13/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** GPW-10 | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 24.0 ft. Date Started: 11/13/2013 Date Completed: 11/13/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 24.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-11

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 27.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 27.0 | 27.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/13/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-11

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 27.0 ft. Date Started: 11/13/2013 Date Completed: 11/13/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 27.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: ____ (Well Driller) Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-12

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 27.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 27.0 | 27.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/13/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-12

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 27.0 ft. Date Started: 11/13/2013 Date Completed: 11/13/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 27.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: ____ Date: 3/10/2014
Well Driller
If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-13

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 28.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 28.0 | 28.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/13/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-13

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 28.0 ft. Date Started: 11/13/2013 Date Completed: 11/13/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 28.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker CERT. NO.: 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ (Well Driller) Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C

PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-14

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 28.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 28.0 | 28.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/14/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-14

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 28.0 ft. Date Started: 11/14/2013 Date Completed: 11/14/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above/Below
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft. NOTE: MULTIPLE SCREENS
_____ ft. and _____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 28.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker CERT. NO.: 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-15

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 15.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 15.0 | 15.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/14/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** GPW-15 | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 15.0 ft. Date Started: 11/14/2013 Date Completed: 11/14/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 15.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker CERT. NO.: 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-16

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 14.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 14.0 | 14.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/14/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-16

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 11/14/2013
14.0 ft. Date Completed: 11/14/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. NOTE: MULTIPLE SCREENS
____ ft. and ____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 14.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-17

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 12.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 12.0 | 12.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/14/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-17

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 11/14/2013
12.0 ft. Date Completed: 11/14/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft. **NOTE: MULTIPLE SCREENS**
_____ ft. and _____ ft. **USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐No Bacterial Analysis ☐ Yes ☐ No
Please enclose tab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 12.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004)

**COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-18

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 12.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 12.0 | 12.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/14/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-18

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 12.0 ft. Date Started: 11/14/2013 Date Completed: 11/14/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 12.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: _____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-19

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 14.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 14.0 | 14.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/14/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-19

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 14.0 ft. Date Started: 11/14/2013 Date Completed: 11/14/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 14.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-20

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 27.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 27.0 | 27.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/14/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-20

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 27.0 ft. Date Started: 11/14/2013 Date Completed: 11/14/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 27.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) **COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-21

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 12.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 12.0 | 12.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/14/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-21

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 12.0 ft. Date Started: 11/14/2013 Date Completed: 11/14/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. NOTE: MULTIPLE SCREENS
____ ft. and ____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 12.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-22

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 12.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 12.0 | 12.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/14/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-22

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 12.0 ft. Date Started: 11/14/2013 Date Completed: 11/14/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above/Below
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐No Bacterial Analysis ☐ Yes ☐No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 12.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: _____ Date: 3/10/2014
Well Driller
If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-23

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 28.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 28.0 | 28.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/14/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-23

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 28.0 ft. Date Started: 11/14/2013 Date Completed: 11/14/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. NOTE: MULTIPLE SCREENS
____ ft. and ____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 28.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: ____ (Well Driller) Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-24

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 24.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 24.0 | 24.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/14/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** GPW-24 | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 24.0 ft. Date Started: 11/14/2013 Date Completed: 11/14/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. NOTE: MULTIPLE SCREENS
____ ft. and ____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 24.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: ____ (Well Driller) Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-25

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 14.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 14.0 | 14.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/14/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-25

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 14.0 ft. Date Started: 11/14/2013 Date Completed: 11/14/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 14.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ (Well Driller) Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-26

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 12.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 12.0 | 12.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 11/14/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-26

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 11/14/2013
12.0 ft. Date Completed: 11/14/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft. **NOTE: MULTIPLE SCREENS**
_____ ft. and _____ ft. **USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 12.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe_____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-27

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 25.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 25.0 | 25.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/3/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** GPW-27 | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 25.0 ft. Date Started: 12/3/2013 Date Completed: 12/3/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. NOTE: MULTIPLE SCREENS
____ ft. and ____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 25.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) **COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-28

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 43.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 43.0 | 43.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/3/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-28

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 43.0 ft. Date Started: 12/3/2013 Date Completed: 12/3/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. NOTE: MULTIPLE SCREENS
____ ft. and ____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 43.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-29

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 30.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 30.0 | 30.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/3/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-29

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 30.0 ft. Date Started: 12/3/2013 Date Completed: 12/3/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 30.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) **COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-30

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 22.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 22.0 | 22.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/3/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-30

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 22.0 ft. Date Started: 12/3/2013 Date Completed: 12/3/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. NOTE: MULTIPLE SCREENS
____ ft. and ____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 22.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker CERT. NO.: 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-31

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 16.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 16.0 | 16.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/3/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-31

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 16.0 ft. Date Started: 12/3/2013 Date Completed: 12/3/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.:
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
in. to ft. depth
in. to ft. depth
Height: Above/Below
Surface ft.
Weight lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Diam.:
Slot/Gauge: Length:
Set Between: ft. and ft.
ft. and ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ft. to ft.
Effective size Uniformity Coefficient

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other
Depth: From 0.0 ft. to 16.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ft. direction
Type
Well Disinfected ☐ Yes ☐ No Type: Amount:

**18. PUMP:** Date installed: Not installed ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Well Driller Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-32

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 25.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 25.0 | 25.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/3/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-32

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 25.0 ft. Date Started: 12/3/2013 Date Completed: 12/3/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 25.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: ____ Date: 3/10/2014
Well Driller
If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-33

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 22.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 22.0 | 22.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/3/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-33

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 22.0 ft. Date Started: 12/3/2013 Date Completed: 12/3/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 22.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: ____ (Well Driller) Date: 3/10/2014
If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-34

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 15.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 15.0 | 15.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/3/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-34

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 15.0 ft. Date Started: 12/3/2013 Date Completed: 12/3/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. NOTE: MULTIPLE SCREENS
____ ft. and ____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 15.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

D H E C — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-35

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 26.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 26.0 | 26.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/3/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-35

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 26.0 ft. Date Started: 12/3/2013 Date Completed: 12/3/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 26.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ (Well Driller) Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004)

COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-36

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 38.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 38.0 | 38.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/3/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** GPW-36 | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 38.0 ft. Date Started: 12/3/2013 Date Completed: 12/3/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 38.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C

PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-37

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 19.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 19.0 | 19.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/3/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-37

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 19.0 ft. Date Started: 12/3/2013 Date Completed: 12/3/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 19.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date Installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ (Well Driller) Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004)

COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-38

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 24.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 24.0 | 24.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/3/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-38

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 24.0 ft. Date Started: 12/3/2013 Date Completed: 12/3/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 24.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:



COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-39

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 49.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 49.0 | 49.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/4/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-39

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 49.0 ft. Date Started: 12/4/2013 Date Completed: 12/4/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. NOTE: MULTIPLE SCREENS
____ ft. and ____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 49.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-40

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 25.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 25.0 | 25.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/4/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-40

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 25.0 ft. Date Started: 12/4/2013 Date Completed: 12/4/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. NOTE: MULTIPLE SCREENS
____ ft. and ____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 25.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ (Well Driller) Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004)

COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-41

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 26.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 26.0 | 26.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/4/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-41

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 26.0 ft. Date Started: 12/4/2013 Date Completed: 12/4/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. **NOTE: MULTIPLE SCREENS**
____ ft. and ____ ft. **USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 26.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004)

**COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-42

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 46.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 46.0 | 46.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/4/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-42

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 46.0 ft. Date Started: 12/4/2013 Date Completed: 12/4/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. **NOTE: MULTIPLE SCREENS**
____ ft. and ____ ft. **USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 46.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) **COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-43

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 26.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 26.0 | 26.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/4/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-43

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 26.0 ft. Date Started: 12/4/2013 Date Completed: 12/4/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. NOTE: MULTIPLE SCREENS
____ ft. and ____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 26.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: ____ (Well Driller) Date: 3/10/2014
If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-44

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 9.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 9.0 | 9.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/4/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-44

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 9.0 ft. Date Started: 12/4/2013 Date Completed: 12/4/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. **NOTE: MULTIPLE SCREENS**
____ ft. and ____ ft. **USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 9.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-45

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 9.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 9.0 | 9.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/4/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** GPW-45 | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 9.0 ft. Date Started: 12/4/2013 Date Completed: 12/4/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. **NOTE: MULTIPLE SCREENS**
____ ft. and ____ ft. **USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 9.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-46

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 33.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 33.0 | 33.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/4/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** GPW-46 | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 33.0 ft. Date Started: 12/4/2013 Date Completed: 12/4/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft. NOTE: MULTIPLE SCREENS
____ ft. and ____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 33.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ (Well Driller) Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-47

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 9.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 9.0 | 9.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/4/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** GPW-47 | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 9.0 ft. Date Started: 12/4/2013 Date Completed: 12/4/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 9.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ (Well Driller) Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

OHEC 1903 (03/2004)

COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-48

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 25.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 25.0 | 25.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/4/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** GPW-48 | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 12/4/2013
25.0 ft. Date Completed: 12/4/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 25.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-49

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 25.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 25.0 | 25.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/4/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:** GPW-49

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 25.0 ft. Date Started: 12/4/2013 Date Completed: 12/4/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 25.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker CERT. NO.: 02042
Address: (Print) Level: A B C ✓ D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-50

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 25.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 25.0 | 25.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/4/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
GPW-50

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 12/4/2013
25.0 ft. Date Completed: 12/4/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: _____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
_____ in. to _____ ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** _____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐No Bacterial Analysis ☐ Yes ☐No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 25.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-2544 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** GPW-51

**4. ABANDONMENT:** ☑ Yes ☐ No
Give Details Below
Grouted Depth: from 0.0 ft. to 25.0 ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| DIRECT PUSH WATER SAMPLE | | |
| (NO SOIL TAKEN) | 25.0 | 25.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Temporary Boring Abandoned by | | |
| William Walker Environmental | | |
| via tremie pipe with Portland- | | |
| Bentonite Cement Slurry on | | |
| 12/4/2013. | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** GPW-51 | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 25.0 ft. Date Started: 12/4/2013 Date Completed: 12/4/2013

**10. CASING:** ☐ Threaded ☐ Welded
Diam.: ____
Type: ☐ PVC ☐ Galvanized ☐ Steel ☐ Other
____ in. to ____ ft. depth
____ in. to ____ ft. depth
Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: ____ Diam.: ____
Slot/Gauge: ____ Length: ____
Set Between: ____ ft. and ____ ft.
____ ft. and ____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** ____ ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: ____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☐ Yes ☐ No
Installed from ____ ft. to ____ ft.
Effective size ____ Uniformity Coefficient ____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other ____
Depth: From 0.0 ft. to 25.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type ____
Well Disinfected ☐ Yes ☐ No Type: ____ Amount: ____

**18. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** William Walker **CERT. NO.:** 02042
Address: (Print) Level: A B C D (circle one)
1317 Hummingbird Drive
West Columbia, South Carolina 29169
Telephone No.: 803-351-7936 Fax No.:

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

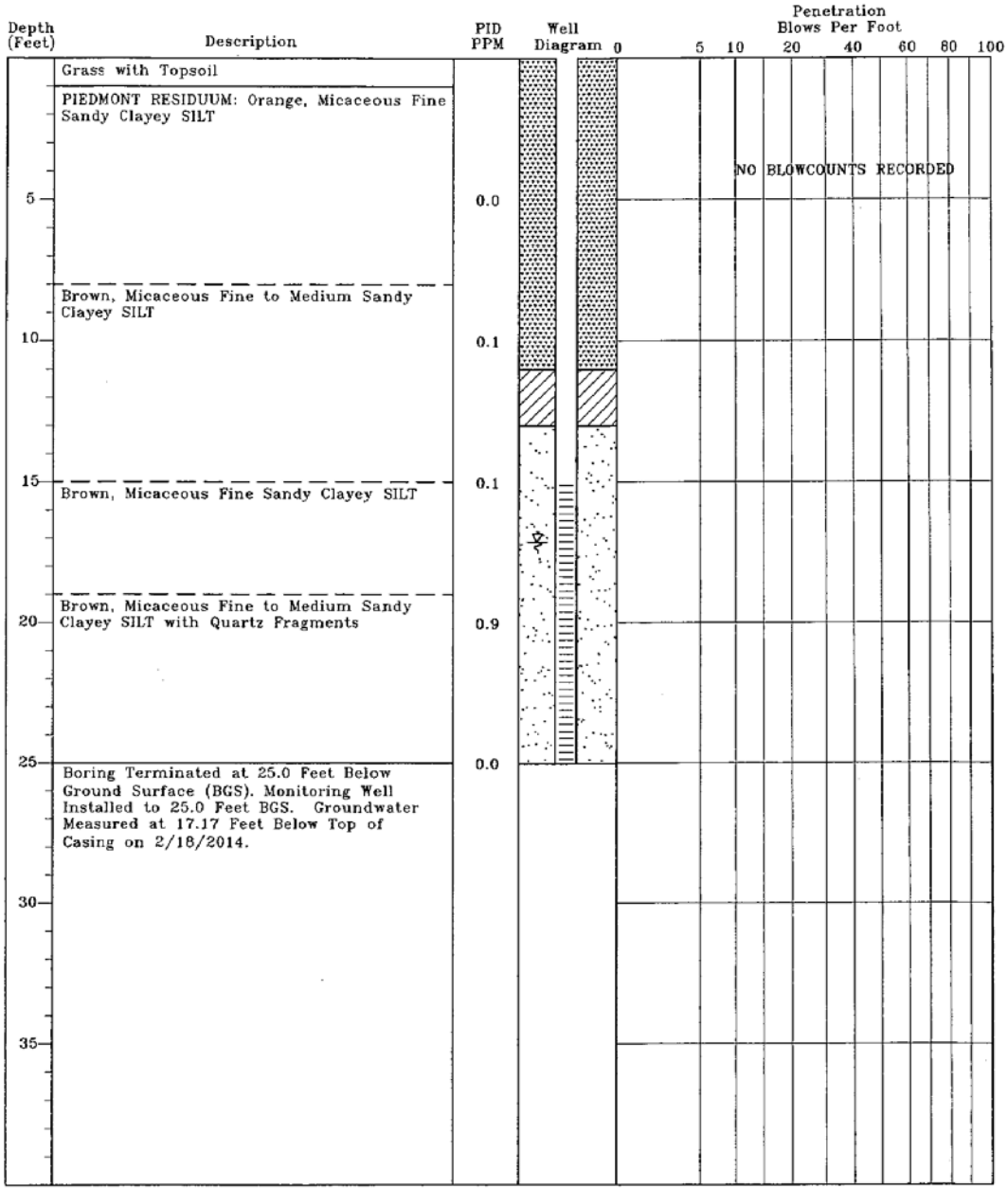
Signed: ____ Date: 3/10/2014
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

**APPENDIX E:**

**WELL COMPLETION LOGS & 1903 FORMS**



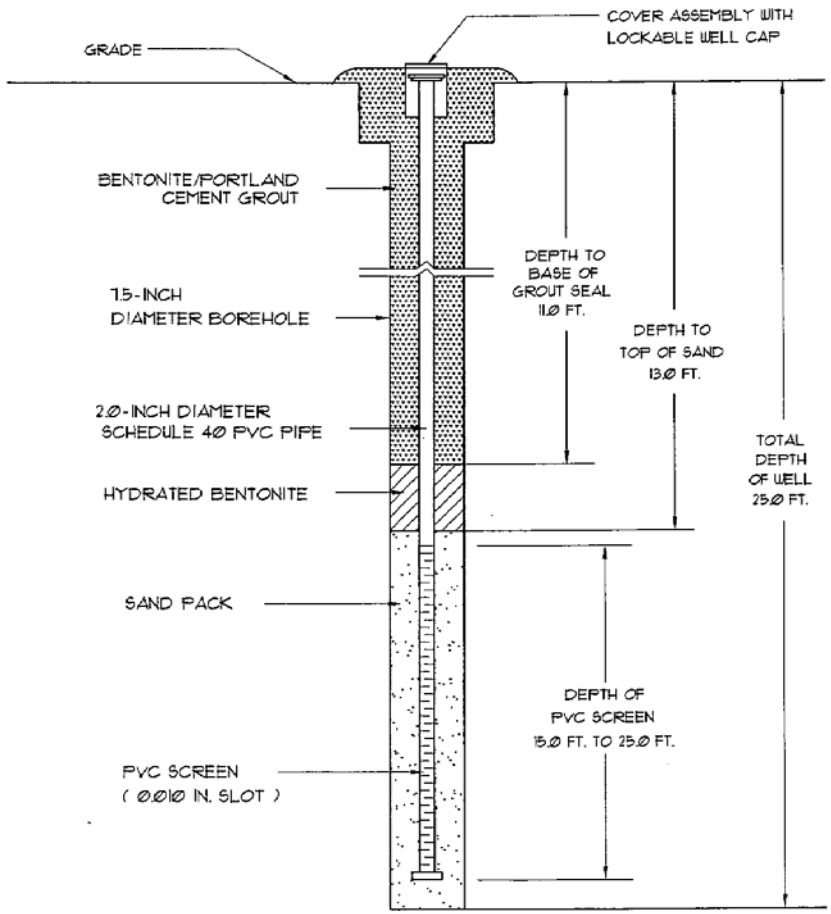

TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

| | |
|---|---|
| Boring Number: | MW-12R (12335) |
| Date Drilled: | 01/27/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Arlail |


Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

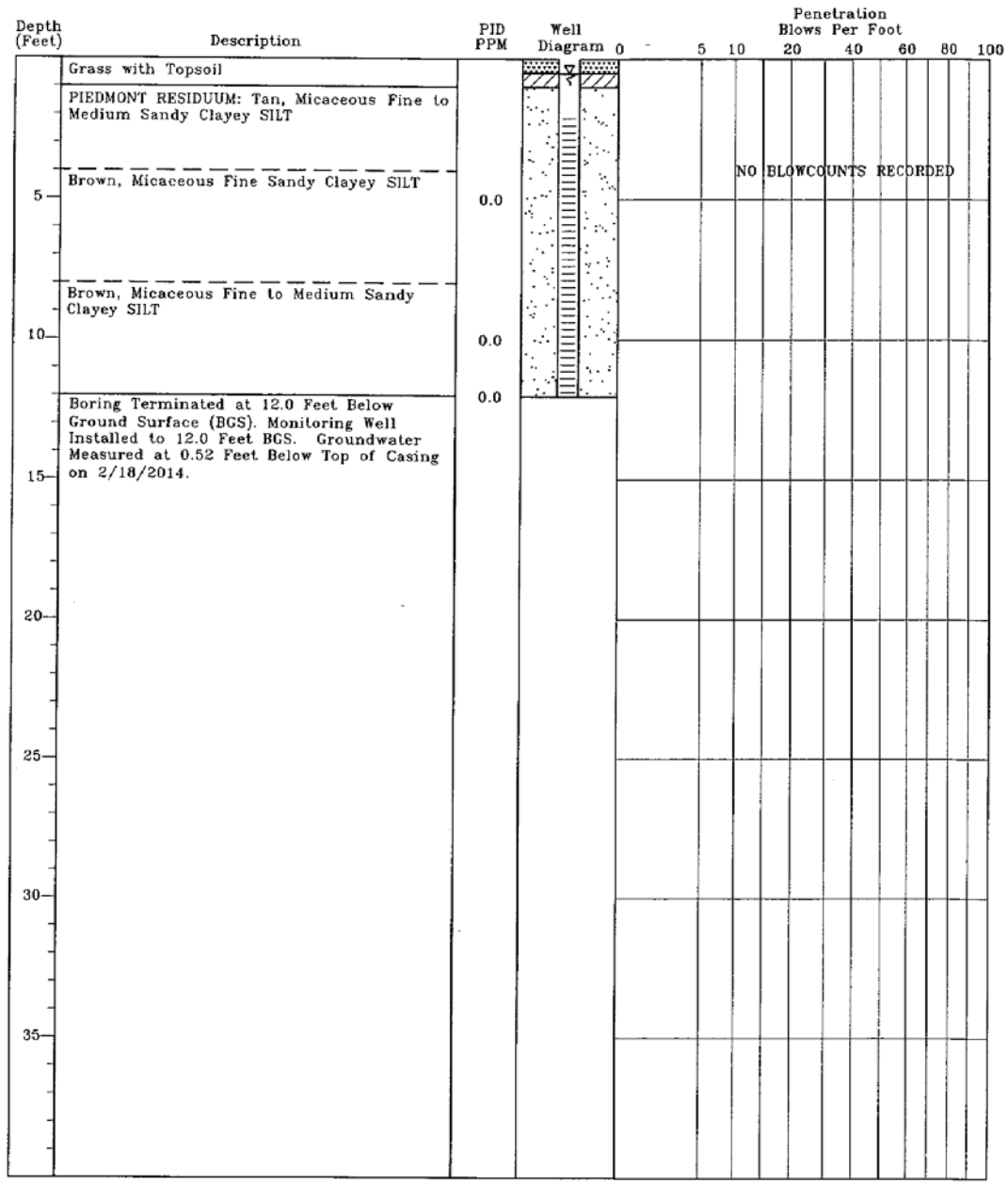
# MONITORING WELL INSTALLATION RECORD

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650




| | |
|---|---|
| Well Number: | MW-12R (12335) |
| Date Drilled: | 01/27/2014 |
| Drilled By: | Enviornmental Drilling & Probing Services |
| Driller: D. Brown | S.C. I.D.#: B 02053 |
| Logged By: | R. Arlail |


Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048



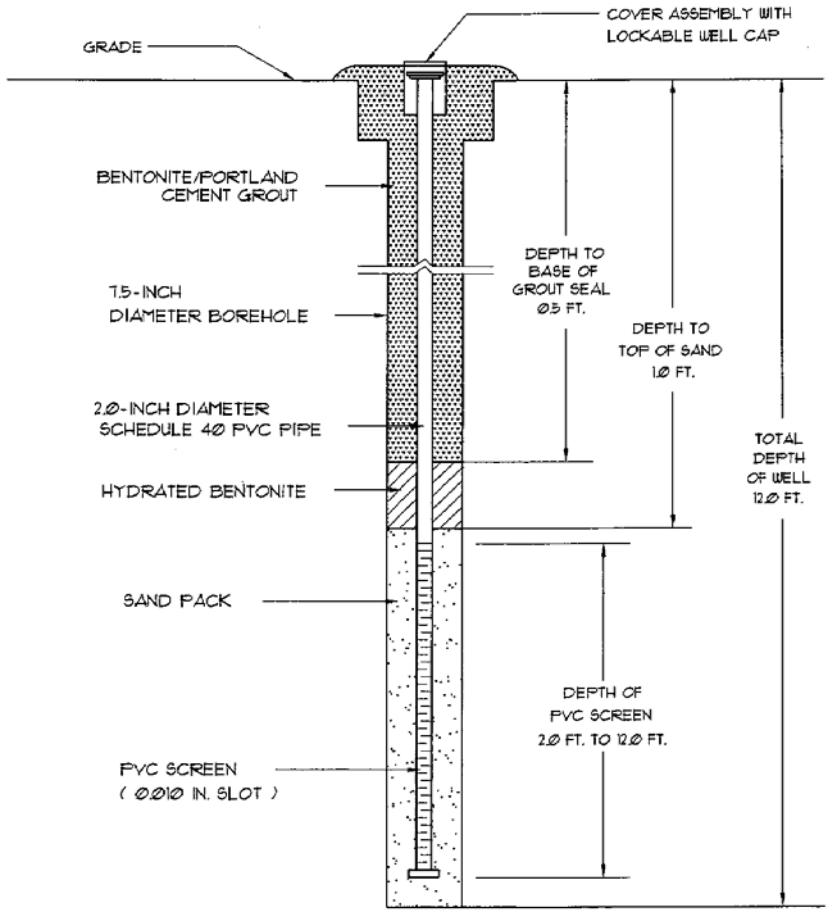

TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

| | |
|---|---|
| Boring Number: | MW-24 (12335) |
| Date Drilled: | 01/26/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Ariail |

Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803)808-2043 fax: 808-1048

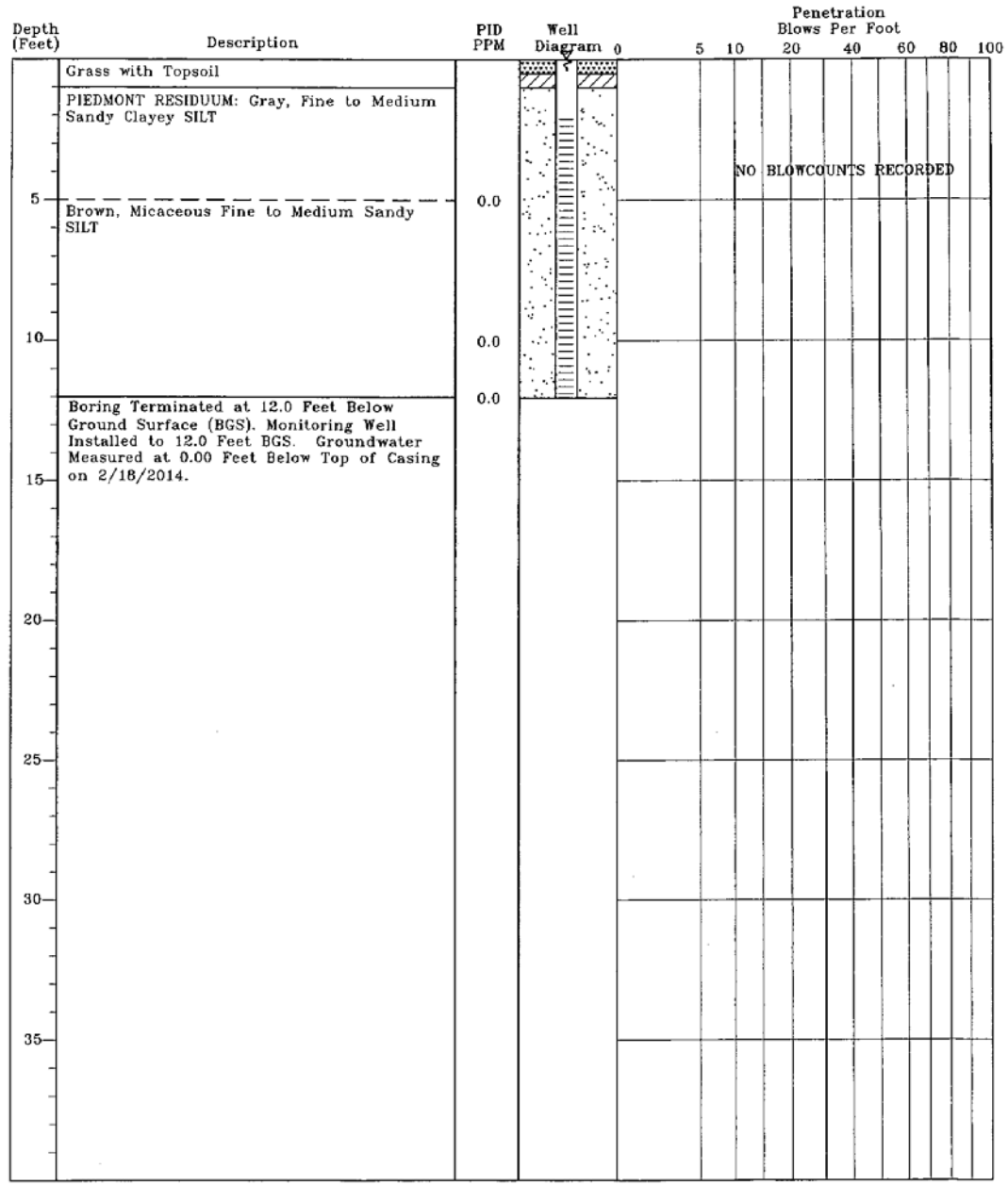
# MONITORING WELL INSTALLATION RECORD

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650




| | |
|---|---|
| Well Number: | MW-24 (12335) |
| Date Drilled: | 01/26/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Driller: D. Brown | S.C. I.D.#: B 02053 |
| Logged By: | R. Arlail |


Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048



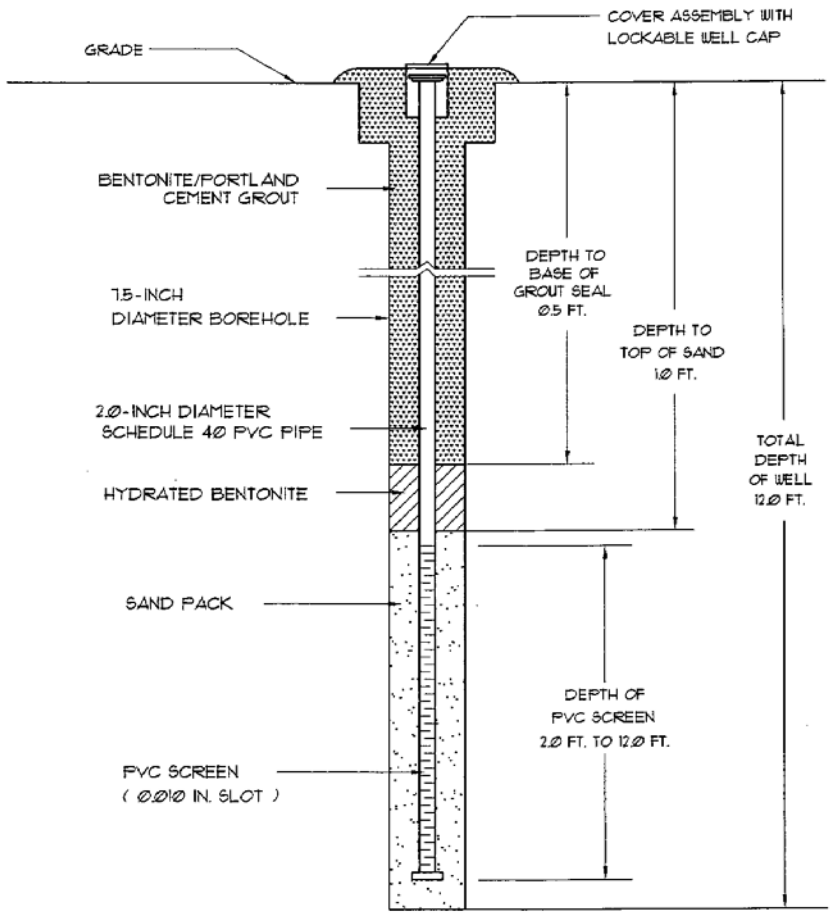

TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

| | |
|---|---|
| Boring Number: | MW-25 (12335) |
| Date Drilled: | 01/26/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Ariail |


Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

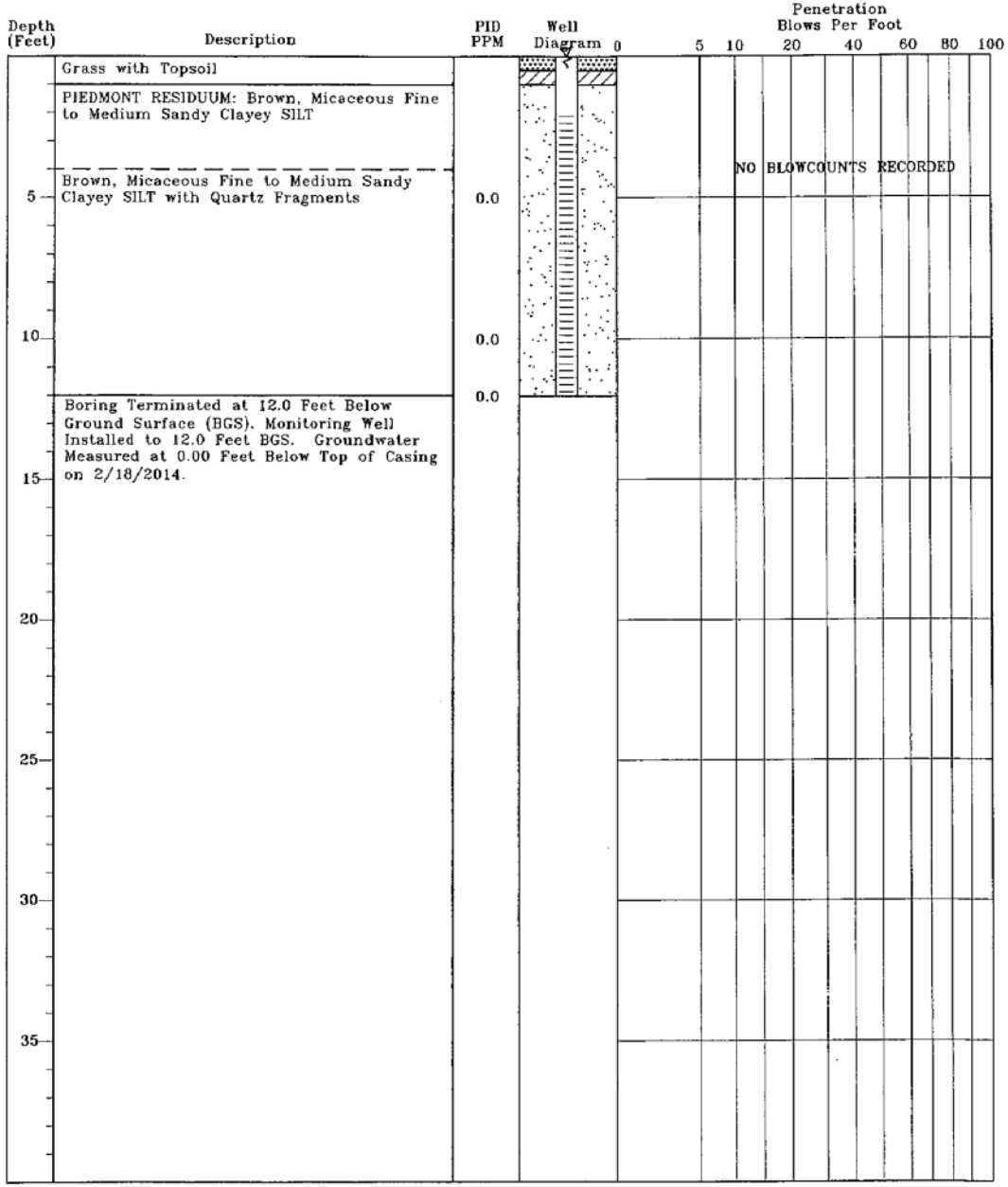
# MONITORING WELL INSTALLATION RECORD

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650




| | |
|---|---|
| Well Number: | MW-25 (12335) |
| Date Drilled: | 01/26/2014 |
| Drilled By: | Enviornmental Drilling & Probing Services |
| Driller: D. Brown | S.C. I.D.#: B 02053 |
| Logged By: | R. Arlail |


Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048



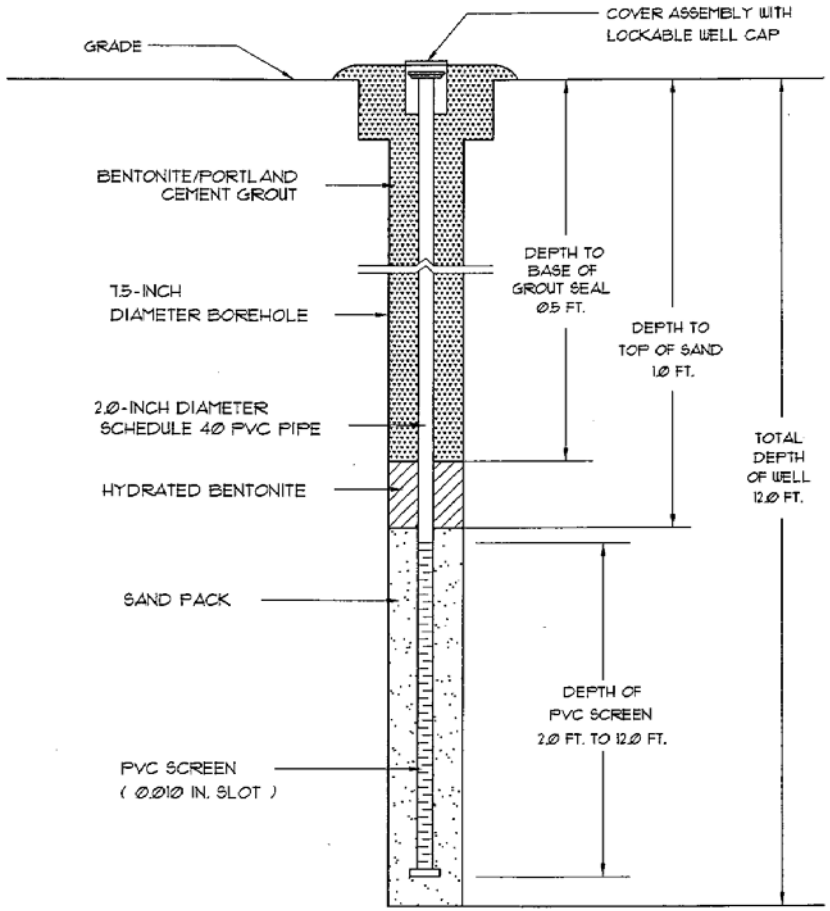

TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

| | |
|---|---|
| Boring Number: | MW-26 (12335) |
| Date Drilled: | 01/26/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Ariail |


Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

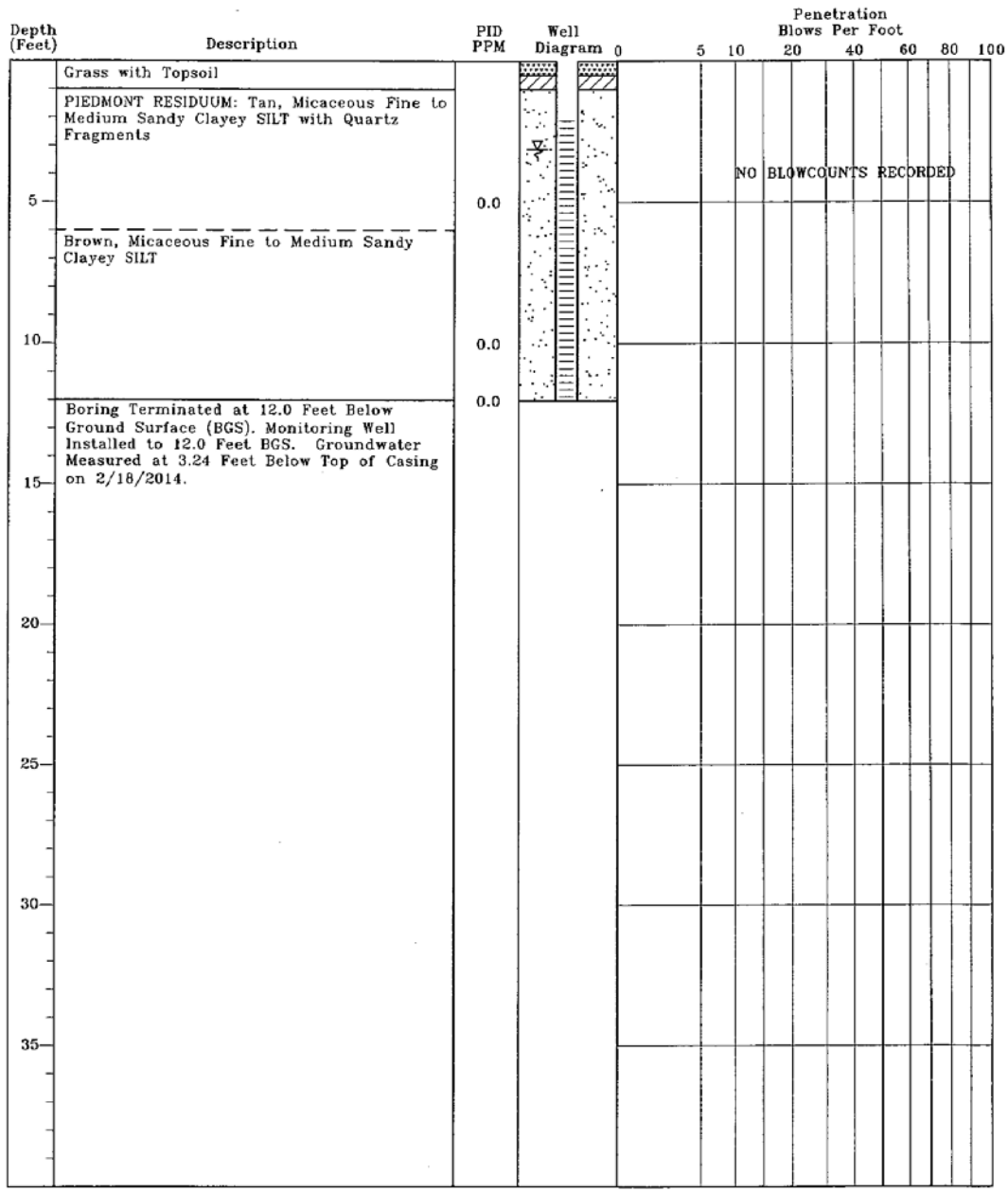
# MONITORING WELL INSTALLATION RECORD

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650




| | |
|---|---|
| Well Number: | MW-26 (12335) |
| Date Drilled: | 01/26/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Driller: D. Brown | S.C. I.D.#: B 02053 |
| Logged By: | R. Arlail |


Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048



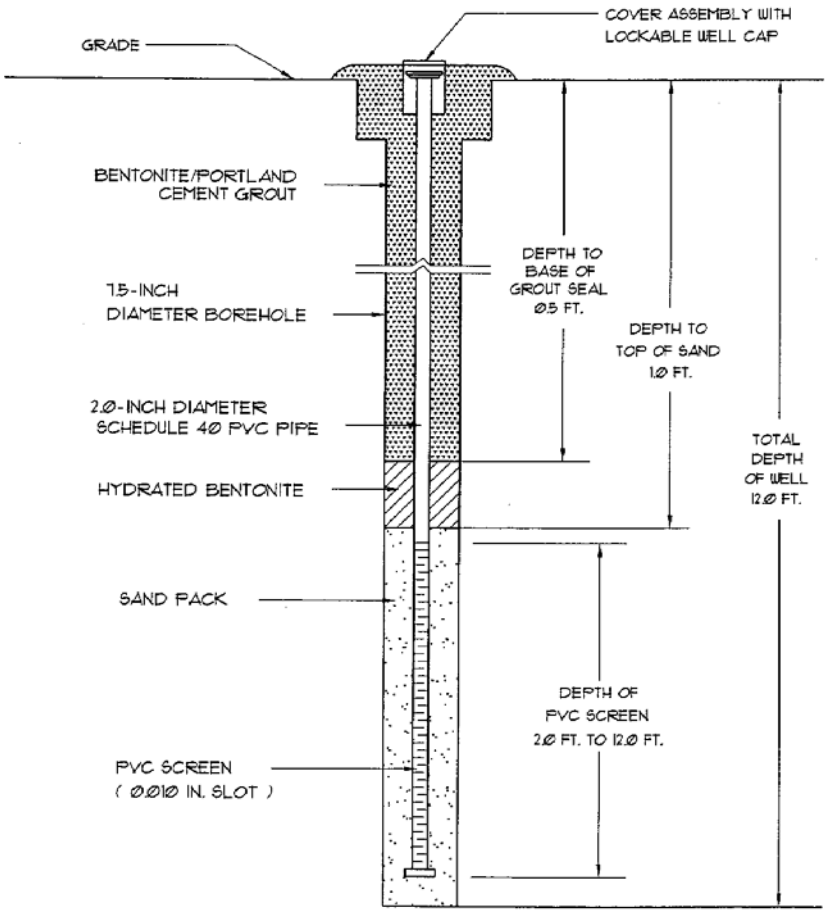

TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

| | |
|---|---|
| Boring Number: | MW-27 (12335) |
| Date Drilled: | 01/26/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Ariail |


Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2045 fax: 808-2048

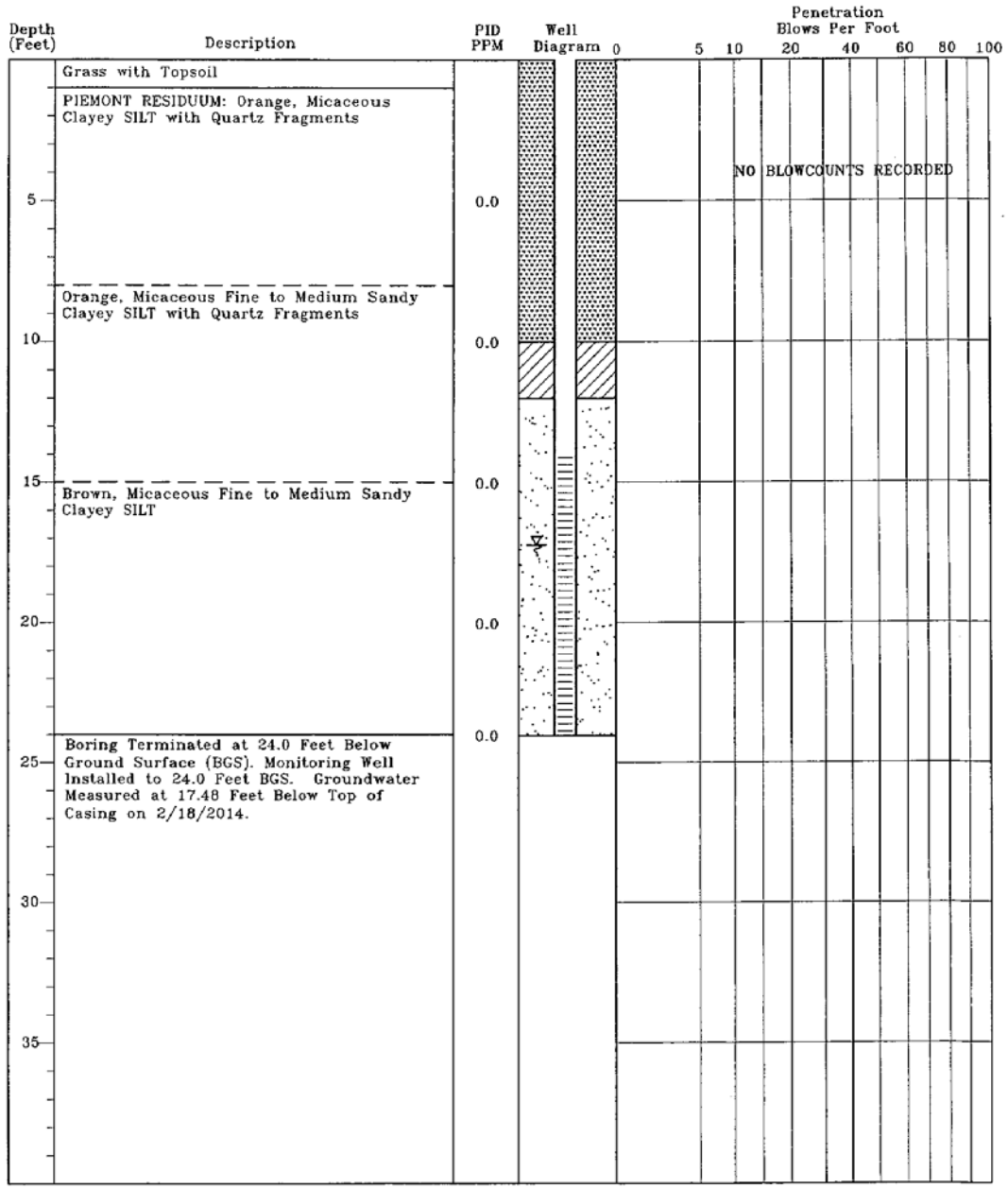
# MONITORING WELL INSTALLATION RECORD

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MEC! Project Number 13-4650




| | |
|---|---|
| Well Number: | MW-27 (12335) |
| Date Drilled: | 01/26/2014 |
| Drilled By: | Enviornmental Drilling & Probing Services |
| Driller: D. Brown | S.C. I.D.#: B 02053 |
| Logged By: | R. Arlail |


Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048



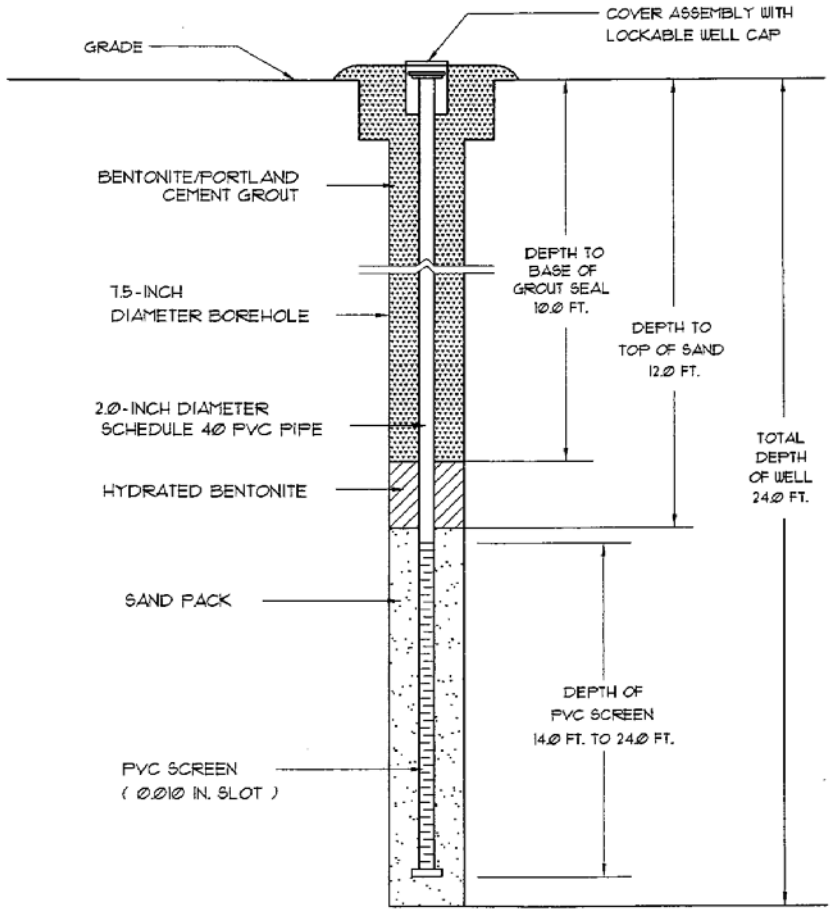

TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

| | |
|---|---|
| Boring Number: | MW-28 (12335) |
| Date Drilled: | 01/26/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Ariail |


Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-1048

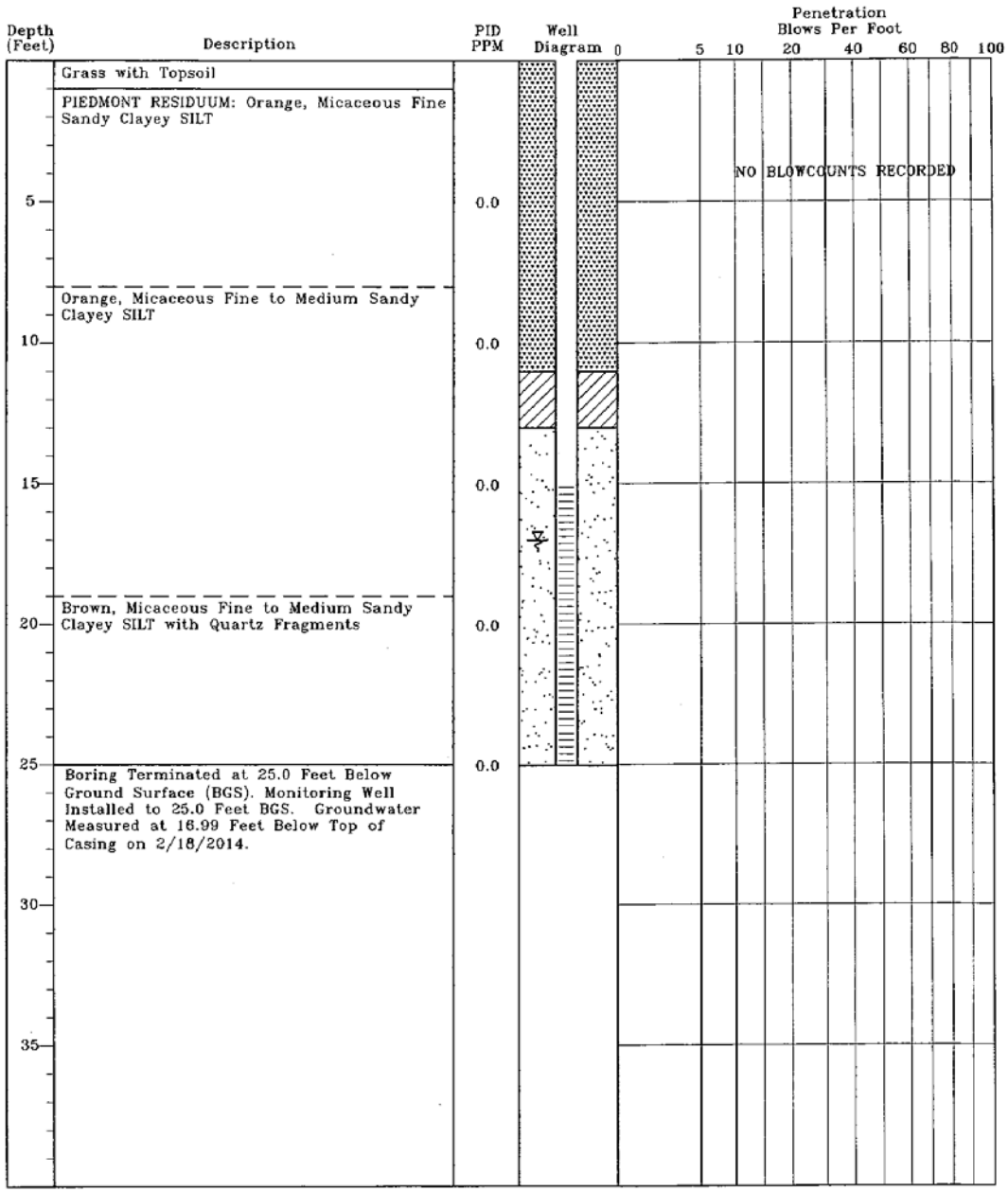
# MONITORING WELL INSTALLATION RECORD

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650




| | |
|---|---|
| Well Number: | MW-28 (12335) |
| Date Drilled: | 01/26/2014 |
| Drilled By: | Enviornmental Drilling & Probing Services |
| Driller: D. Brown | S.C. I.D.#: B 02053 |
| Logged By: | R. Arlail |


Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048



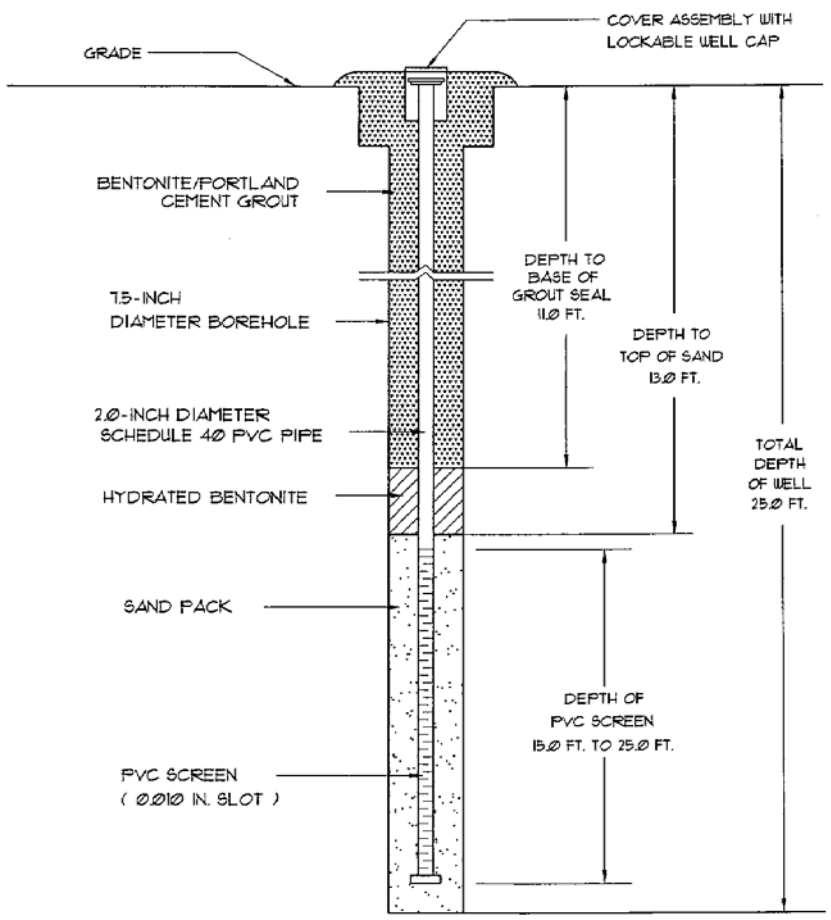

TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

| | |
|---|---|
| Boring Number: | MW-29 (12335) |
| Date Drilled: | 01/26/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Ariail |


Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-7048

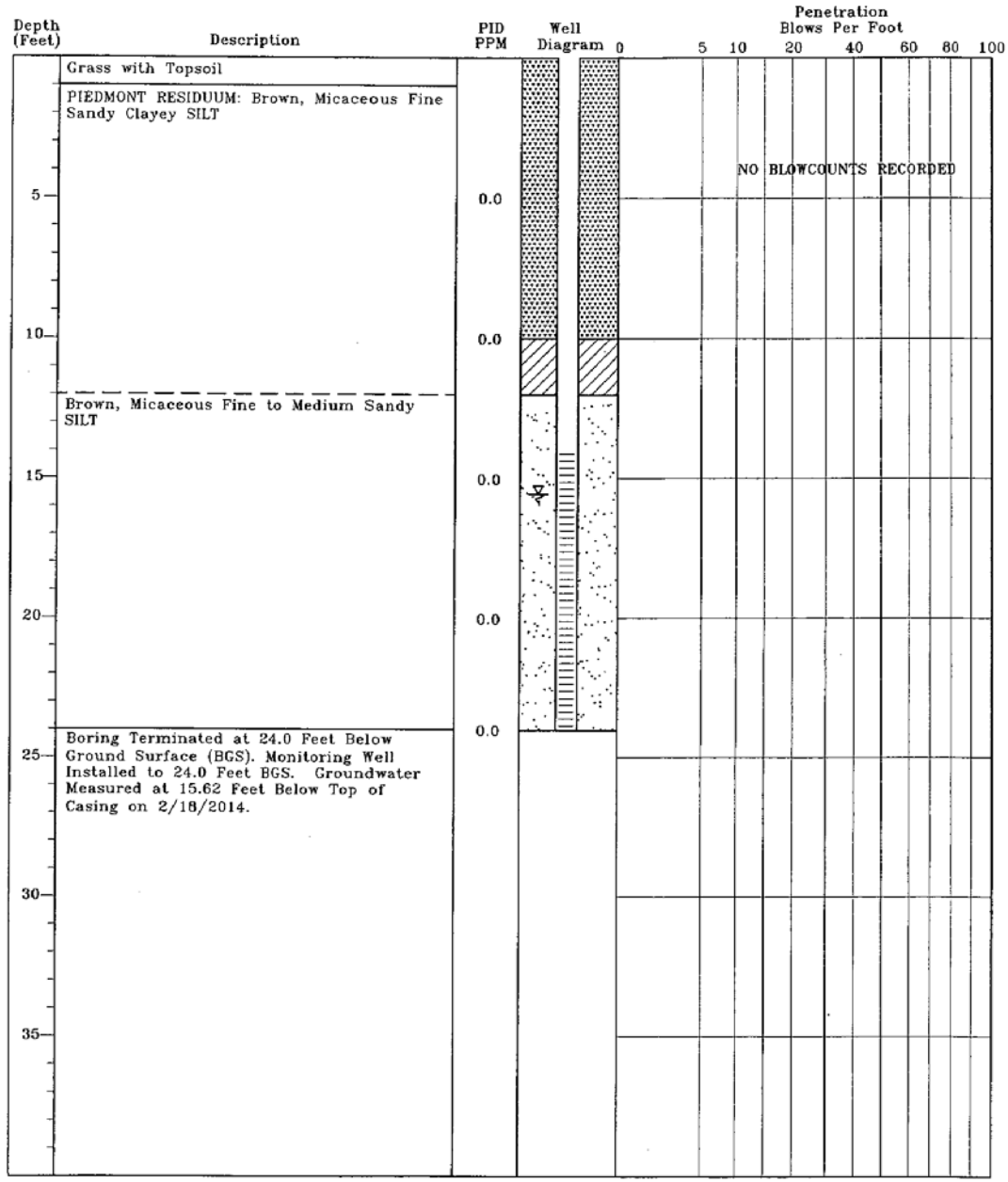
# MONITORING WELL INSTALLATION RECORD

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650




| | |
|---|---|
| Well Number: | MW-29 (12335) |
| Date Drilled: | 01/26/2014 |
| Drilled By: | Enviornmental Drilling & Probing Services |
| Driller: D. Brown | S.C. I.D.#: B 02053 |
| Logged By: | R. Ariail |


Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048



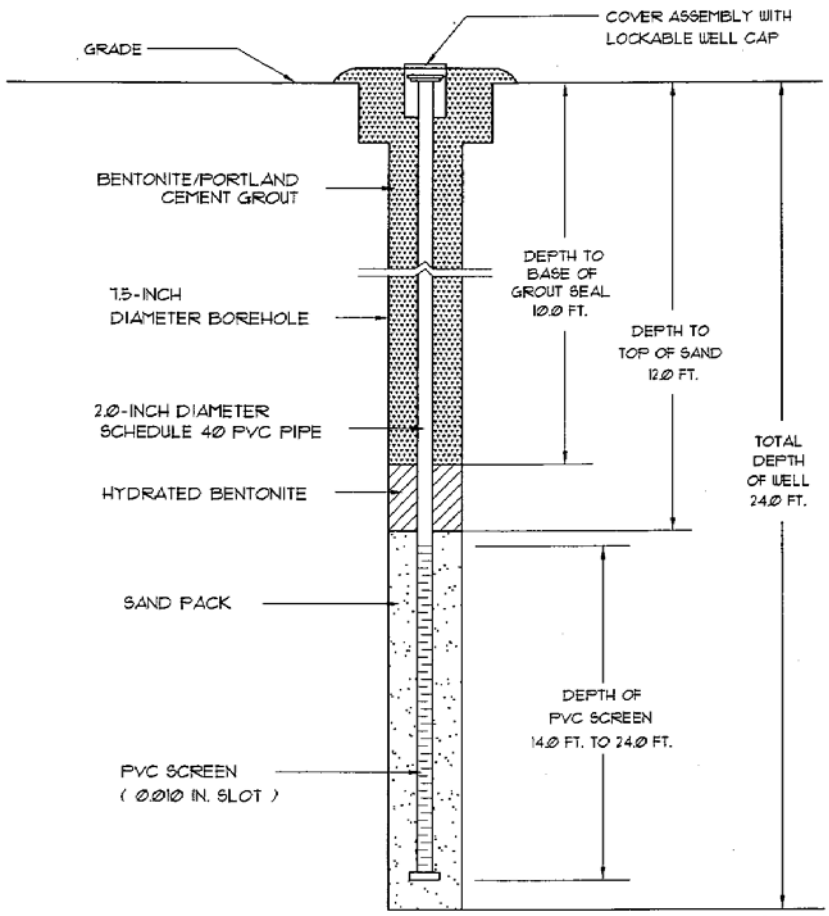

TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

| | |
|---|---|
| Boring Number: | MW-30 (12335) |
| Date Drilled: | 01/26/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Ariail |

Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 Fax: 808-2048

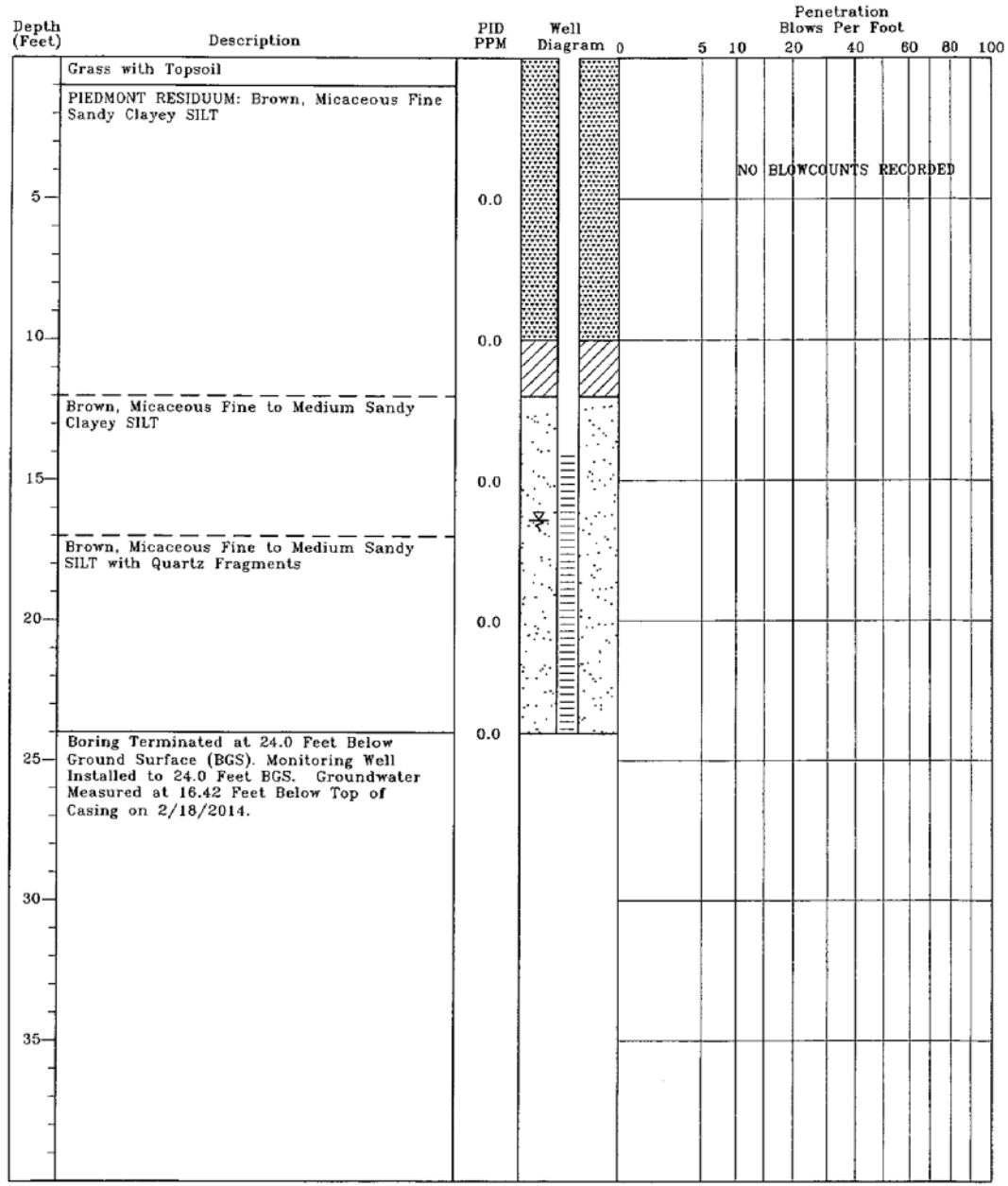
# MONITORING WELL INSTALLATION RECORD

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650




| | |
|---|---|
| Well Number: | MW-30 (12335) |
| Date Drilled: | 01/26/2014 |
| Drilled By: | Enviornmental Drilling & Probing Services |
| Driller: D. Brown | S.C. I.D.#: B 02053 |
| Logged By: | R. Arlail |


Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-1243 fax: 808-2048



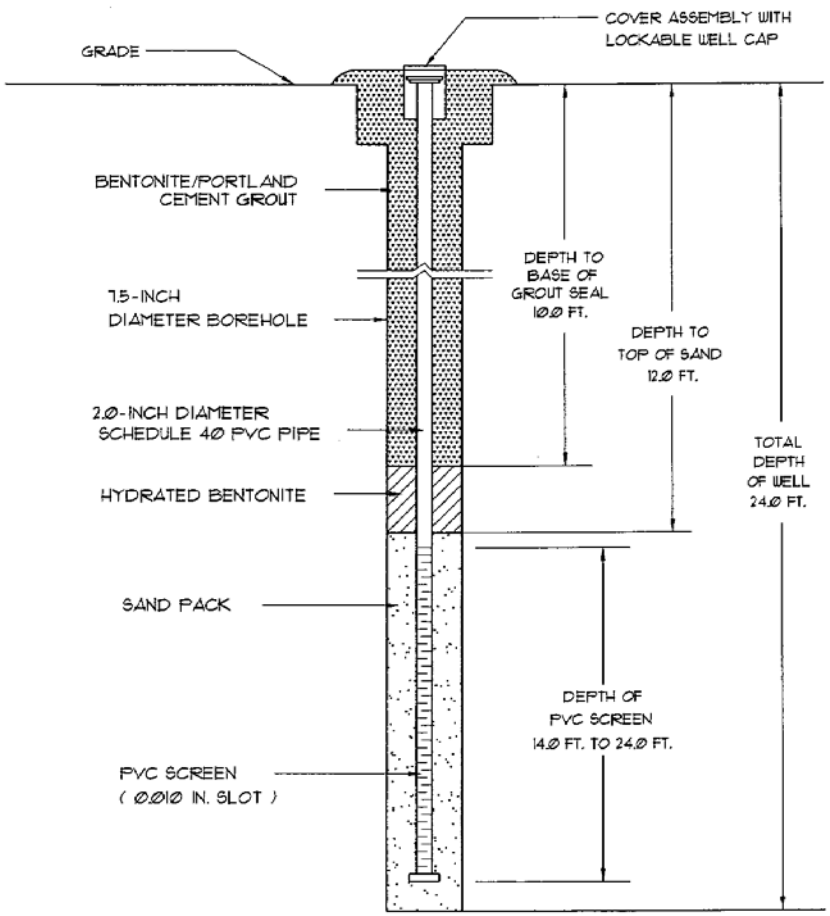

TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

| | |
|---|---|
| Boring Number: | MW-31 (12335) |
| Date Drilled: | 01/27/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Ariail |

Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 Fax: 808-2049

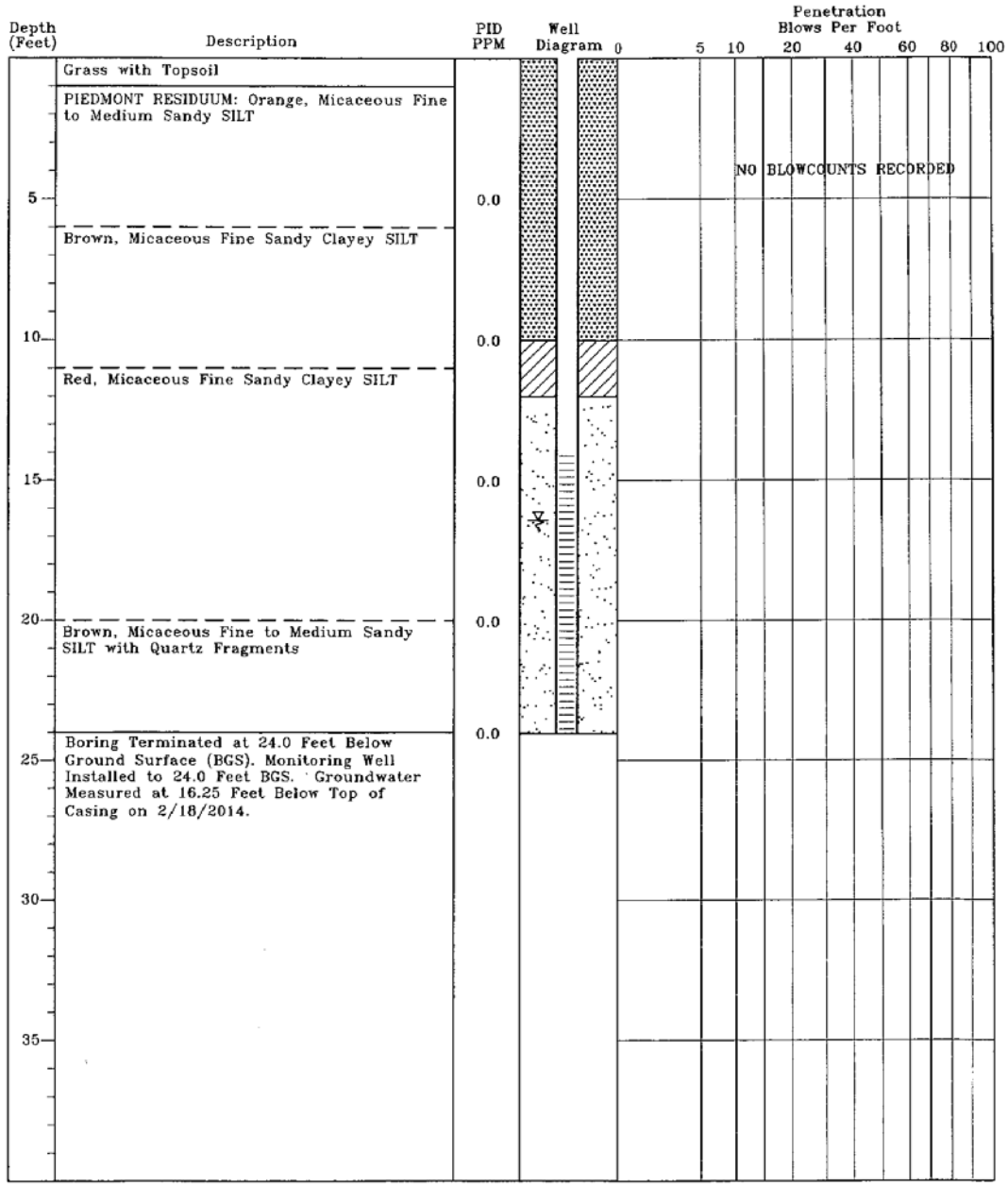
# MONITORING WELL INSTALLATION RECORD

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650




| | |
|---|---|
| Well Number: | MW-31 (12335) |
| Date Drilled: | 01/27/2014 |
| Drilled By: | Enviornmental Drilling & Probing Services |
| Driller: D. Brown | S.C. I.D.#: B 02053 |
| Logged By: | R. Ariail |


Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048



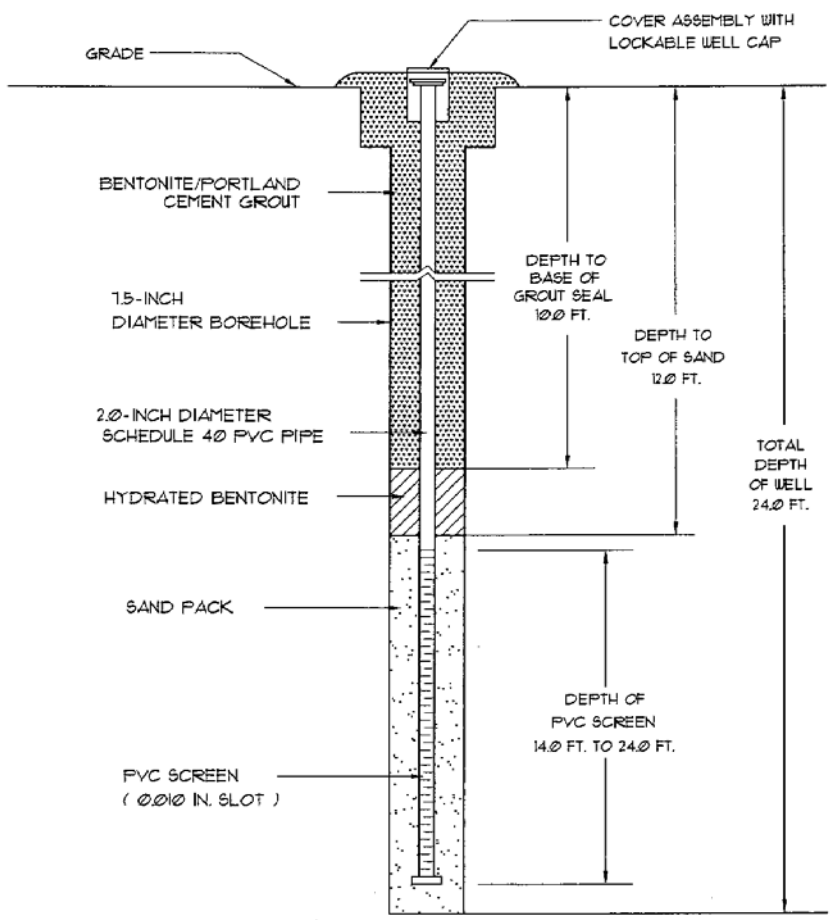

TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

| | |
|---|---|
| Boring Number: | MW-32 (12335) |
| Date Drilled: | 01/27/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Ariail |


Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 Fax: 808-2048

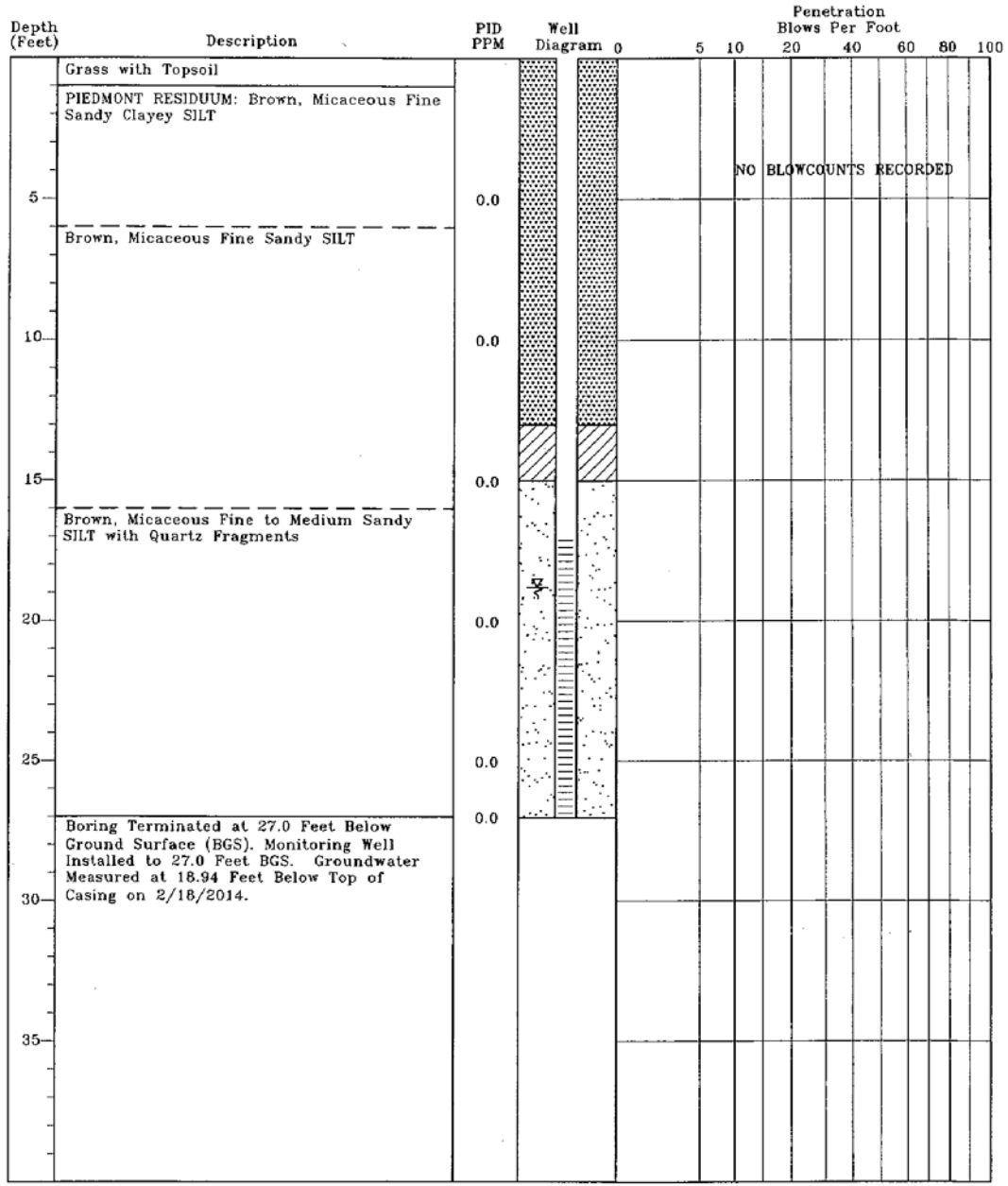
# MONITORING WELL INSTALLATION RECORD

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MEC! Project Number 13-4650




| | |
|---|---|
| Well Number: | MW-32 (12335) |
| Date Drilled: | 01/27/2014 |
| Drilled By: | Enviornmental Drilling & Probing Services |
| Driller: D. Brown | S.C. I.D.#: B 02053 |
| Logged By: | R. Ariail |


Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

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Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

| | |
|---|---|
| Boring Number: | MW-33 (12335) |
| Date Drilled: | 01/27/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Arlail |


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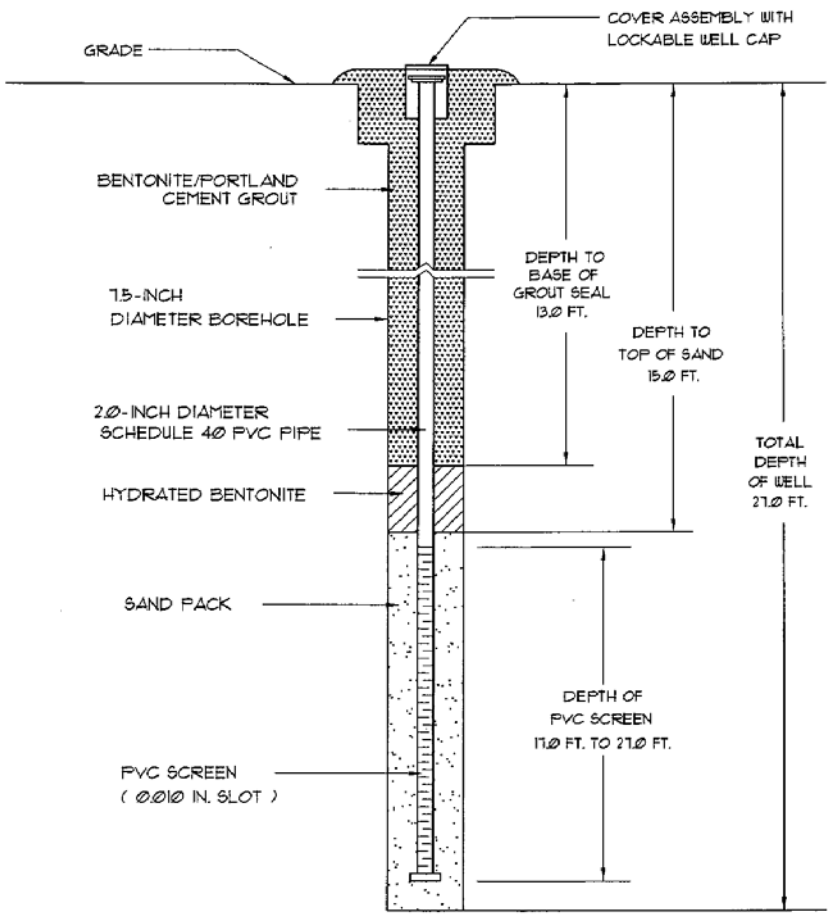
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650




| | |
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| Date Drilled: | 01/27/2014 |
| Drilled By: | Enviornmental Drilling & Probing Services |
| Driller: D. Brown | S.C. I.D.#: B 02053 |
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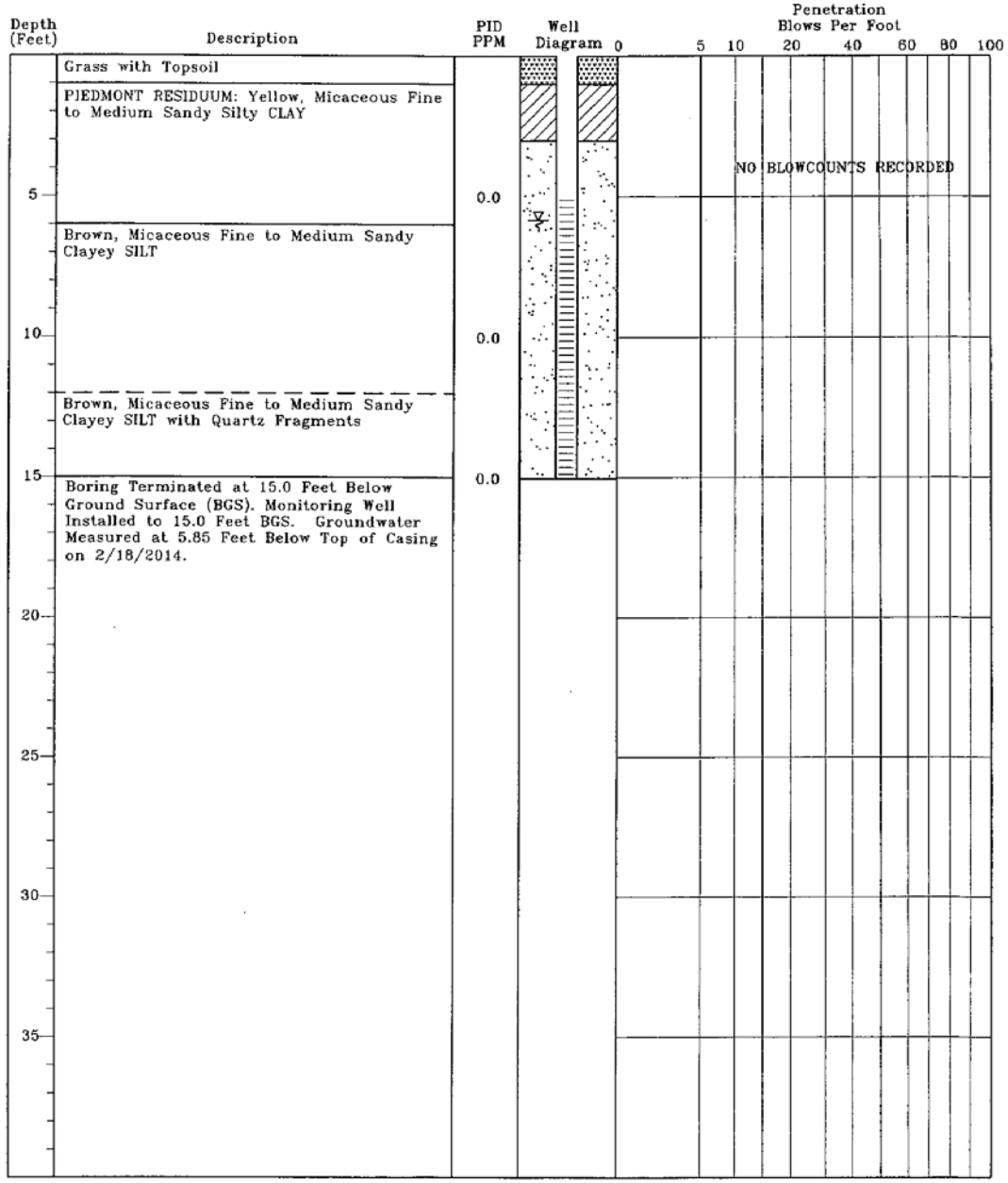


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Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

| | |
|---|---|
| Boring Number: | MW-34 (12335) |
| Date Drilled: | 01/27/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Ariail |


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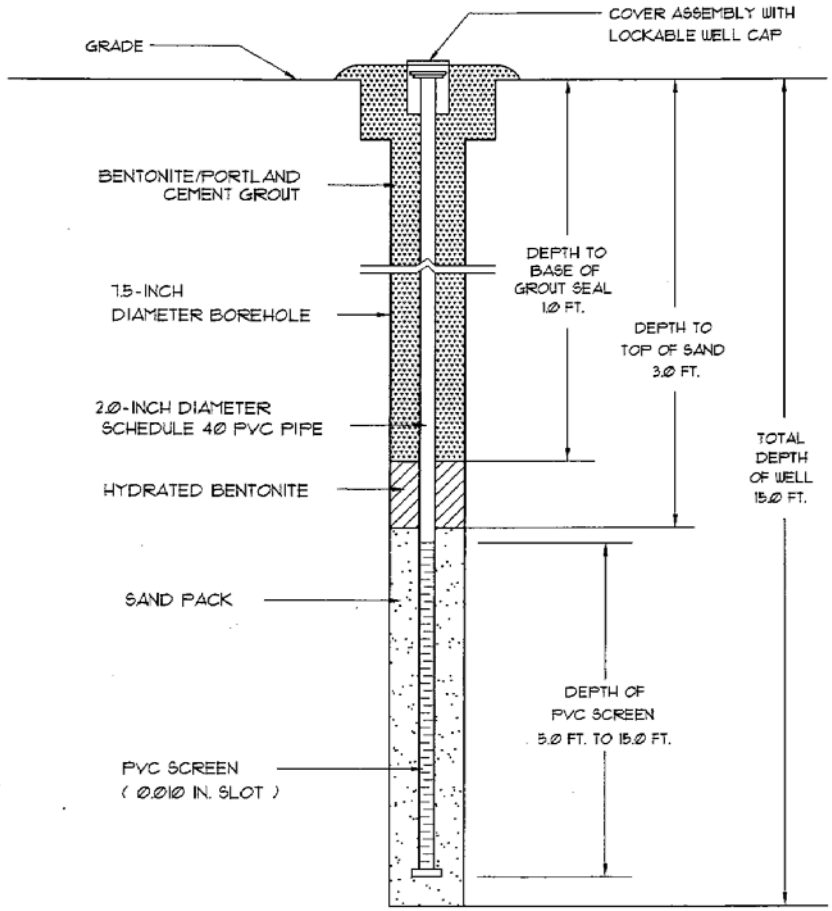
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650




| | |
|---|---|
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| Date Drilled: | 01/27/2014 |
| Drilled By: | Enviornmental Drilling & Probing Services |
| Driller: D. Brown | S.C. I.D.#: B 02053 |
| Logged By: | R. Ariail |


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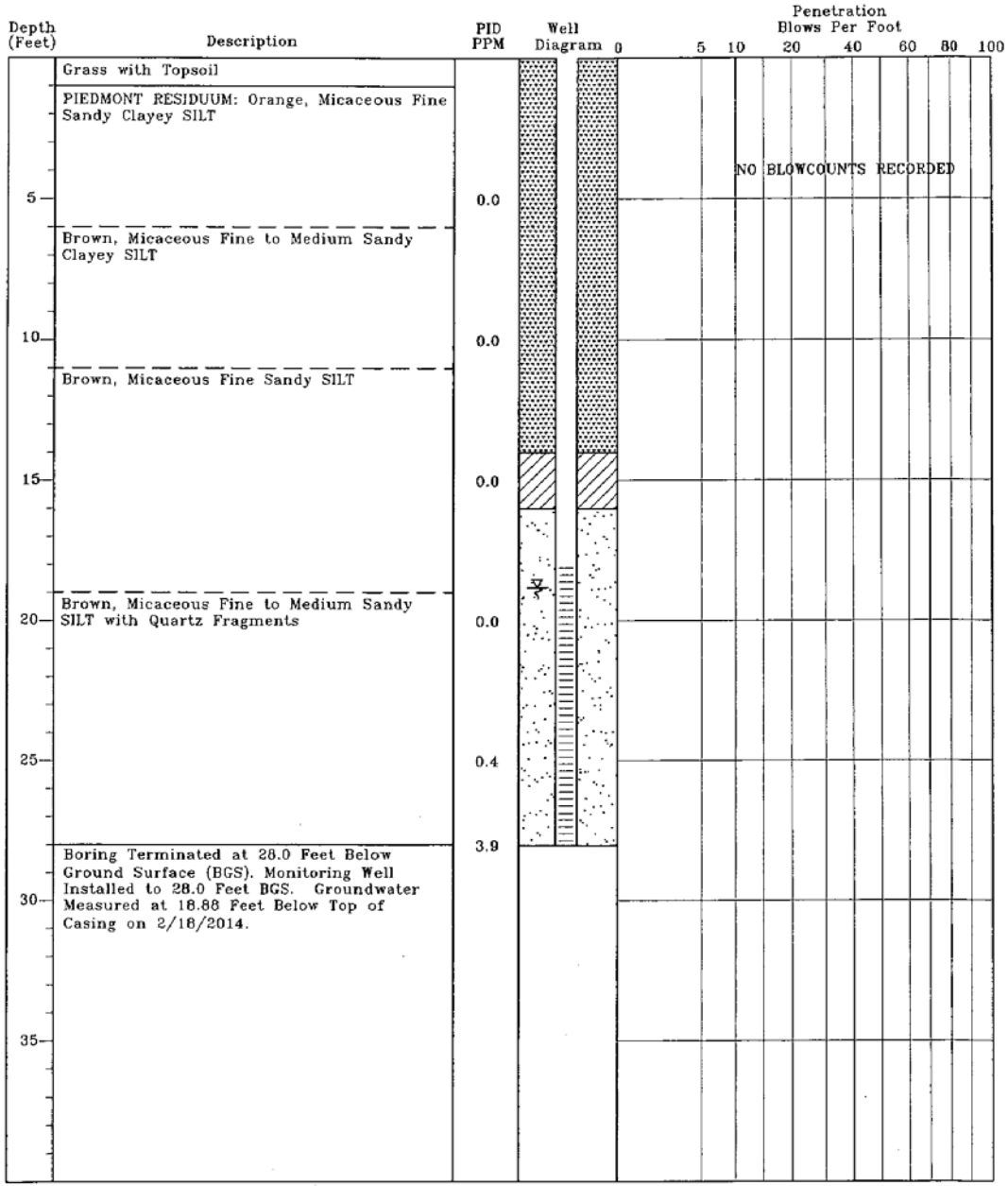


TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

| | |
|---|---|
| Boring Number: | MW-35 (12335) |
| Date Drilled: | 01/27/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Ariail |


Prepared By:
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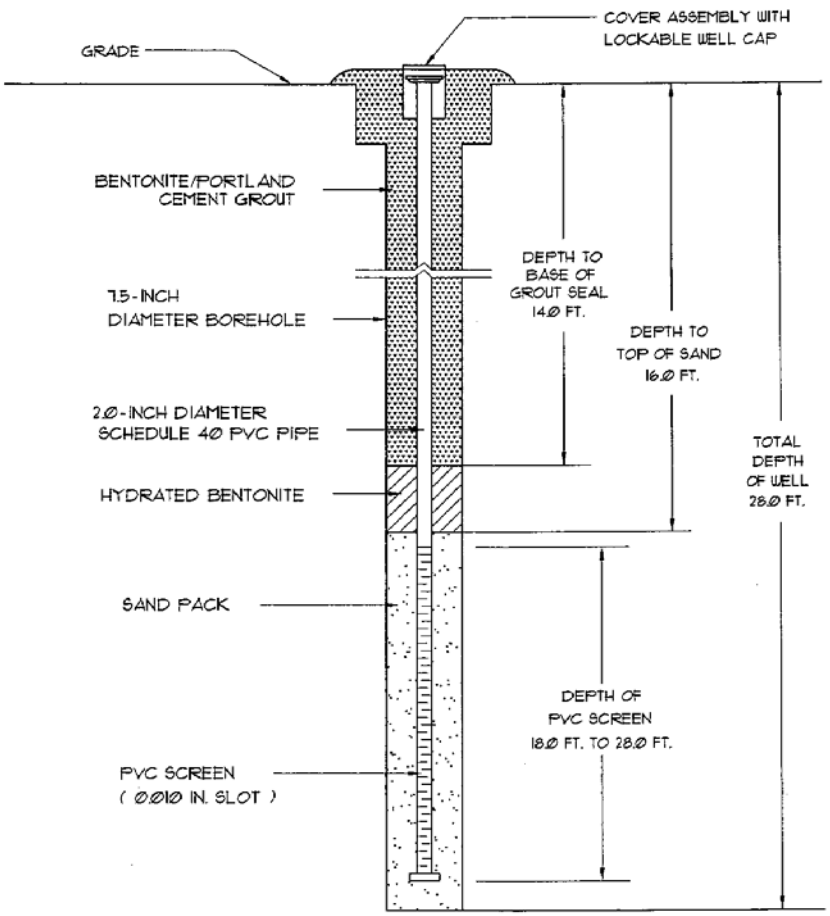
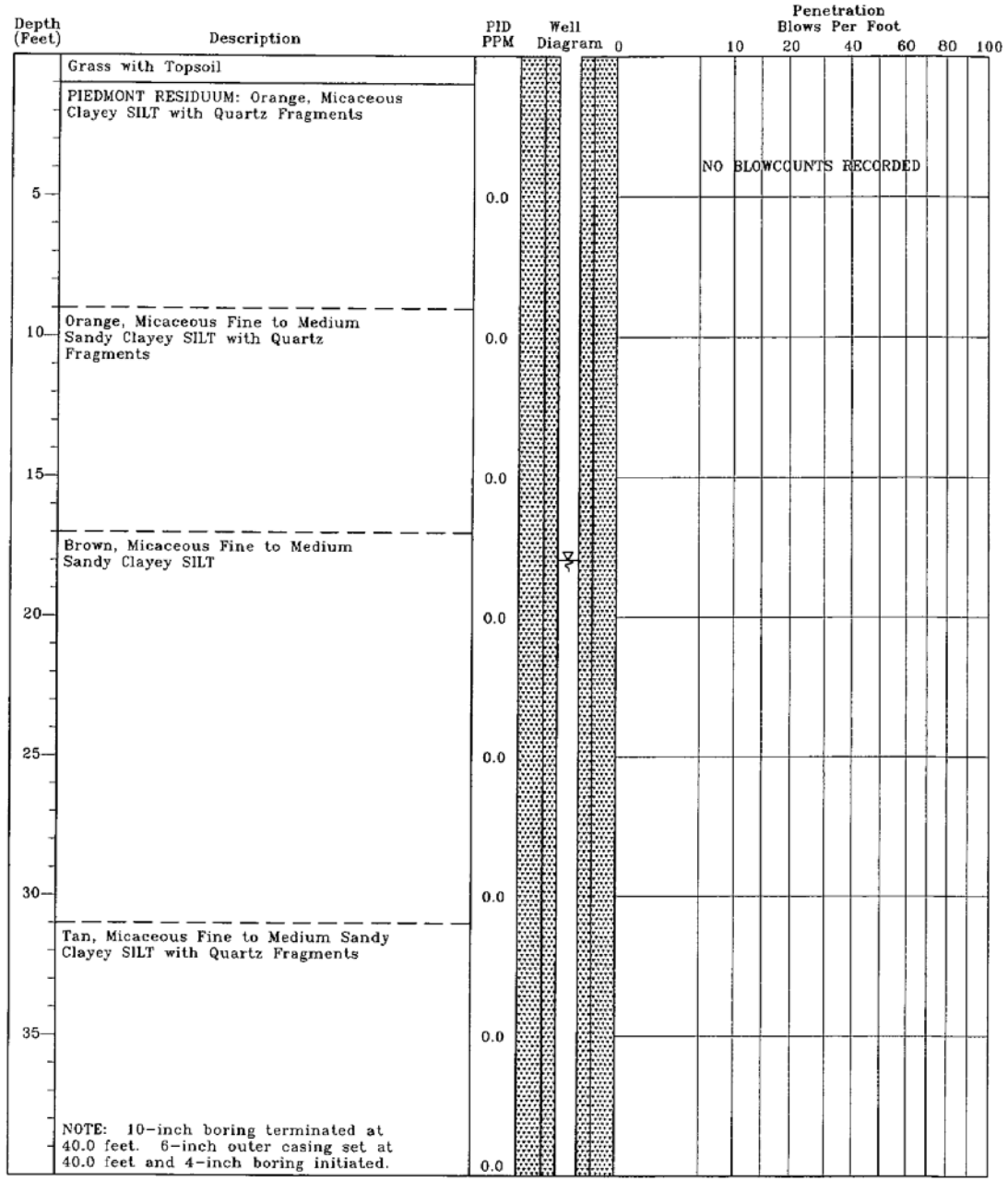
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650




| | |
|---|---|
| Well Number: | MW-35 (12335) |
| Date Drilled: | 01/27/2014 |
| Drilled By: | Enviornmental Drilling & Probing Services |
| Driller: D. Brown | S.C. I.D.#: B 02053 |
| Logged By: | R. Arlail |


Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 Fax: 808-2048






TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

| | |
|---|---|
| Boring Number: | DMW-36 (12335) |
| Date Drilled: | 2/5/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Ariail |

Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
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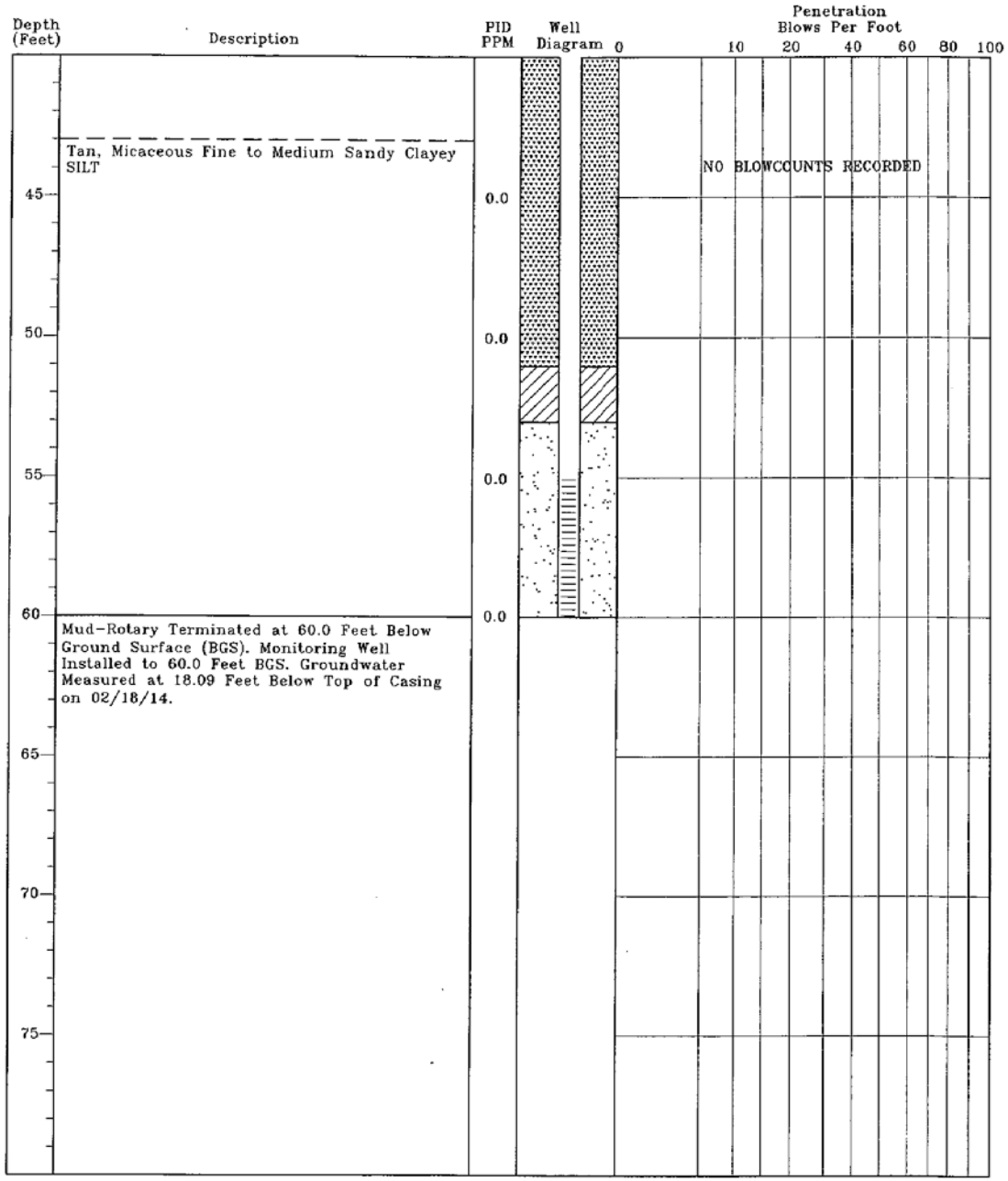




TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

| | |
|---|---|
| Boring Number: | DMW-36 (12335) |
| Date Drilled: | 2/5/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Arlail |

Prepared By:
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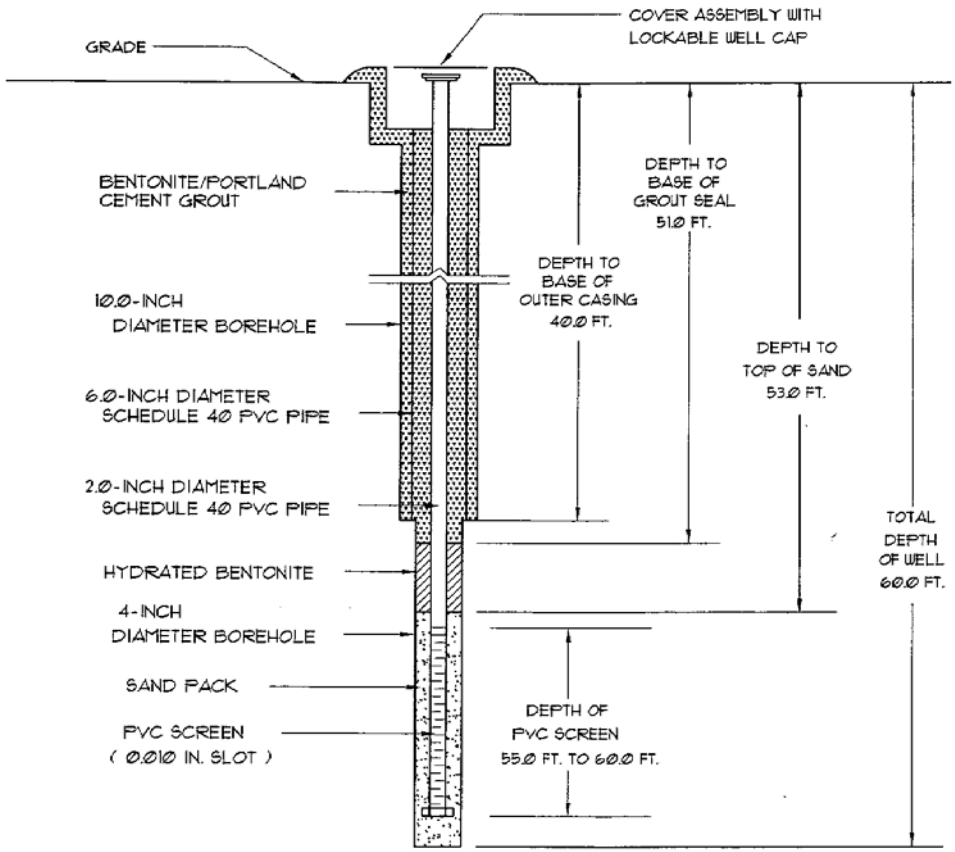
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

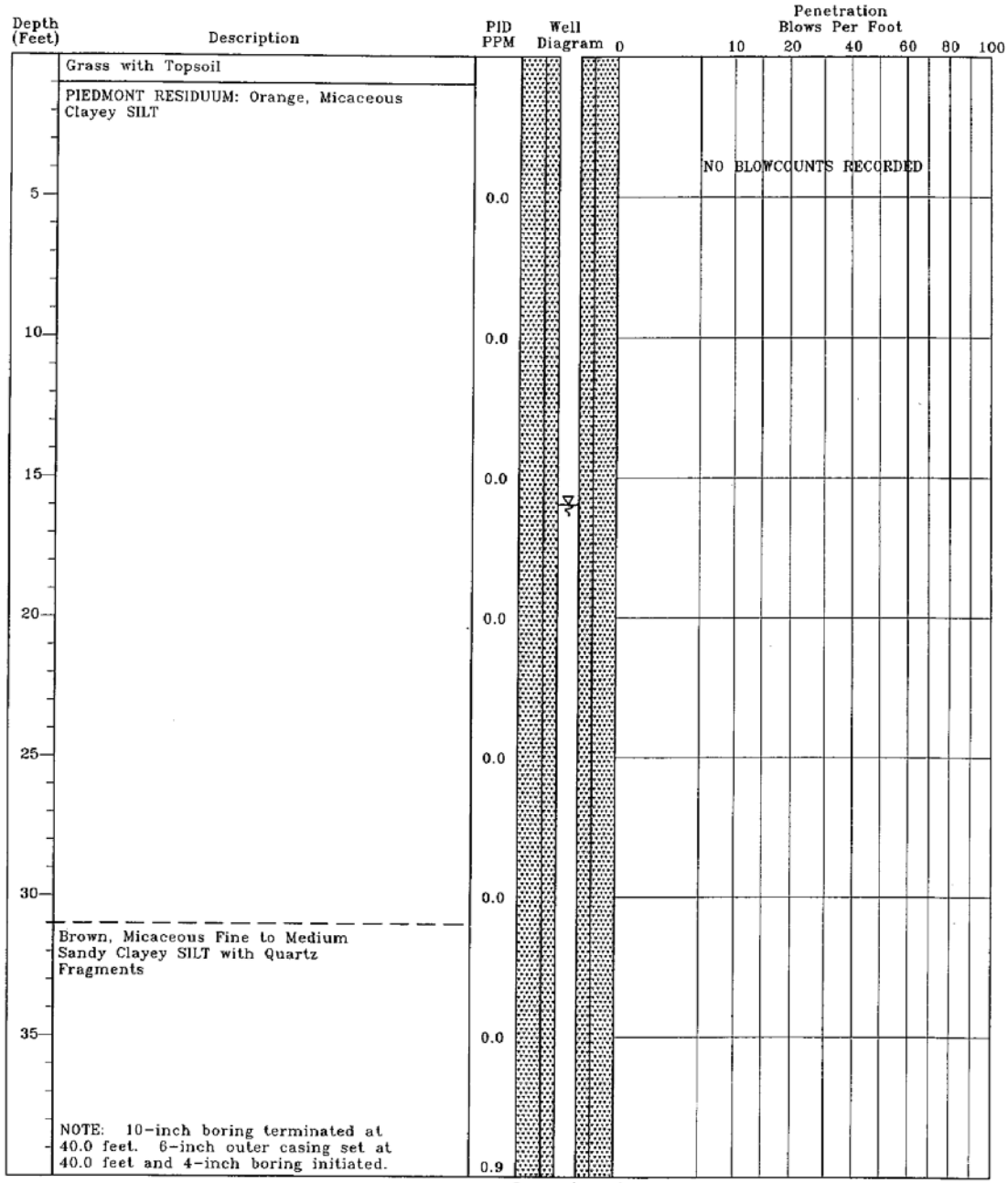
# MONITORING WELL INSTALLATION RECORD

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650




| | |
|---|---|
| Well Number: | DMW-36 (12335) |
| Date Drilled: | 2/5/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Driller: T. Bolyard S.C. I.D. #: B 01846 | |
| Logged By: | R. Ariail |


Prepared By:
Midlands Environmental Consultants, Inc.
731 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-1048



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Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

| | |
|---|---|
| Boring Number: | DMW-37 (12335) |
| Date Drilled: | 2/5/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Ariail |

Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
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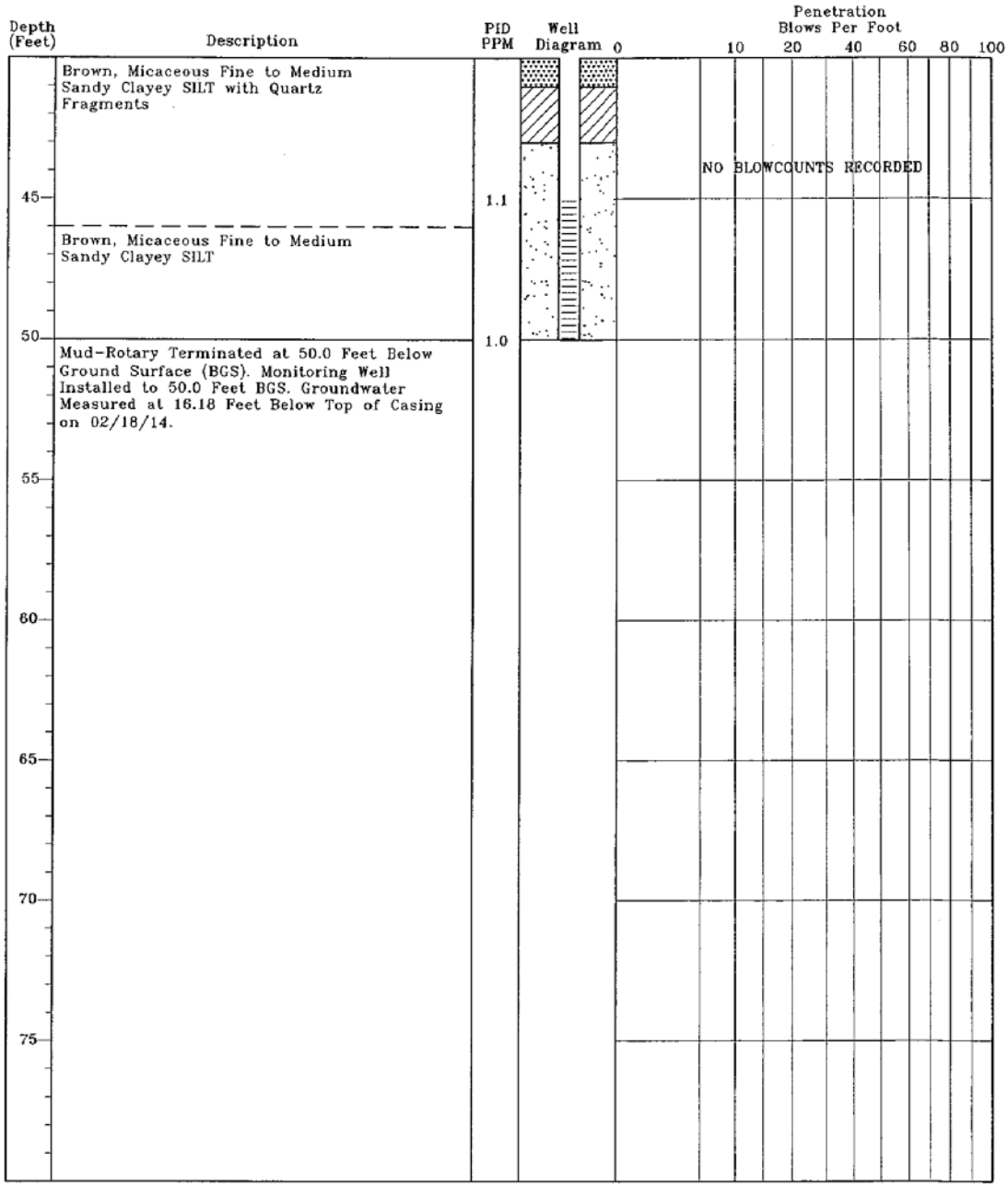




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Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

| | |
|---|---|
| Boring Number: | DMW-37 (12335) |
| Date Drilled: | 2/5/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Ariail |

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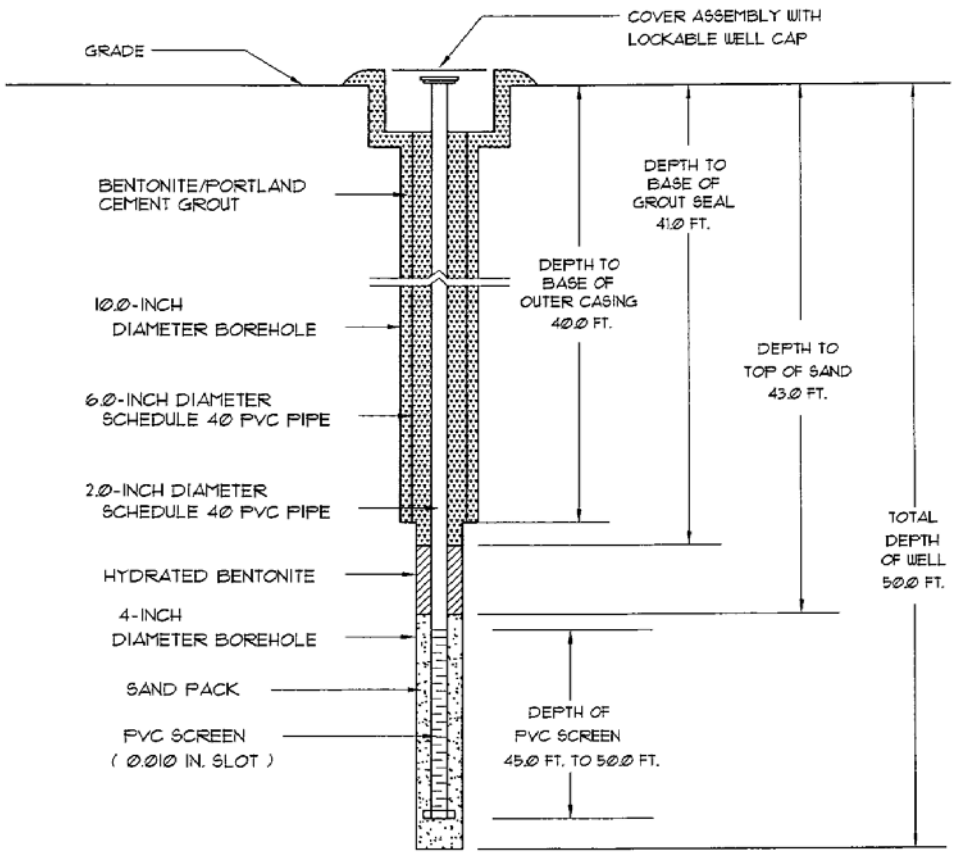
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650




| | |
|---|---|
| Well Number: | DMW-37 (12335) |
| Date Drilled: | 2/5/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Driller: T. Bolyard S.C. I.D. #: B 01846 | |
| Logged By: | R. Ariail |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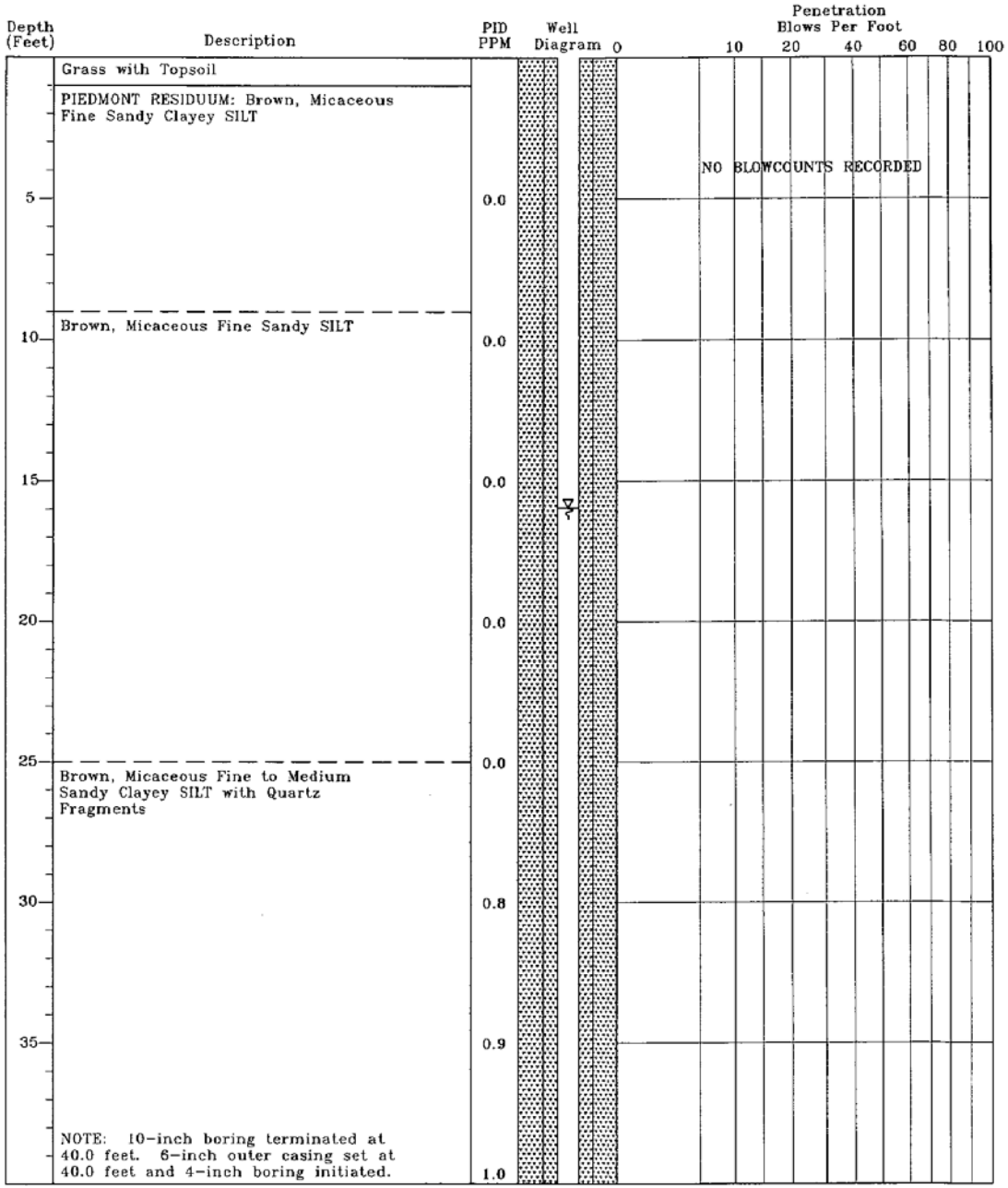




TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

| | |
|---|---|
| Boring Number: | DMW-38 (12335) |
| Date Drilled: | 2/5/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Ariail |

Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
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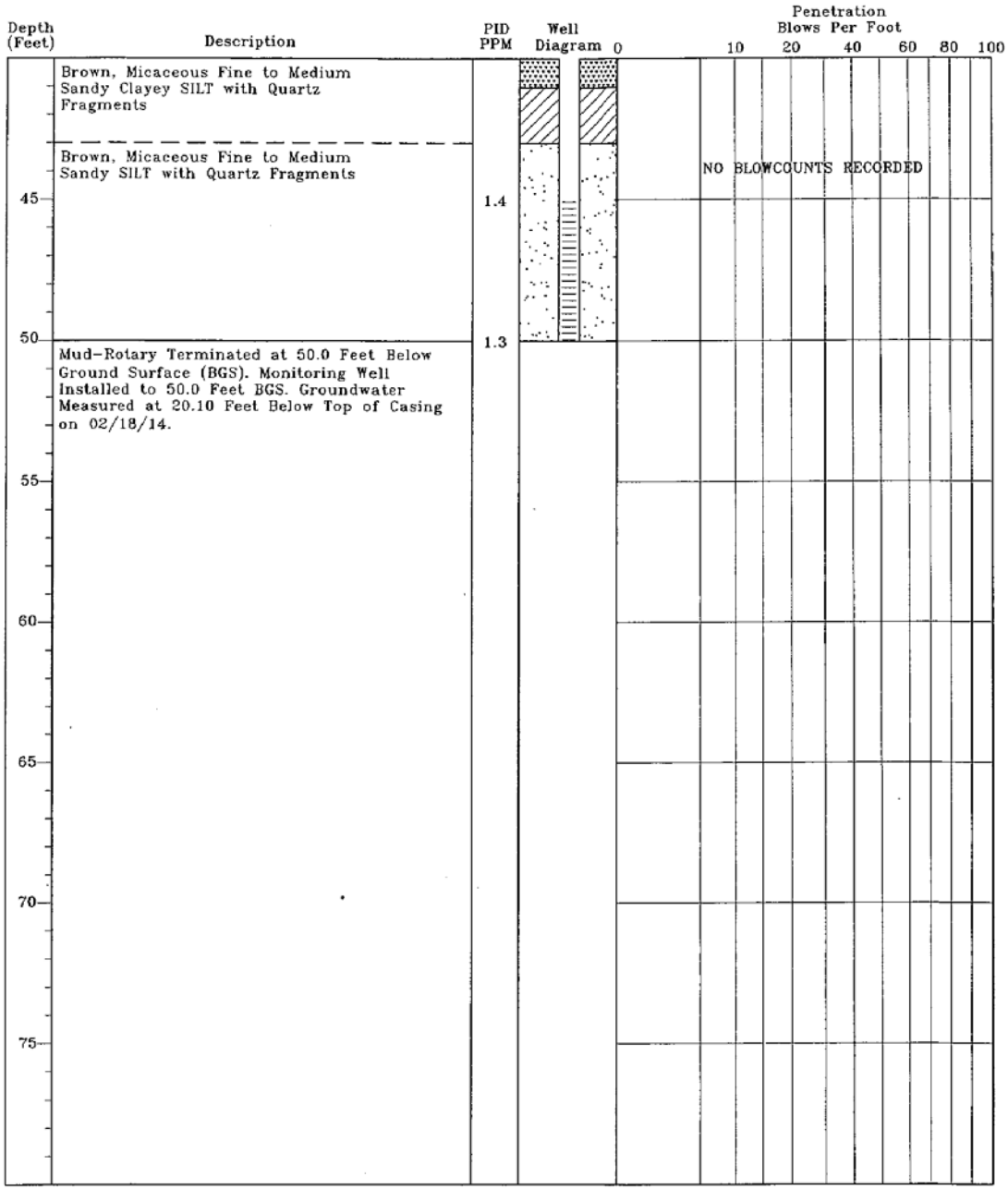




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Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

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| Boring Number: | DMW-38 (12335) |
| Date Drilled: | 2/5/2014 |
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Prepared By:
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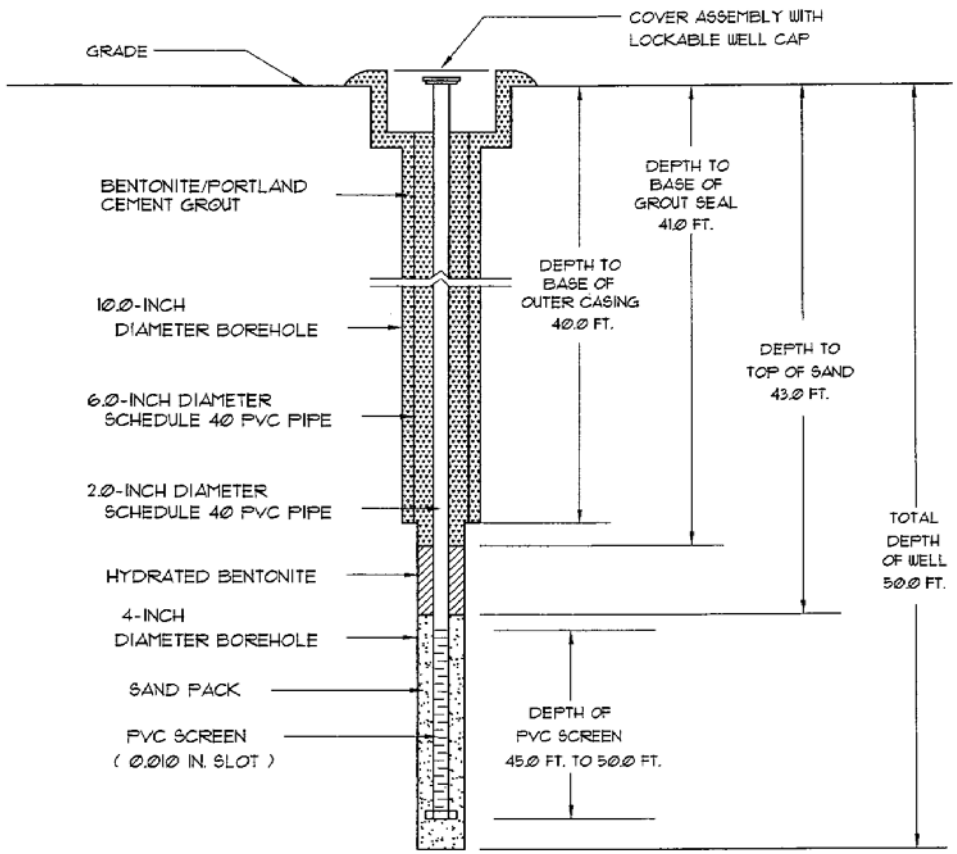
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

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| Well Number: | DMW-38 (12335) |
| Date Drilled: | 2/5/2014 |
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| Driller: T. Bolyard S.C. I.D. #: B 01846 | |
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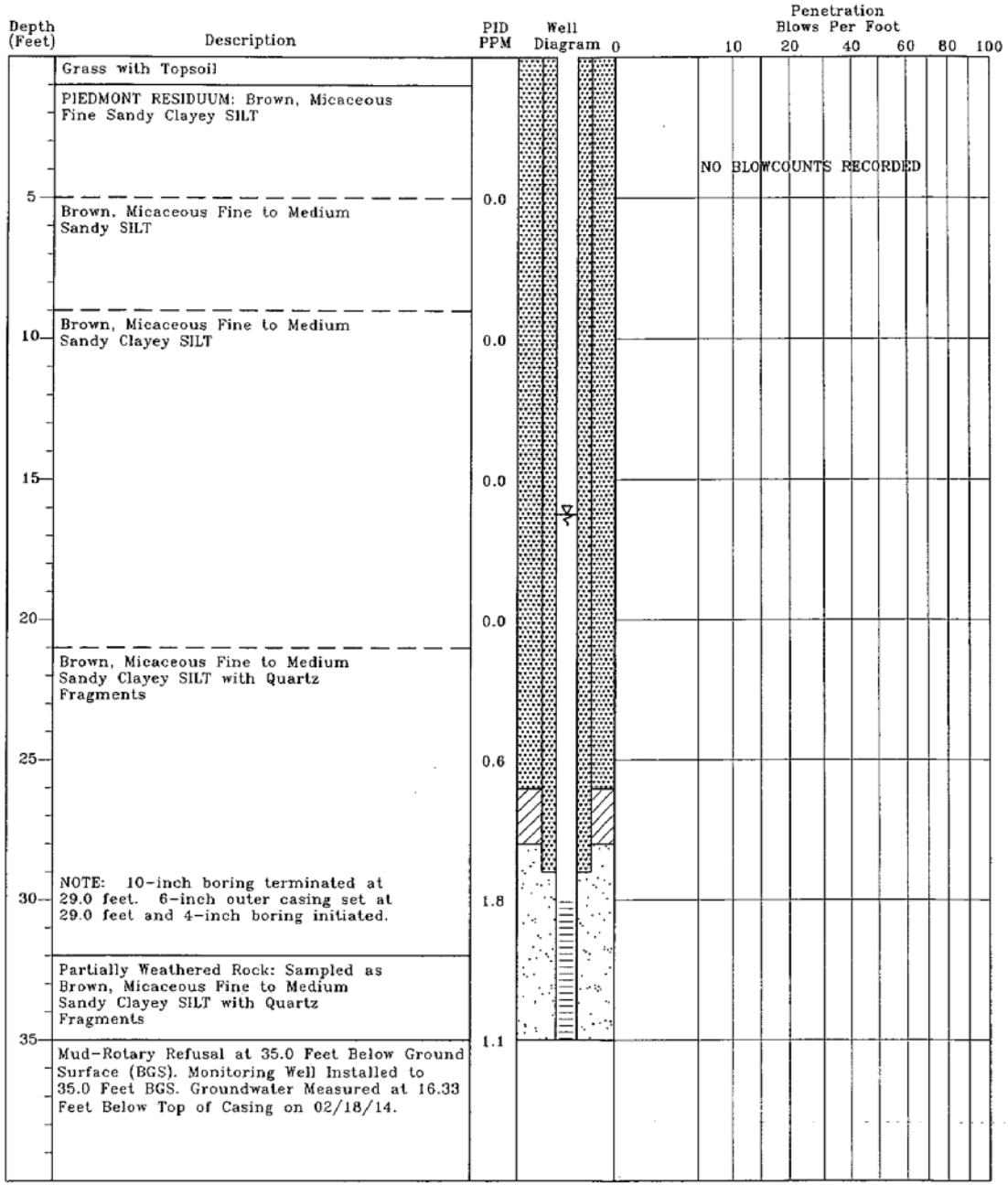


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Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

| | |
|---|---|
| Boring Number: | DMW-39 (12335) |
| Date Drilled: | 2/6/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Ariail |

Prepared By:
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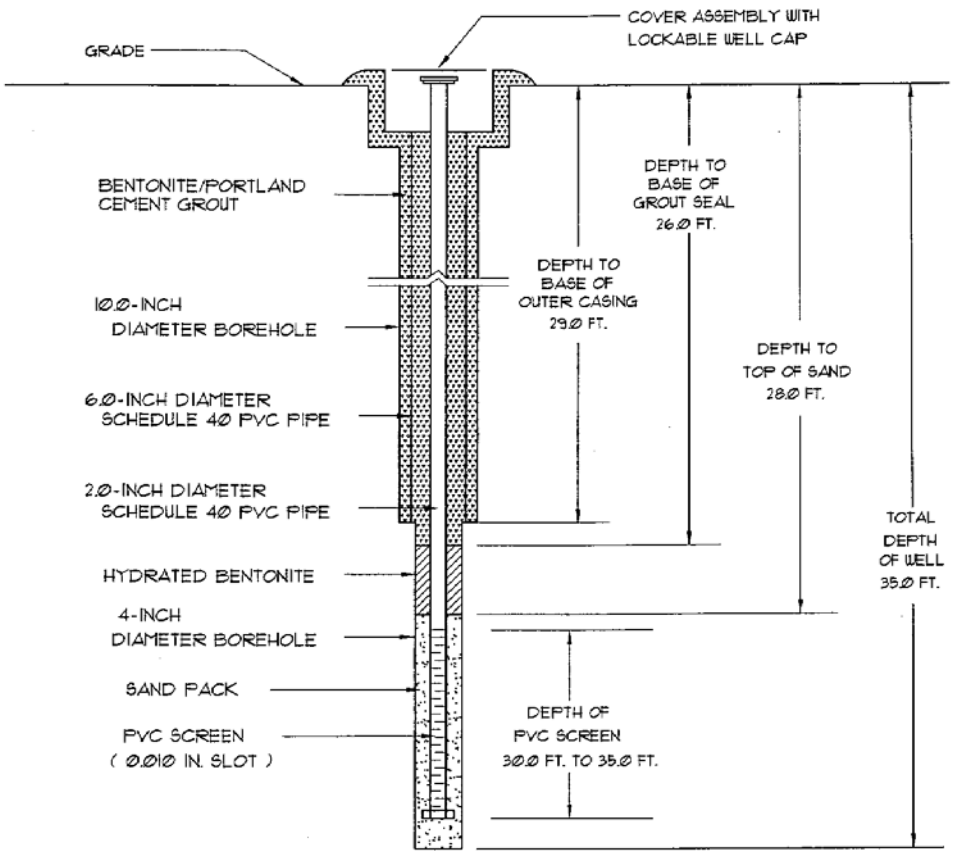


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| Well Number: | DMW-39 (12335) |
| Date Drilled: | 2/6/2014 |
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| Driller: T. Bolyard S.C. I.D. #: B 01846 | |
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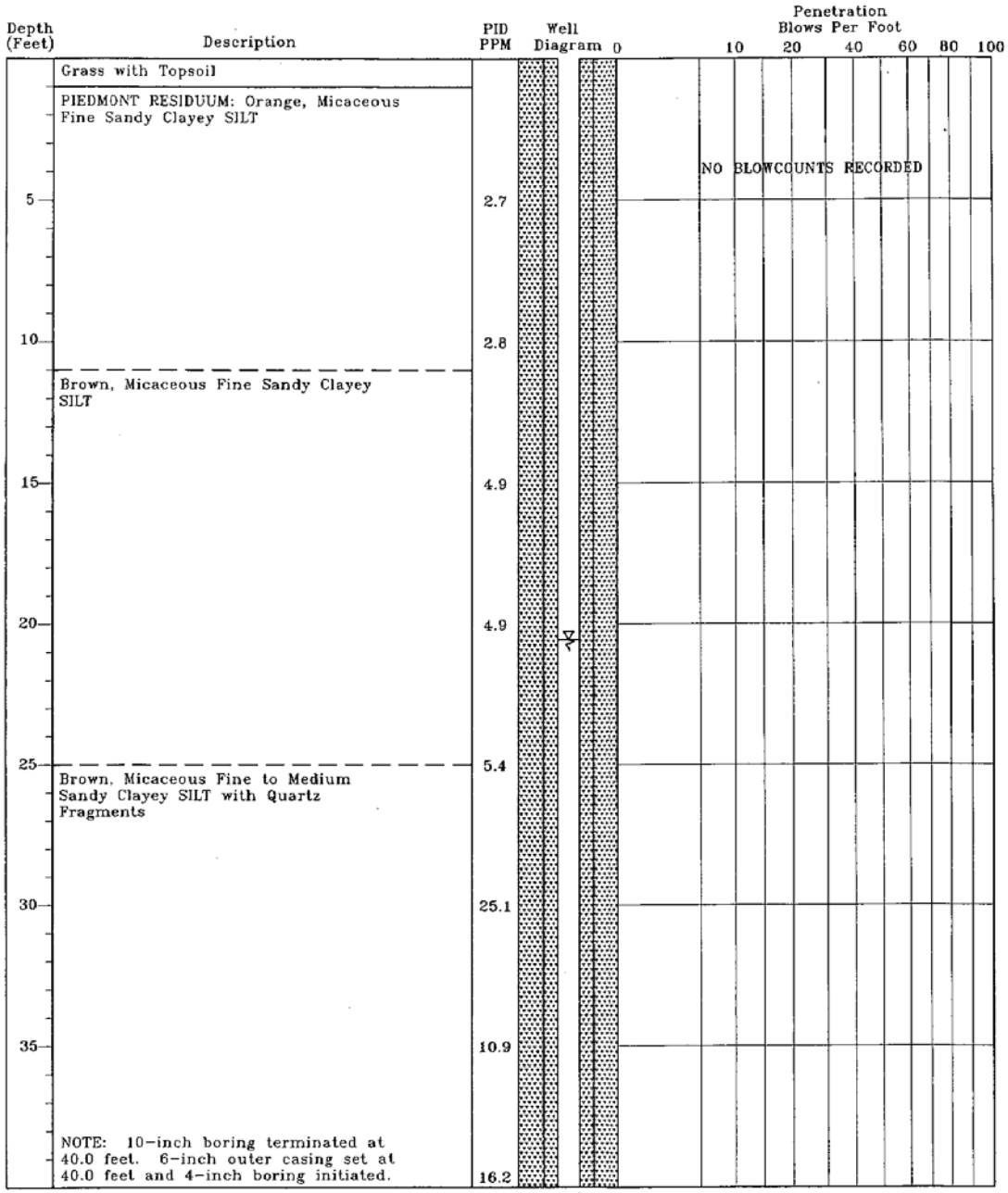




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Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 13-4650

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|---|---|
| Boring Number: | DMW-40 (12335) |
| Date Drilled: | 2/6/2014 |
| Drilled By: | Environmental Drilling & Probing Services |
| Logged By: | R. Ariail |

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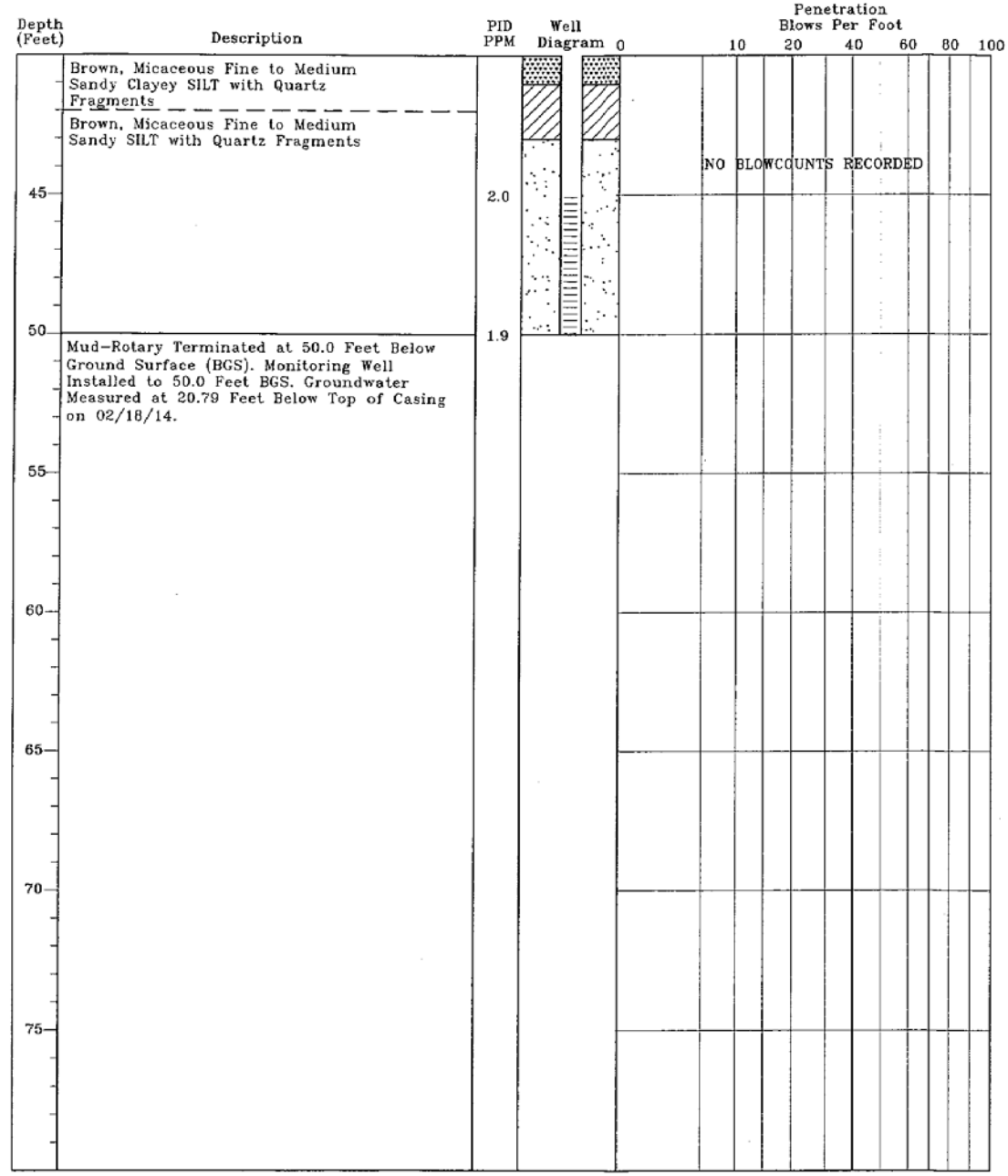




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Abbeville, South Carolina
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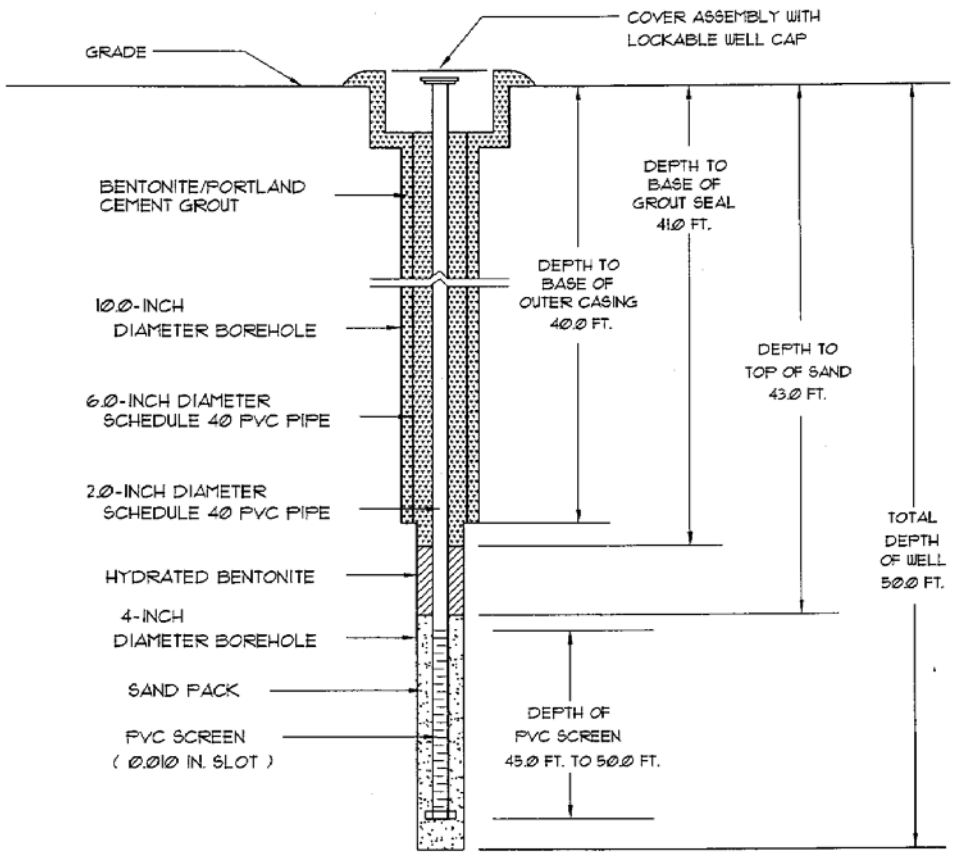


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| Driller: T. Bolyard S.C. I.D. #: B 01846 | |
| Logged By: | R. Ariail |


Prepared By:
Midlands Environmental Consultants, Inc.
231 Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** MW-12R

**4. ABANDONMENT:** ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Grass with Topsoil | 0.5 | 0.5 |
| Orange, Sandy Clayey SILT | 10.5 | 11.0 |
| Brown, Sandy Clayey SILT | 14.0 | 25.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-12R

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 25.0 ft. Date Started: 1/27/2014 Date Completed: 1/27/2014

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 15.0 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Schedule 40 PVC Diam.: 2 Inch
Slot/Gauge: 0.010 Length: 10.0 Feet
Set Between: 15.0 ft. and 25.0 ft. **NOTE: MULTIPLE SCREENS**
_____ ft. and _____ ft. **USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** 17.17 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 13.0 ft. to 25.0 ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 11.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** David Brown **CERT. NO.:** 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: David Brown (Well Driller) Date: 3/10/2014
If D Level Driller, provide supervising driller's name:

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** MW-24

**4. ABANDONMENT:** ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Grass with Topsoil | 0.5 | 0.5 |
| Tan, Sandy Clayey SILT | 6.5 | 7.0 |
| Brown, Sandy Clayey SILT | 5.0 | 12.0 |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-24

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 12.0 ft. Date Started: 1/26/2014 Date Completed: 1/26/2014

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 2.0 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Schedule 40 PVC Diam.: 2 Inch
Slot/Gauge: 0.010 Length: 10.0 Feet
Set Between: 2.0 ft. and 12.0 ft. **NOTE: MULTIPLE SCREENS**
_____ ft. and _____ ft. **USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** 0.52 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 1.0 ft. to 12.0 ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 0.5 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe_____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** David Brown CERT. NO.: 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: David Brown (Well Driller) Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** MW-25

**4. ABANDONMENT:** ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Grass with Topsoil | 0.5 | 0.5 |
| Gray, Sandy Clayey SILT | 3.5 | 4.0 |
| Brown, Sandy Clayey SILT | 8.0 | 12.0 |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-25

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 12.0 ft. Date Started: 1/26/2014 Date Completed: 1/26/2014

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 2.0 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Schedule 40 PVC Diam.: 2 Inch
Slot/Gauge: 0.010 Length: 10.0 Feet
Set Between: 2.0 ft. and 12.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** 0.00 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 1.0 ft. to 12.0 ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 0.5 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** David Brown **CERT. NO.:** 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: David Brown (Well Driller) Date: 3/10/2014
If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) **COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** MW-26

**4. ABANDONMENT:** ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Grass with Topsoil | 0.5 | 0.5 |
| Brown, Sandy Clayey SILT | 11.5 | 12.0 |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** MW-26 | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 12.0 ft. Date Started: 1/26/2014 Date Completed: 1/26/2014

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 2.0 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Schedule 40 PVC Diam.: 2 Inch
Slot/Gauge: 0.010 Length: 10.0 Feet
Set Between: 2.0 ft. and 12.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** 0.00 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 1.0 ft. to 12.0 ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 0.5 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** David Brown **CERT. NO.:** 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: David Brown (Well Driller) Date: 3/10/2014
If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** MW-27

**4. ABANDONMENT:** ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Grass with Topsoil | 0.5 | 0.5 |
| Tan, Sandy Clayey SILT | 6.5 | 7.0 |
| Brown, Sandy Clayey SILT | 5.0 | 12.0 |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-27

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 12.0 ft. Date Started: 1/26/2014 Date Completed: 1/26/2014

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 2.0 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Schedule 40 PVC Diam.: 2 Inch
Slot/Gauge: 0.010 Length: 10.0 Feet
Set Between: 2.0 ft. and 12.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** 3.24 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐No Bacterial Analysis ☐ Yes ☐No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 1.0 ft. to 12.0 ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 0.5 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date Installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** David Brown **CERT. NO.:** 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: David Brown (Well Driller) Date: 3/10/2014
If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004)

COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** MW-28

**4. ABANDONMENT:** ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Grass with Topsoil | 0.5 | 0.5 |
| Orange, Sandy Clayey SILT | 10.5 | 11.0 |
| Brown, Sandy Clayey SILT | 13.0 | 24.0 |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** MW-28 | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 24.0 ft. Date Started: 1/26/2014 Date Completed: 1/26/2014

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 14.0 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Schedule 40 PVC Diam.: 2 Inch
Slot/Gauge: 0.010 Length: 10.0 Feet
Set Between: 14.0 ft. and 24.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** 17.48 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 12.0 ft. to 24.0 ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 10.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** David Brown **CERT. NO.:** 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: David Brown Well Driller Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) **COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER**

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** MW-29

**4. ABANDONMENT:** ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Grass with Topsoil | 0.5 | 0.5 |
| Orange, Sandy Clayey SILT | 9.5 | 10.0 |
| Brown, Sandy Clayey SILT | 15.0 | 25.0 |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** MW-29 | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 25.0 ft. Date Started: 1/26/2014 Date Completed: 1/26/2014

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 15.0 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Schedule 40 PVC Diam.: 2 Inch
Slot/Gauge: 0.010 Length: 10.0 Feet
Set Between: 15.0 ft. and 25.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** 16.99 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 13.0 ft. to 25.0 ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 11.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** David Brown CERT. NO.: 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: David Brown (Well Driller) Date: 3/10/2014
If D Level Driller, provide supervising driller's name:

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** MW-30

**4. ABANDONMENT:** ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Grass with Topsoil | 0.5 | 0.5 |
| Brown, Sandy Clayey SILT | 12.5 | 13.0 |
| Brown, Sandy SILT | 11.0 | 24.0 |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-30

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 24.0 ft. Date Started: 1/26/2014 Date Completed: 1/26/2014

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 14.0 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Schedule 40 PVC Diam.: 2 Inch
Slot/Gauge: 0.010 Length: 10.0 Feet
Set Between: 14.0 ft. and 24.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** 15.62 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 12.0 ft. to 24.0 ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 10.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** David Brown **CERT. NO.:** 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: David Brown (Well Driller) Date: 3/10/2014
If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** MW-31

**4. ABANDONMENT:** ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Grass with Topsoil | 0.5 | 0.5 |
| Brown, Sandy SILT | 10.5 | 11.0 |
| Brown, Sandy Clayey SILT | 13.0 | 24.0 |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-31

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 24.0 ft. Date Started: 1/27/2014 Date Completed: 1/27/2014

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 14.0 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Schedule 40 PVC Diam.: 2 Inch
Slot/Gauge: 0.010 Length: 10.0 Feet
Set Between: 14.0 ft. and 24.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** 16.42 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐No Bacterial Analysis ☐ Yes ☐No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 12.0 ft. to 24.0 ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 10.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe_____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** David Brown **CERT. NO.:** 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-807-7529 Fax No.: 803-548-2233

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: David Brown (Well Driller) Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** MW-32

**4. ABANDONMENT:** ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Grass with Topsoil | 0.5 | 0.5 |
| Orange, Sandy SILT | 6.5 | 7.0 |
| Brown, Sandy Clayey SILT | 8.0 | 15.0 |
| Red, Sandy Clayey SILT | 3.0 | 18.0 |
| Brown, Sandy SILT | 6.0 | 24.0 |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-32

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 24.0 ft. Date Started: 1/27/2014 Date Completed: 1/27/2014

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 14.0 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below
Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Schedule 40 PVC Diam.: 2 Inch
Slot/Gauge: 0.010 Length: 10.0 Feet
Set Between: 14.0 ft. and 24.0 ft. **NOTE: MULTIPLE SCREENS**
_____ ft. and _____ ft. **USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** 16.25 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 12.0 ft. to 24.0 ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 10.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** David Brown **CERT. NO.:** 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-807-7529 Fax No.: 803-548-2233

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: David Brown (Well Driller) Date: 3/10/2014
If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** MW-33

**4. ABANDONMENT:** ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Grass with Topsoil | 0.5 | 0.5 |
| Brown, Sandy Clayey SILT | 19.5 | 20.0 |
| Brown, Sandy SILT | 7.0 | 27.0 |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-33

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 27.0 ft. Date Started: 1/27/2014 Date Completed: 1/27/2014

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 17.0 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Schedule 40 PVC Diam.: 2 Inch
Slot/Gauge: 0.010 Length: 10.0 Feet
Set Between: 17.0 ft. and 27.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** 18.94 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 15.0 ft. to 27.0 ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 13.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** David Brown CERT. NO.: 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-807-7529 Fax No.: 803-548-2233

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: David Brown (Well Driller) Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** MW-34

**4. ABANDONMENT:** ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Grass with Topsoil | 0.5 | 0.5 |
| Yellow, Sandy Clayey SILT | 6.5 | 7.0 |
| Brown, Sandy Clayey SILT | 8.0 | 15.0 |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-34

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 15.0 ft. Date Started: 1/27/2014 Date Completed: 1/27/2014

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 5.0 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Schedule 40 PVC Diam.: 2 Inch
Slot/Gauge: 0.010 Length: 10.0 Feet
Set Between: 5.0 ft. and 15.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** 5.85 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 3.0 ft. to 15.0 ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 1.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe_____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** David Brown CERT. NO.: 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: David Brown (Well Driller) Date: 3/10/2014
If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

**2. LOCATION OF WELL:** **COUNTY:** Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** MW-35

**4. ABANDONMENT:** ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Grass with Topsoil | 0.5 | 0.5 |
| Orange, Sandy Clayey SILT | 15.5 | 16.0 |
| Brown, Sandy Clayey SILT | 12.0 | 28.0 |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-35

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 28.0 ft. Date Started: 1/27/2014 Date Completed: 1/27/2014

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 18.0 ft. depth
_____ in. to _____ ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Schedule 40 PVC Diam.: 2 Inch
Slot/Gauge: 0.010 Length: 10.0 Feet
Set Between: 2.0 ft. and 18.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** 18.88 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 16.0 ft. to 28.0 ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 14.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe_____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** David Brown **CERT. NO.:** 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: David Brown (Well Driller) Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** DMW-36

**4. ABANDONMENT:** ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Grass with Topsoil | 0.5 | 0.5 |
| Orange, Sandy Clayey SILT | 19.5 | 20.0 |
| Brown, Sandy Clayey SILT | 22.0 | 42.0 |
| Brown, Sandy SILT | 18.0 | 60.0 |
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| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
DMW-36

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 60.0 ft. Date Started: 2/4/2014 Date Completed: 2/5/2014

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 55.0 ft. depth
6.0 in. to 40.0 ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Schedule 40 PVC Diam.: 2 Inch
Slot/Gauge: 0.010 Length: 5.0 Feet
Set Between: 55.0 ft. and 60.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
~~Sieve~~ Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** 18.09 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 53.0 ft. to 60.0 ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 51.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe_____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** David Brown CERT. NO.: 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: David Brown (Well Driller) Date: 3/10/2014
If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** DMW-37

**4. ABANDONMENT:** ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Grass with Topsoil | 0.5 | 0.5 |
| Orange, Sandy Clayey SILT | 9.5 | 10.0 |
| Orange, Sandy SILT | 10.0 | 20.0 |
| Brown, Sandy Clayey SILT | 10.0 | 30.0 |
| Brown, Sandy SILT | 20.0 | 50.0 |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |
| **5. REMARKS:** DMW-37 | | |

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 50.0 ft. Date Started: 2/4/2014 Date Completed: 2/5/2014

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 45.0 ft. depth
6.0 in. to 40.0 ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Schedule 40 PVC Diam.: 2 Inch
Slot/Gauge: 0.010 Length: 5.0 Feet
Set Between: 45.0 ft. and 50.0 ft. NOTE: MULTIPLE SCREENS
_____ ft. and _____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** 16.18 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 43.0 ft. to 50.0 ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 41.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe_____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** David Brown CERT. NO.: 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: David Brown (Well Driller) Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** DMW-38

**4. ABANDONMENT:** ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Grass with Topsoil | 0.5 | 0.5 |
| Brown, Sandy Clayey SILT | 9.5 | 10.0 |
| Brown, Sandy SILT | 10.0 | 20.0 |
| Brown, Sandy Clayey SILT | 10.0 | 30.0 |
| Brown, Sandy SILT | 20.0 | 50.0 |
| | | |
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| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
DMW-38

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 50.0 ft. Date Started: 2/4/2014 Date Completed: 2/5/2014

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 45.0 ft. depth
6.0 in. to 40.0 ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Schedule 40 PVC Diam.: 2 Inch
Slot/Gauge: 0.010 Length: 5.0 Feet
Set Between: 45.0 ft. and 50.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
~~Sieve~~ Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** 20.10 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 43.0 ft. to 50.0 ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 41.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity _____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** David Brown CERT. NO.: 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: David Brown (Well Driller) Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** DMW-39

**4. ABANDONMENT:** ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Grass with Topsoil | 0.5 | 0.5 |
| Brown, Sandy Clayey SILT | 9.5 | 10.0 |
| Brown, Sandy SILT | 6.0 | 16.0 |
| Brown, Sandy Clayey SILT | 16.0 | 32.0 |
| Partially Weathered Rock | 3.0 | 35.0 |
| | | |
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| | | |
| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
DMW-39

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 35.0 ft. Date Started: 2/5/2014 Date Completed: 2/6/2014

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 30.0 ft. depth
6.0 in. to 29.0 ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Schedule 40 PVC Diam.: 2 Inch
Slot/Gauge: 0.010 Length: 5.0 Feet
Set Between: 30.0 ft. and 35.0 ft. NOTE: MULTIPLE SCREENS
_____ ft. and _____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** 16.33 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 28.0 ft. to 35.0 ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 26.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** David Brown CERT. NO.: 02053
Address: (Print) Level: A B C D (circle one) ✓
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-807-7529 Fax No.: 803-548-2233

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: David Brown (Well Driller) Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

DHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

DHEC — PROMOTE PROTECT PROSPER

**1. WELL OWNER INFORMATION:**
Name: SCDHEC (last) (first)
Address: 2600 Bull Street
City: Columbia State: SC Zip: 29201-1708
Telephone: Work: (803) 898-4300 Home:

**2. LOCATION OF WELL:** COUNTY: Abbeville
Name: Crawford's Country Store
Street Address: 5870 Highway 28 North
City: Abbeville Zip: 29620-0000
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** 12335 **PUBLIC SYSTEM NUMBER:** DMW-40

**4. ABANDONMENT:** ☐ Yes ☑ No
Give Details Below
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Grass with Topsoil | 0.5 | 0.5 |
| Brown, Sandy Clayey SILT | 9.5 | 10.0 |
| Brown, Sandy SILT | 10.0 | 20.0 |
| Brown, Sandy Clayey SILT | 10.0 | 30.0 |
| Brown, Sandy SILT | 15.0 | 45.0 |
| Partially Weathered Rock | 5.0 | 50.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
DMW-40

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other

**7. PERMIT NUMBER:** UMW-25248

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 50.0 ft. Date Started: 2/4/2014 Date Completed: 2/5/2014

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 Inch
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 45.0 ft. depth
6.0 in. to 40.0 ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: Schedule 40 PVC Diam.: 2 Inch
Slot/Gauge: 0.010 Length: 5.0 Feet
Set Between: 45.0 ft. and 50.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**12. STATIC WATER LEVEL** 20.10 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 43.0 ft. to 50.0 ft.
Effective size _____ Uniformity Coefficient _____

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Bentonite ☑ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 41.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe _____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** David Brown CERT. NO.: 02053
Address: (Print) Level: A B C D (circle one)
17539 Greenhill Road
Charlotte, North Carolina 28278
Telephone No.: 704-607-7529 Fax No.: 803-548-2233

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: David Brown (Well Driller) Date: 3/10/2014

If D Level Driller, provide supervising driller's name:

OHEC 1903 (03/2004) COPY 1 MAIL TO SCDHEC, COPY 2 TO WELL OWNER, COPY 3 TO WELL DRILLER

**APPENDIX F:**

**AQUIFER EVALUATION SUMMARY FORMS, DATA, GRAPHS, EQUATIONS**

**This appendix is not applicable to the scope of services presented in the subject report, however this page has been included in order to conform to the SCDHEC UST Management Division Programmatic QAPP and provide report continuity**

**APPENDIX G:**

**DISPOSAL MANIFEST**

Midlands Environmental Consultants, Inc.

March 14, 2014

Re: Treatment of Purge Water
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID Number 12335
MECI Project Number 13-4650

To Whom It May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.
2. No free-product was detected in any of the purge water drums.
3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.
4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.
5. Record of usage is maintained by Contractor.
6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.
7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

**165.0 gallons of water was disposed on February 7th, 2014 during the development of the newly installed monitoring wells.**

**224.0 gallons of wastewater was disposed on February 18th, 2014 during the sampling/purging of the monitoring well network.**

**A total of 389.0 gallons were treated on at the referenced site.**

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,
Midlands Environmental Consultants, Inc.

Kyle V. Pudney
Staff Biologist

DEPARTMENT OF PUBLIC WORKS
1094 GASSOWAY FARM RD.
ABBEVILLE, SC 29620

001089 Midlands Environ. Consultants
231 Dooley Rd.
Lexington SC 29073

| SITE | TICKET | GRID | WEIGHMASTER |
|---|---|---|---|
| 01 | 124310 | G5-536 | Betty |

| DATE IN | DATE OUT | TIME IN | TIME OUT | VEHICLE | ROLL OFF |
|---|---|---|---|---|---|
| 02/06/14 | 02/06/14 | 11:52 | 11:52 | 1089 | |

| REFERENCE | ORIGIN |
|---|---|
| | ABBEVILLE COUNTY |

| | | | |
|---|---|---|---|
| Manual Gross Wt. | 13800 | LB | Inbound - Charge ticket |
| Manual Tare Wt. | 8740 | LB | |
| Net Weight | 5060 | LB | |

| QTY. | UNIT | DESCRIPTION | RATE | EXTENSION | FEE | TOTAL |
|---|---|---|---|---|---|---|
| 2.53 | TON | CONTAMINATED SOIL | 35.00 | 88.55 | 0.00 | 88.55 |

HOURS OF OPERATION: MONDAY - FRIDAY 7:00 TO 3:00
SATURDAY 7:00 TO 11:00
This is to certify that this load does not contain any
hazardous materials, medical waste or liquids of any type.

NET AMOUNT 88.55
TENDERED
CHANGE
CHECK NO.

WASTE TO REORDER CONTACT CAROLINA SOFTWARE (910) 799-6767 SIGNATURE _____

DEPARTMENT OF PUBLIC WORKS
1094 GASSOWAY FARM RD.
ABBEVILLE, SC 29620

001089 Midlands Environ. Consultants
231 Dooley Rd.
Lexington SC 29073

| SITE | TICKET | GRID | WEIGHMASTER |
|---|---|---|---|
| 01 | 124311 | G5-536 | Betty |

| DATE IN | DATE OUT | TIME IN | TIME OUT | VEHICLE | ROLL OFF |
|---|---|---|---|---|---|
| 02/06/14 | 02/06/14 | 11:53 | 11:53 | 1089 | |

| REFERENCE | ORIGIN |
|---|---|
| | ABBEVILLE COUNTY |

| | | | |
|---|---|---|---|
| Manual Gross Wt. | 13720 | LB | Inbound - Charge ticket |
| Manual Tare Wt. | 8740 | LB | |
| Net Weight | 4980 | LB | |

| QTY. | UNIT | DESCRIPTION | RATE | EXTENSION | FEE | TOTAL |
|---|---|---|---|---|---|---|
| 2.49 | TON | CONTAMINATED SOIL | 35.00 | 87.15 | 0.00 | 87.15 |

HOURS OF OPERATION: MONDAY - FRIDAY 7:00 TO 3:00
SATURDAY 7:00 TO 11:00
This is to certify that this load does not contain any
hazardous materials, medical waste or liquids of any type.

NET AMOUNT 87.15
TENDERED
CHANGE
CHECK NO.

WASTE TO REORDER CONTACT CAROLINA SOFTWARE (910) 799-6767 SIGNATURE

**APPENDIX H:**

**LOCAL ZONING REGULATIONS**

**This appendix is not applicable to the scope of services presented in the subject report, however this page has been included in order to conform to the SCDHEC UST Management Division Programmatic QAPP and provide report continuity**

# APPENDIX I:
# FATE AND TRANSPORT MODELING

**This appendix is not applicable to the scope of services presented in the subject report, however this page has been included in order to conform to the SCDHEC UST Management Division Programmatic QAPP and provide report continuity**

**APPENDIX J:**

**ACCESS AGREEMENTS**

# Application for Encroachment Permit

S.C. Department of Transportation
Form 07 (Rev 08/2013)

*Form Use I*

## Contact Information

| | |
|---|---|
| **Applicant:** | Midlands Environmental Consultants, Inc. |
| **Street:** | 231 Dooley Road |
| **City:** | Lexington |
| **State:** | SC **Zip Code:** 29073 |
| **Phone:** | (803) 808-2043 **Fax:** (803) 808-2048 |
| **Email:** | jlc@meci.net |
| **Contact:** | Jeff Coleman |

## Project Location

**Primary County:** Abbeville *SCDOT Street Fi*

| County | Road Name | |
|---|---|---|
| Abbeville | SC 28 NORTH | Delete |

Add Road

**1. Type of Encroachment:** ENVIRONMENTAL

Construction of five temporary direct push borings and installation of three groundwater monitoring wells as directed by SCDHEC.

**2. Description of Location:**

Along the the western shoulder of SC Highway 28 North/SC Highway 184, off roadside, out of wheel path within SCDOT Right of Way.

(Attach sketch indicating roadway features such as: pavement width, shoulder width, sidewalk and curb and gutter location, significant drainage structure, north arrow, right of way width, and location of the proposed encroachment with respect to the roadway centerline and the nearest intersecting road on the State system.)

Customer Agreement

3. The undersigned applicant hereby requests the SCDOT to permit encroachment on the SCDO
way as described herein. It is expressly understood that the encroachment, if and when constru
shall be
installed in accordance with the sketch attached hereto and made a part hereof. The applicant
comply with and be bound by the SCDOT's "A Policy for Accommodating Utilities on Highwa
of
way", "Standard Specifications for Highway Construction", the "General Provisions" and "Sp
Provisions", attached hereto or made a part hereof by reference, during the installation, opera
maintenance of said encroachment within the SCDOT's Right of Way. DISCHARGES OF STO
WATER AND NON-STORM WATER: Work within State Highway right-of-way shall be cond
compliance with all applicable requirements of the National Pollutant Discharge Elimination S
(NPDES) permit(s) issued to the Department of Transportation (Department), to govern the di
storm water and non-storm water from its properties. Work shall also be in compliance with al
applicable Federal, State and Local laws and regulations, and with the Department's Encroach
Permits
Manual and encroachment permit. The encroachment permit will not be issued until the applic
received an NPDES construction permit from SC Department of Health and Environmental C
The applicant agrees to comply with all current SCDOT Standards Specifications for Highway Const
including
all Supplemental Technical Specifications. The applicant hereby further agrees, and binds his/her/its
personal
representatives, successors, assigns, to assume any and all liability for accidents or injuries to persons
damage to
property, including the highway, that may be caused by the construction, maintenance, use, moving o
removing of the
physical appurtenances contemplated herein, and the applicant agrees to indemnify and hold SCDOT
from
and against any and all claims for personal injury and/or property damage which may be sustained by
by reason
of the construction, maintenance or existence of said encroachment on the SCDOT's right of way.

**Applicant's Name:** Jeff Coleman (Please print or type) **Date:** 10/23/13

**Applicant's Sig:** _____ **Title:** Senior Scientist

For Office Use Only

## For Office Use Only

In accordance with your request and subject to all the provisions, terms, conditions, and restri
stated

in the application and the general and special provisions attached hereto, the SCDOT hereby
your application for an encroachment permit. This permit shall become null and void unless t
contemplated herein shall have been completed prior to:

See Attached Special Provision and/or Permit Requirements

NPDES Permit Nbr:

10/29/13 (Date received by res. Maint. Engr.) | (SCDOT Approval) | 10/30/13 (Date)

Resident Maintenance Engineer | Deputy Secretary for Engineerin

District Engineering Administrator | District Maint./Constr. Engr

General Provisions

## Application for Encroachment Permit
## General Provisions

1. **DEFINITIONS:** The word "Permittee" used herein shall mean the name of the person, firm corporation to whom this permit is addressed, his, her, its, heirs, personal representatives, s and assigns. The word "DEPARTMENT" shall mean the South Carolina Department of Transportation.
2. **NOTICE PRIOR TO STARTING WORK:** Before starting the work contemplated herein w limits of the highway right of way, the Department's Resident Maintenance Engineer in the which the proposed work is located shall be notified 24 hours in advance so that he may be while the work is under way.
3. **PERMIT SUBJECT TO INSPECTION:** This permit shall be kept at the site of the work at while said work is under way and must be shown to any representative of the Department o enforcement officer on demand.
4. **PROTECTION OF HIGHWAY TRAFFIC:** The applicant shall be responsible for the prote the highway traffic at all times during the construction, maintenance, removing or moving encroachment permitted herein. Detours, barricades, warning signs and flagmen, as necessa be provided by and at the expense of the Permittee and shall be in accordance with the "Ma Uniform Traffic Control Devices" (MUTCD). The work shall be planned and carried out se there will be the least possible inconvenience to the motoring public. The Permittee agrees t all rules and regulations of the Department while carrying on the work contemplated herei take all other precautions that circumstances warrant.
5. **STANDARDS OF CONSTRUCTION:** All work shall conform to the Department's standar construction and shall be performed in a workman-like manner. The applicant shall make provisions for maintaining the proper drainage of the highway as it may be affected by the encroachment permitted herein. All work shall be subject to the supervision and satisfactio Department.
6. **FUTURE MOVING OF PHYSICAL APPURTENANCES:** If, in the opinion of the State Hi Engineer, it should ever become necessary to move or remove the physical appurtenances, o part thereof contemplated herein, on account of change in location of the highway, widening highway, or for any other sufficient reason, such moving shall be done on demand of the De at the expense of the Permittee.

7. RESTORATION OF HIGHWAY FACILITIES UPON MOVING OR REMOVING OF PE APPURTENANCES: If, and when, the physical appurtenances contemplated herein shall b or removed, either on the demand of the Department or at the option of the Permittee, the h and facilities shall immediately be restored to their original condition at the expense of the I
8. COSTS: All work in connection with the construction, maintenance, moving or removing o physical appurtenances contemplated herein shall be done by and at the expense of the Perr
9. ADDITIONAL PERMISSIONS: (a) It distinctly understood that this permit does not in any way grant or release any rights lawful possessed by the abutting property owners. The Permittee shall secure any such rights, as n from said abutting property owners. (b) The Permittee responsible for obtaining all other approvals or permits necessary for installation of the encroachment from other government entities. (c) Th be no excavation of soil nearer than two feet to any public utility line or appurtenant facility with the consent of the owner thereof, or except upon special permission of this Departmen opportunity to be heard is given the owner of such line or appurtenant facility.
10. ADDITIONAL WORK PERFORMANCE: (a) All crossi the highway shall be constructed in accordance with "Specifications for Overhead Crossing and Power Transmission Lines and Telegraph Lines over each other and over Highway Rig Way in South Carolina," as approved by the Public Service Commission of South Carolina effective as of date of this permit.
(b) All tunneling, boring, or jacking shall be done in such a way as not to disturb the highw surfacing. (c) No pavement shall be cut unless specifically authorized herein. (d) No excavation shall be nearer than three fee edge of pavement unless specifically authorized herein.
(e) Underground facilities will be located at minimum depths as defined in the "Utility Accommodations Manual" for the transmittant, generally as follows: 4 feet minimum for h or dangerous transmittant, 3 feet minimum for other lines. The Department may approve s depths if adequate protection is provided. Such approval must be obtained in writing. (f) Service and other small diameter pipes sha jacked, driven, or otherwise forced underneath the pavements on any surfaced road withou disturbing the pavement. The section under the highway pavement and within a distance of feet on either side shall be continuous without joints.
11. ACCESS:
(a) Permittee is responsible for maintaining reasonable access to private driveways during construction. (b) It is expressly provided that, with respect to any limited access highway, th Permittee shall not have or gain access from the main traveled way of the highway, or the o ramps to such facility, except upon approval by the Department.
12. DRIVEWAYS:
(a) The existing crown of the highway shall be continued to the outside shoulder line of the highway. (b) If the driveway or approach is concrete pavement, the pavement shall be constructed at least 6 inches thick and with a minimum of class 2500 concrete. There shall b bituminous expansion joint, not less than 3/4 inches in thickness, placed between the highwa and the paving of the approach for the full width of the approach.
13. BEAUTIFICATION:
(a) All trees, plants, flowers, etc. shall be placed in accordance with the provisions specifical stipulated

herein.

(b) All trees, plants, flowers, etc. shall be maintained by, and at the expense of, the Permittee provisions of this permit shall become null and void, if and when said Permittee ceases to m said trees, plants, flowers, etc.

14. AS-BUILT PLANS:

(a) The applicant shall provide the Department with survey-quality as-built plans in accord the requirements set forth in the Department's "A Policy for Accommodating Utilities on H Rights of Way".

**APPENDIX K:**

**DATA VERIFICATION CHECKLIST**

**Contractor Checklist**

| Item# | Item | Yes | No | N/A |
|---|---|---|---|---|
| 1 | Are Facility Name, Permit #, and address provided? | X | | |
| 2 | Is UST Owner/Operator name, address, & phone number provided? | X | | |
| 3 | Is name, address, & phone number of current property owner provided? | X | | |
| 4 | Is the DHEC Certified UST Site Rehabilitation Contractor's Name, Address, telephone number, and certification number provided? | X | | |
| 5 | Is the name, address, telephone number, and certification number of the well driller that installed borings/monitoring wells provided? | X | | |
| 6 | Is the name, address, telephone number, and certification number of the certified laboratory(ies) performing analytical analyses provided? | X | | |
| 7 | Has the facility history been summarized? | X | | |
| 8 | Has the regional geology and hydrogeology been described? | X | | |
| 9 | Are the receptor survey results provided as required? | X | | |
| 10 | Has current use of the site and adjacent land been described? | X | | |
| 11 | Has the site-specific geology and hydrogeology been described? | X | | |
| 12 | Has the primary soil type been described? | X | | |
| 13 | Have field screening results been described? | X | | |
| 14 | Has a description of the soil sample collection and preservation been detailed? | X | | |
| 15 | Has the field screening methodology and procedure been detailed? | X | | |
| 16 | Has the monitoring well installation and development dates been provided? | X | | |
| 17 | Has the method of well development been detailed? | X | | |
| 18 | Has justification been provided for the locations of the monitoring wells? | X | | |
| 19 | Have the monitoring wells been labeled in accordance with the UST QAPP guidelines? | X | | |
| 20 | Has the groundwater sampling methodology been detailed? | X | | |
| 21 | Have the groundwater sampling dates and groundwater measurements been provided? (Table 2 & Figure 5) | X | | |
| 22 | Has the purging methodology been detailed? | X | | |
| 23 | Has the volume of water purged from each well been provided along with measurements to verify that purging is complete? (Appendix B) | X | | |
| 24 | If free-product is present, has the thickness been provided? | X | | |
| 25 | Does the report include a brief discussion of the assessment done and the results? | X | | |
| 26 | Does the report include a brief discussion of the aquifer evaluation and results? | | | X |
| 27 | Does the report include a brief discussion of the fate & transport models used? | | | X |

| Item# | Item | Yes | No | N/A |
|---|---|---|---|---|
| 28 | Are the site-conceptual model tables included? (Tier 1 Risk Evaluation) | | | X |
| 29 | Have the exposure pathways been analyzed? (Tier 2 Risk Evaluation) | | | X |
| 30 | Have the SSTLs for each compound and pathway been calculated? (Tier 2 Risk Evaluation) | | | X |
| 31 | Have recommendations for further action been provided and explained? | X | | |
| 32 | Has the soil analytical data for the site been provided in tabular format? (Table 1) | | | X |
| 33 | Has the potentiometric data for the site been provided in tabular format? (Table 2) | X | | |
| 34 | Has the current and historical laboratory data been provided in tabular format? (Tables 3 & 3A) | X | | |
| 35 | Have the aquifer characteristics been provided and summarized on the appropriate form? (Appendix F) | | | X |
| 36 | Have the Site conceptual model tables been included? (Tier 1 Risk Evaluation) | | | X |
| 37 | Has the topographic map been provided with all required elements? (Figure 1) | X | | |
| 38 | Has the site base map been provided with all required elements? (Figure 2) | X | | |
| 39 | Have the CoC site maps been provided? (Figures 3, 4) | X | | |
| 40 | Has the site potentiometric map been provided? (Figure 5) | X | | |
| 41 | Have the geologic cross-sections been provided? (Figure 6) | | | X |
| 42 | Have maps showing the predicted migration of the CoCs through time been provided? (Tier 2 Risk Evaluation) | | | X |
| 43 | Has the site survey been provided and include all necessary elements? (Appendix A) | X | | |
| 44 | Have the sampling logs, chain of custody forms, and the analytical data package been included with all required elements? (Appendix B) | X | | |
| 45 | Is the laboratory performing the analyses properly certified? | X | | |
| 46 | Has the tax map been included with all necessary elements? (Appendix C) | | | X |
| 47 | Have the soil boring/field screening logs been provided? (Appendix D) | X | | |
| 48 | Have the well completion logs and SCDHEC Form 1903 been provided? (Appendix E) | X | | |
| 49 | Have the aquifer evaluation forms, data, graphs, equations, etc. been provided? (Appendix F) | | | X |
| 50 | Have the disposal manifests been provided? (Appendix G) | X | | |
| 51 | Has a copy of the local zoning regulations been provided? (Appendix H) | | | X |
| 52 | Has all fate and transport modeling been provided? (Appendix I) | | | X |
| 53 | Have copies of all access agreements obtained by the contractor been provided? (Appendix J) | X | | |
| 54 | Has a copy of this form been attached to the final report and are explanations for any missing or incomplete data been provided? (Appendix K) | X | | |

D H E C
PROMOTE PROTECT PROSPER

# Site-Specific Work Plan for Approved ACQAP
## Underground Storage Tank Management Division

To: Shane S. Shull (SCDHEC Project Manager)
From: Shane S. Shull (Contractor Project Manager)
Contractor: SCDHEC - UST Division UST Contractor Certification Number: UCC-0116

Facility Name: Crawfords Country Store UST Permit #: 12335
Facility Address: 5870 Hwy 28 N
Responsible Party: Frank Crawford Phone: (864)446-2000
RP Address: 5870 Hwy 28 N, Abbeville, SC 29620-3447
Property Owner (if different):
Property Owner Address: 5870 Hwy 28 N, Abbeville, SC 29620-3447
Current Use of Property: Active gas station (5 USTs currently in use)

**Scope of Work** (Please check all that apply)

☐ IGWA ☐ Tier II ☑ Groundwater Sampling ☐ GAC
☐ Tier I ☐ Monitoring Well Installation ☑ Other Stream Sampling

**Analyses** (Please check all that apply)

Groundwater/Surface Water:

☑ BTEXNMDCA (8260B) ☐ Lead ☐ BOD ☐ Methane
☑ Oxygenates (8260B) ☐ 8 RCRA Metals ☐ Nitrate ☑ Ethanol
☑ EDB (8011) ☐ TPH ☐ Sulfate ☐ Dissolved Iron
☐ PAH (8270D) ☐ pH ☐ Other

Soil:

☐ BTEXN ☐ 8 RCRA Metals ☐ TPH-DRO (3550B/8015B) ☐ Grain Size
☐ PAH ☐ Oil & Grease (9071) ☐ TPH-GRO (5030B/8015B) ☐ TOC

Air:

☐ BTEXN

**Sample Collection** (Estimate the number of samples of each matrix that are expected to be collected.)

____ Soil 1 Water Supply Wells ____ Air 1 Field Blank
____ Monitoring Wells 2 Surface Water 1 Duplicate 1 Trip Blank

**Field Screening Methodology**

Estimate number and total completed depth for each point, and include their proposed locations on the attached map.
# of shallow points proposed: Estimated Footage: feet per point
# of deep points proposed: Estimated Footage: feet per point
Field Screening Methodology:

**Permanent Monitoring Wells**

Estimate number and total completed depth for each well, and include their proposed locations on the attached map.
# of shallow wells: Estimated Footage: feet per point
# of deep wells: Estimated Footage: feet per point
# of recovery wells: Estimated Footage: feet per point
Monitoring Well development method (consistent with SOP):
Comments, if warranted:

US Btech DOCKET

UST APR 01 2014 DIVISION

UST Permit #: 12335 Facility Name: Crawfords Country Store

**Implementation Schedule** (Number of calendar days from approval)
Field Work Start-Up: April 8, 2014 Field Work Completion: April 8, 2014
Report Submittal: 2 weeks after field work completion # of Copies Provided to Property Owners: 1

**Aquifer Characterization**
Pump Test: ☐ Slug Test: ☐ (Check one and provide explanation below for choice)

**Investigation Derived Waste Disposal**
Soil: _____ Tons Purge Water: _____ Gallons
Drilling Fluids: _____ Gallons Free-Phase Product: _____ Gallons

**Additional Details For This Scope of Work**
For example, list wells to be sampled, wells to be abandoned/repaired, well pads/bolts/caps to replace, details of AFVR event, etc.
Will sample site McCullough-WW and stream (SW-1 & SW-2) for BTEXMNADCA+Oxys+EDB.
Duplicate sample will be collected from WSW.

WSW & Stream located on property of Mr. Jerry McCullough, (864)348-7041. Tax Map # 047-00-00-004

**Compliance With Annual Contractor Quality Assurance Plan (ACQAP)**
Yes Laboratory as indicated in ACQAP? (Yes/No) If no, indicate laboratory information below.
Name of Laboratory: Shealy Environmental Services
SCDHEC Certification Number: _____
Name of Laboratory Director: _____

____ Well Driller as indicated in ACQAO? (Yes/No) If no, indicate driller information below.
Name of Well Driller: _____
SCLLR Certification Number: _____

____ Other variations from ACQAP. Please describe below.

**Attachments**
1. Attach a copy of the relevant portion of the USGS topographic map showing the site location.
2. Prepare a site base map. This map must be accurately scaled, but does not need to be surveyed. The map must include the following:
   - North Arrow
   - Location of property lines
   - Location of buildings
   - Previous soil sampling locations
   - Previous monitoring well locations
   - Proposed soil boring locations
   - Proposed monitoring well locations
   - Legend with facility name and address, UST permit number, and bar scale
   - Streets or highways (indicate names and numbers)
   - Location of all present and former ASTs and USTs
   - Location of all potential receptors
3. Assessment Component Cost Agreement, SCDHEC Form D-3664

D H E C
PROMOTE PROTECT PROSPER

# Site-Specific Work Plan for Approved ACQAP
## Underground Storage Tank Management Division

To: Shane S. Shull (SCDHEC Project Manager)
From: Shane S. Shull (Contractor Project Manager)
Contractor: SCDHEC - UST Division UST Contractor Certification Number: UCC-0116

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Property Owner (if different):
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Current Use of Property: Active gas station (5 USTs currently in use)

**Scope of Work** (Please check all that apply)

☐ IGWA ☐ Tier II ☑ Groundwater Sampling ☐ GAC
☐ Tier I ☐ Monitoring Well Installation ☑ Other Stream Sampling

**Analyses** (Please check all that apply)

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☑ EDB (8011) ☐ TPH ☐ Sulfate ☐ Dissolved Iron
☐ PAH (8270D) ☐ pH ☐ Other

Soil:

☐ BTEXN ☐ 8 RCRA Metals ☐ TPH-DRO (3550B/8015B) ☐ Grain Size
☐ PAH ☐ Oil & Grease (9071) ☐ TPH-GRO (5030B/8015B) ☐ TOC

Air:

☐ BTEXN

**Sample Collection** (Estimate the number of samples of each matrix that are expected to be collected.)

____ Soil 1 Water Supply Wells ____ Air 1 Field Blank
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Field Screening Methodology:

**Permanent Monitoring Wells**

Estimate number and total completed depth for each well, and include their proposed locations on the attached map.
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# of deep wells: Estimated Footage: feet per point
# of recovery wells: Estimated Footage: feet per point
Monitoring Well development method (consistent with SOP):
Comments, if warranted:

UST Permit #: 12335 Facility Name: Crawfords Country Store

**Implementation Schedule** (Number of calendar days from approval)
Field Work Start-Up: April 8, 2014 Field Work Completion: April 8, 2014
Report Submittal: 2 weeks after field work completion # of Copies Provided to Property Owners: 1

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Pump Test: ☐ Slug Test: ☐ (Check one and provide explanation below for choice)

**Investigation Derived Waste Disposal**
Soil: _____ Tons Purge Water: _____ Gallons
Drilling Fluids: _____ Gallons Free-Phase Product: _____ Gallons

**Additional Details For This Scope of Work**
For example, list wells to be sampled, wells to be abandoned/repaired, well pads/bolts/caps to replace, details of AFVR event, etc.
Will sample site McCullough-WW and stream (SW-1 & SW-2) for BTEXMNADCA+Oxys+EDB.
Duplicate sample will be collected from WSW.

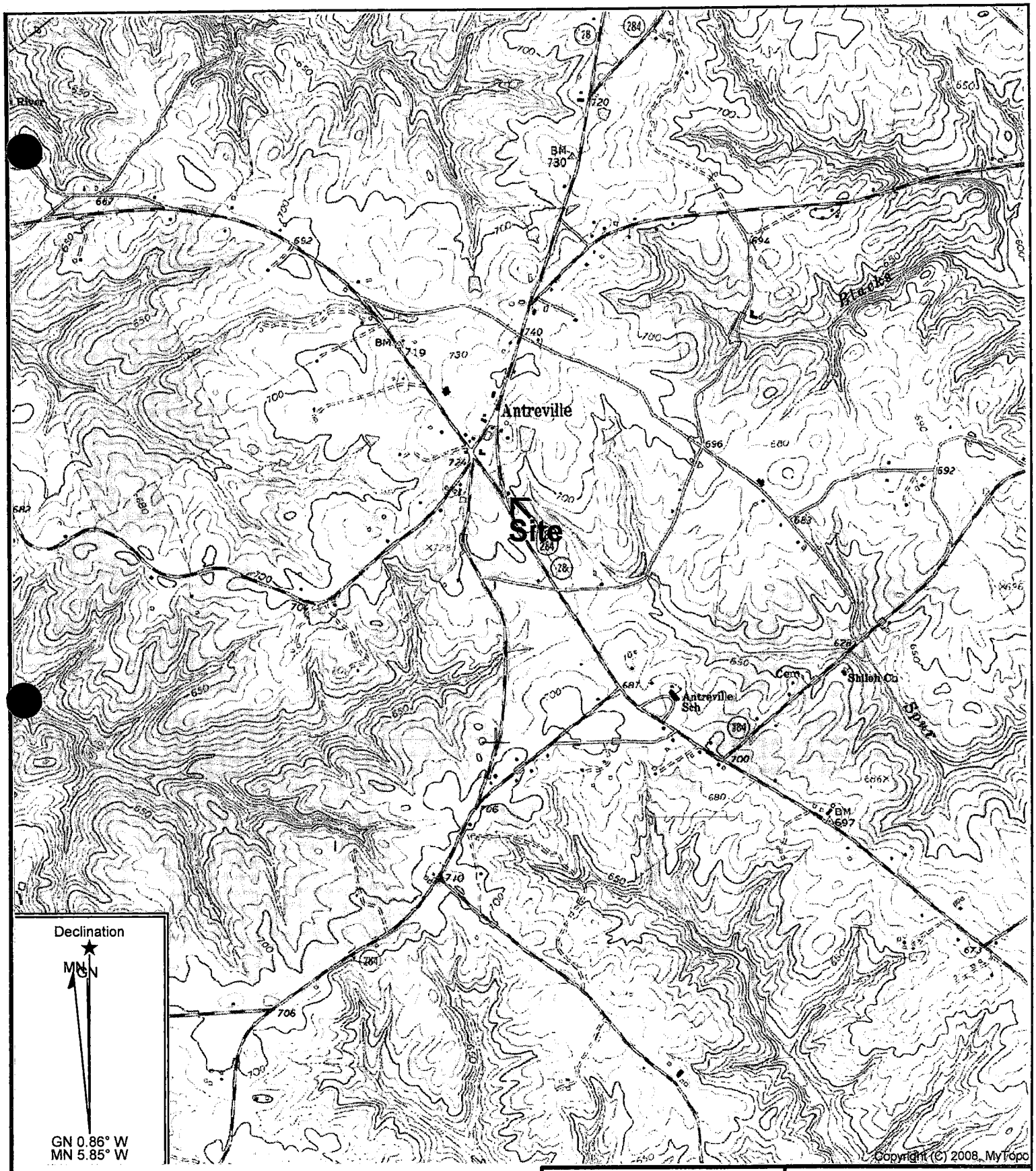
WSW & Stream located on property of Mr. Jerry McCullough, (864)348-7041. Tax Map # 047-00-00-004

**Compliance With Annual Contractor Quality Assurance Plan (ACQAP)**
Yes Laboratory as indicated in ACQAP? (Yes/No) If no, indicate laboratory information below.
Name of Laboratory: Shealy Environmental Services
SCDHEC Certification Number: _____
Name of Laboratory Director: _____

____ Well Driller as indicated in ACQAO? (Yes/No) If no, indicate driller information below.
Name of Well Driller: _____
SCLLR Certification Number: _____

____ Other variations from ACQAP. Please describe below.

**Attachments**
1. Attach a copy of the relevant portion of the USGS topographic map showing the site location.
2. Prepare a site base map. This map must be accurately scaled, but does not need to be surveyed. The map must include the following:
   - North Arrow
   - Location of property lines
   - Location of buildings
   - Previous soil sampling locations
   - Previous monitoring well locations
   - Proposed soil boring locations
   - Proposed monitoring well locations
   - Legend with facility name and address, UST permit number, and bar scale
   - Streets or highways (indicate names and numbers)
   - Location of all present and former ASTs and USTs
   - Location of all potential receptors
3. Assessment Component Cost Agreement, SCDHEC Form D-3664




Reference: Antreville, South Carolina
USGS 7.5 Min. Quad
Contour Interval – 10 Feet

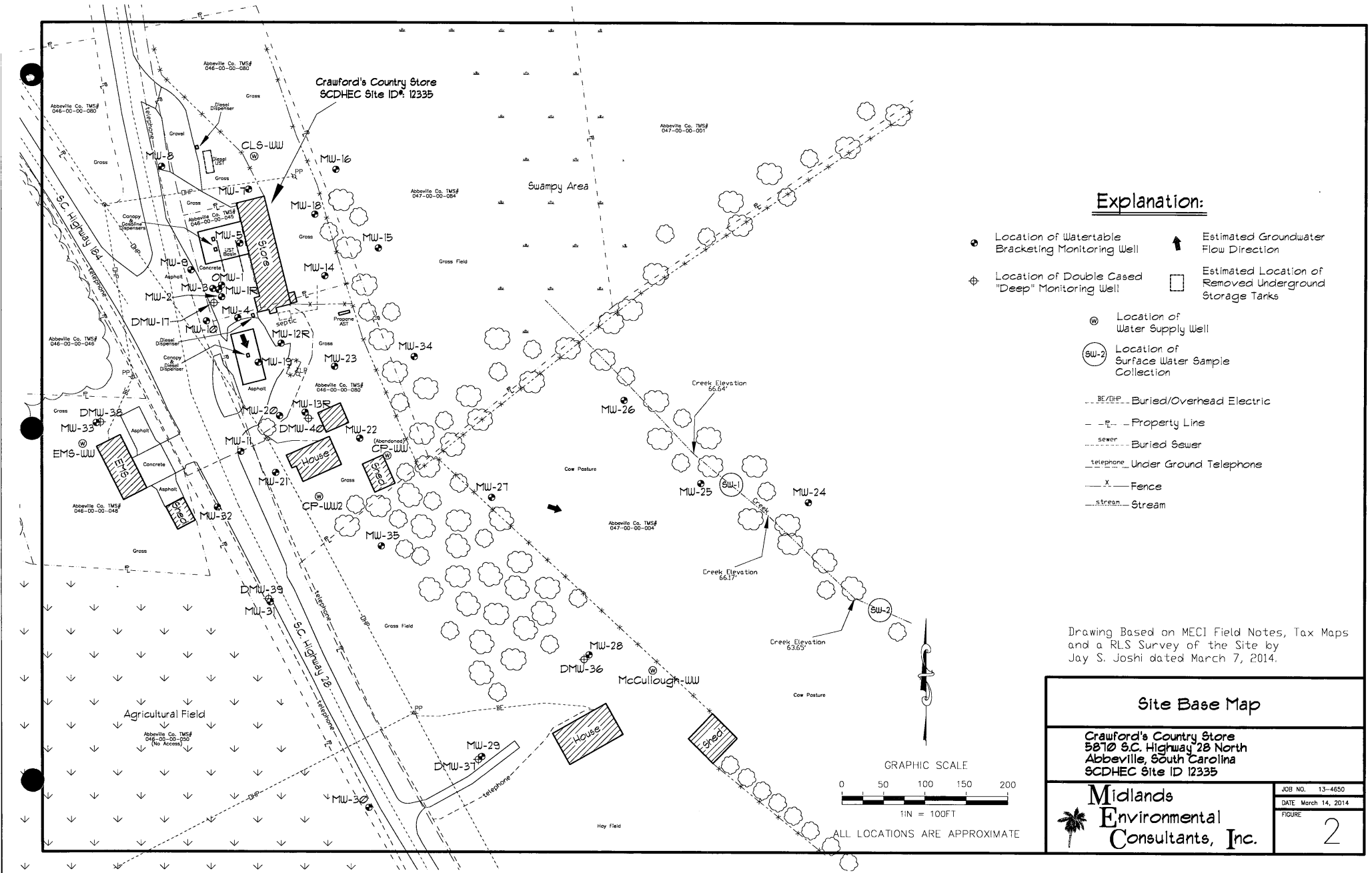
Midlands Environmental Consultants, Inc.

Site Location

Crawford's Country Store
5870 South Carolina 28 North, Abbeville, SC
SCDHEC Site ID# 12335

Figure 1

MECI 11-3327




## Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased "Deep" Monitoring Well
- Estimated Groundwater Flow Direction
- Estimated Location of Removed Underground Storage Tanks
- (W) Location of Water Supply Well
- (SW-2) Location of Surface Water Sample Collection
- BE/OHP — Buried/Overhead Electric
- PL — Property Line
- sewer — Buried Sewer
- telephone — Under Ground Telephone
- X — Fence
- stream — Stream

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

GRAPHIC SCALE
0 50 100 150 200
1IN = 100FT

ALL LOCATIONS ARE APPROXIMATE

# Site Base Map

Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 13-4650
DATE March 14, 2014
FIGURE 2

D H E C

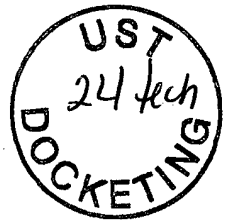
PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

*Promoting and protecting the health of the public and the environment*

KELLY MABERRY
SHEALY ENVIRONMENTAL
106 VANTAGE POINT DR
WEST COLUMBIA SC 29172

APR 0 2 2014




Re: Laboratory Analyses Approval
Bid # IFB-5400003038-06/02/11-EMW; PO#4600107190

Dear Ms. Maberry:

Under the terms and conditions of the referenced bid package, analytical sampling has been approved for the referenced facility. The facility has been assigned an individual Cost Agreement (CA) number as listed below. Please reference the CA number and Purchase Order #4600107190 on the appropriate invoice submitted for payment against the facility.

| UST Permit # | Facility | Analyses-Groundwater | CA # |
|---|---|---|---|
| 12335 | Crawfords Country Store | 6-BTEXMN, DCA, Oxygenates, & EDB | 47879 |

If you have any questions or need further assistance, please contact me at (803) 898-0631 or thomadl@dhec.sc.gov.

Sincerely,

Debra L. Thoma

Debra L. Thoma, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

Enc: Approved Cost Agreement

cc: Technical File

# Approved Cost Agreement 47879

Facility: 12335 CRAWFORDS COUNTRY STORE
SHULLSS
PO Number:

| Task / Description | Categories | Item | Description | Qty / Pct | Unit Price | Amount |
|---|---|---|---|---|---|---|
| 11 ANALYSES | | | | | | |
| | GW GROUNDWATER | A1 | BTEXNM+OXYGS+1,2-DCA+ETH-8260B | 6.0000 | 35.00 | 210.00 |
| | | B1 | RUSH EPA METHOD 8260B (ALL A1) | 6.0000 | 55.00 | 330.00 |
| | | F | EDB | 6.0000 | 20.00 | 120.00 |
| | | | | **Total Amount** | | 660.00 |

D H E C
PROMOTE PROTECT PROSPER
Catherine B. Templeton, Director
*Promoting and protecting the health of the public and the environment*

**MR & MRS MCCULLOUGH**
**5804 HWY 28 NORTH**
**ABBEVILLE SC 29620-3447**

APR 0 2 2014

UST 25 Tech DOCKETING

Re: **Water Supply Well & Stream Sampling Results**
Crawfords Country Store
5870 Hwy 28 North, Abbeville, SC 29620
UST Permit # 12335
Petroleum Release Reported December 3, 1991
Additional Assessment Report Received March 19, 2014
Abbeville County

Dear Mr. and Mrs. McCullough:

On February 18, 2014, Midlands Environmental Consultants, Inc., collected groundwater samples from your water supply well and the stream located on your property. This sampling work was directed by the Underground Storage Tank Management Division (UST Division) to evaluate the extent of the underground petroleum release from Crawfords Country Store. The lab results from your water supply well sample indicate that Methy tertiary butyl ether (MTBE) is present at a concentration of 1.8 µg/L, and Diisopropyl ether (DIPE) is present at an estimated concentration of 3.5 µg/L. The safe drinking water standard / Risk Based Screening Level (RBSL) for MTBE is 40 µg/L, and the Action Level for DIPE is 150 µg/L. Based on current scientific evidence, concentrations below RBSL and AL do not pose any risk to your health. Additionally, for the two samples collected from the stream located in your pasture, MTBE was detected at 1.5 µg/L and 1.4 µg/L respectively.

Based on these results, the UST Management Division plans to resample your water supply well and stream on Tuesday, April 8, 2014, to ensure that contaminants remain below the safe drinking water standards. If concentrations increase, a granular activated carbon (GAC) unit can be installed on your well to remove chemicals of concern.

On all correspondence concerning this site, please reference UST Permit # 12335. If there are any questions concerning this correspondence, please feel free to contact me at (803) 898-0607, via fax at (803) 898-0673, or via email at ShullSS@dhec.sc.gov.

Sincerely,

Shane S. Shull, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

enc: Lab Results for Water Supply Well and Stream Samples
cc: Technical File (w/ enc.)

Client: Midlands Environmental Consultants, Inc.
Description: McCOLLOUGH WW
Date Sampled: 02/18/2014 1130
Date Received: 02/19/2014

Water Supply Well

Laboratory ID: PB20024-045
Matrix: Aqueous

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1348 | ALL | | 40826 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **3.5** | **J** | **10** | **0.40** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **1.8** | | **1.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 96 | 70-130 |
| Bromofluorobenzene | | 99 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 1112 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 112 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **CK-1** Stream Sample #1
Date Sampled: **02/18/2014 1000**
Date Received: **02/19/2014**

Laboratory ID: **PB20024-040**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1158 | ALL | | 40826 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **1.5** | | **1.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 99 | 70-130 |
| Bromofluorobenzene | | 97 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 0959 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 99 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **Midlands Environmental Consultants, Inc.**
Description: **CK-2**
Date Sampled: **02/18/2014 1005**
Date Received: **02/19/2014**

Stream Sample #2

Laboratory ID: **PB20024-041**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 02/21/2014 1220 | ALL | | 40826 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **1.4** | | **1.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 100 | 70-130 |
| Bromofluorobenzene | | 97 | 70-130 |
| Toluene-d8 | | 100 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 02/22/2014 1009 | JCG | 02/21/2014 1456 | 40856 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.019 | 0.019 | ug/L | 1 |

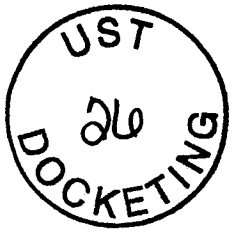
| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 124 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Report of Analysis

**SC DHEC - UST Management**
2600 Bull Street
Columbia, SC 29201
Attention: Debra Thoma




Project Name: **Crawford's Country Store**

Project Number: **UST Permit #12335/CA #47879**

Lot Number: **PD08037**

Date Completed: **04/09/2014**

**Kelly M. Maberry**
Project Manager

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The following non-paginated documents are considered part of this report: Chain of Custody Record and Sample Receipt Checklist.

## Case Narrative
## SC DHEC - UST Management
### Lot Number: PD08037

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

## Sample Summary
## SC DHEC - UST Management
### Lot Number: PD08037

| Sample Number | Sample ID | Matrix | Date Sampled | Date Received |
|---|---|---|---|---|
| 001 | WSW | Aqueous | 04/08/2014 1130 | 04/08/2014 |
| 002 | WSWX | Aqueous | 04/08/2014 1135 | 04/08/2014 |
| 003 | SW1 | Aqueous | 04/08/2014 1145 | 04/08/2014 |
| 004 | SW2 | Aqueous | 04/08/2014 1150 | 04/08/2014 |
| 005 | FB | Aqueous | 04/08/2014 1200 | 04/08/2014 |
| 006 | Trip Blank | Aqueous | 04/08/2014 | 04/08/2014 |

(6 samples)

## Executive Summary
## SC DHEC - UST Management
### Lot Number: PD08037

| Sample | Sample ID | Matrix | Parameter | Method | Result | Q | Units | Page |
|---|---|---|---|---|---|---|---|---|
| 001 | WSW | Aqueous | Diisopropyl ether (IPE) | 8260B | 3.6 | J | ug/L | 5 |
| 001 | WSW | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 2.1 | | ug/L | 5 |
| 002 | WSWX | Aqueous | Diisopropyl ether (IPE) | 8260B | 3.2 | J | ug/L | 6 |
| 002 | WSWX | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 2.2 | | ug/L | 6 |
| 003 | SW1 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 0.81 | J | ug/L | 7 |
| 004 | SW2 | Aqueous | Methyl tertiary butyl ether (MTBE) | 8260B | 0.74 | J | ug/L | 8 |

(6 detections)

Client: **SC DHEC - UST Management**
Description: **WSW**
Date Sampled: **04/08/2014 1130**
Date Received: **04/08/2014**

Laboratory ID: **PD08037-001**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 04/08/2014 2316 | PMM2 | | 44321 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **3.6** | **J** | **10** | **0.40** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **2.1** | | **1.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 118 | 70-130 |
| Bromofluorobenzene | | 119 | 70-130 |
| Toluene-d8 | | 122 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 04/09/2014 0841 | JCG | 04/08/2014 2040 | 44316 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.019 | 0.019 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 104 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **WSWX**
Date Sampled: **04/08/2014 1135**
Date Received: **04/08/2014**

Laboratory ID: **PD08037-002**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 04/08/2014 2338 | PMM2 | | 44321 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| **Diisopropyl ether (IPE)** | **108-20-3** | **8260B** | **3.2** | **J** | **10** | **0.40** | **ug/L** | **1** |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **2.2** | | **1.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 119 | 70-130 |
| Bromofluorobenzene | | 120 | 70-130 |
| Toluene-d8 | | 122 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 04/09/2014 0851 | JCG | 04/08/2014 2040 | 44316 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.019 | 0.019 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 94 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **SW1**
Date Sampled: **04/08/2014 1145**
Date Received: **04/08/2014**

Laboratory ID: **PD08037-003**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 04/09/2014 0000 | PMM2 | | 44321 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **0.81** | **J** | **1.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 119 | 70-130 |
| Bromofluorobenzene | | 118 | 70-130 |
| Toluene-d8 | | 124 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 04/09/2014 0922 | JCG | 04/08/2014 2040 | 44316 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.019 | 0.019 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 98 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **SW2**
Date Sampled: **04/08/2014 1150**
Date Received: **04/08/2014**

Laboratory ID: **PD08037-004**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 04/09/2014 0022 | PMM2 | | 44321 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| **Methyl tertiary butyl ether (MTBE)** | **1634-04-4** | **8260B** | **0.74** | **J** | **1.0** | **0.40** | **ug/L** | **1** |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 118 | 70-130 |
| Bromofluorobenzene | | 116 | 70-130 |
| Toluene-d8 | | 124 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 04/09/2014 0933 | JCG | 04/08/2014 2040 | 44316 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.019 | 0.019 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 99 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **FB**
Date Sampled: **04/08/2014 1200**
Date Received: **04/08/2014**

Laboratory ID: **PD08037-005**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 04/08/2014 2232 | PMM2 | | 44321 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 117 | 70-130 |
| Bromofluorobenzene | | 119 | 70-130 |
| Toluene-d8 | | 122 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 04/09/2014 0943 | JCG | 04/08/2014 2040 | 44316 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.019 | 0.019 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 97 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

Client: **SC DHEC - UST Management**
Description: **Trip Blank**
Date Sampled: **04/08/2014**
Date Received: **04/08/2014**

Laboratory ID: **PD08037-006**
Matrix: **Aqueous**

## Volatile Organic Compounds by GC/MS

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 5030B | 8260B | 1 | 04/08/2014 2254 | PMM2 | | 44321 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 75-85-4 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| tert-Amyl methyl ether (TAME) | 994-05-8 | 8260B | ND | | 10 | 0.20 | ug/L | 1 |
| Benzene | 71-43-2 | 8260B | ND | | 1.0 | 0.13 | ug/L | 1 |
| tert-Butyl formate (TBF) | 762-75-4 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| 1,2-Dichloroethane | 107-06-2 | 8260B | ND | | 1.0 | 0.15 | ug/L | 1 |
| Diisopropyl ether (IPE) | 108-20-3 | 8260B | ND | | 10 | 0.40 | ug/L | 1 |
| 3,3-Dimethyl-1-butanol | 624-95-3 | 8260B | ND | | 100 | 1.0 | ug/L | 1 |
| Ethanol | 64-17-5 | 8260B | ND | | 1000 | 33 | ug/L | 1 |
| Ethylbenzene | 100-41-4 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Ethyl-tert-butyl ether (ETBE) | 637-92-3 | 8260B | ND | | 100 | 0.20 | ug/L | 1 |
| Methyl tertiary butyl ether (MTBE) | 1634-04-4 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| Naphthalene | 91-20-3 | 8260B | ND | | 1.0 | 0.40 | ug/L | 1 |
| tert-butyl alcohol (TBA) | 75-65-0 | 8260B | ND | | 100 | 6.7 | ug/L | 1 |
| Toluene | 108-88-3 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |
| Xylenes (total) | 1330-20-7 | 8260B | ND | | 1.0 | 0.33 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,2-Dichloroethane-d4 | | 116 | 70-130 |
| Bromofluorobenzene | | 117 | 70-130 |
| Toluene-d8 | | 123 | 70-130 |

## EDB & DBCP by Microextraction

| Run | Prep Method | Analytical Method | Dilution | Analysis Date | Analyst | Prep Date | Batch |
|---|---|---|---|---|---|---|---|
| 1 | 8011 | 8011 | 1 | 04/09/2014 0954 | JCG | 04/08/2014 2040 | 44316 |

| Parameter | CAS Number | Analytical Method | Result | Q | PQL | MDL | Units | Run |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 106-93-4 | 8011 | ND | | 0.020 | 0.020 | ug/L | 1 |

| Surrogate | Q | Run 1 % Recovery | Acceptance Limits |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 108 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
B = Detected in the method blank
J = Estimated result < PQL and ≥ MDL
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
N = Recovery is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

# QC Summary

## Volatile Organic Compounds by GC/MS - MB

**Sample ID:** PQ44321-001
**Batch:** 44321
**Analytical Method:** 8260B
**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Result | Q | Dil | PQL | MDL | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | ND | | 1 | 100 | 6.7 | ug/L | 04/08/2014 2210 |
| tert-Amyl methyl ether (TAME) | ND | | 1 | 10 | 0.20 | ug/L | 04/08/2014 2210 |
| Benzene | ND | | 1 | 1.0 | 0.13 | ug/L | 04/08/2014 2210 |
| tert-Butyl formate (TBF) | ND | | 1 | 100 | 1.0 | ug/L | 04/08/2014 2210 |
| 1,2-Dichloroethane | ND | | 1 | 1.0 | 0.15 | ug/L | 04/08/2014 2210 |
| Diisopropyl ether (IPE) | ND | | 1 | 10 | 0.40 | ug/L | 04/08/2014 2210 |
| 3,3-Dimethyl-1-butanol | ND | | 1 | 100 | 1.0 | ug/L | 04/08/2014 2210 |
| Ethanol | ND | | 1 | 1000 | 33 | ug/L | 04/08/2014 2210 |
| Ethylbenzene | ND | | 1 | 1.0 | 0.33 | ug/L | 04/08/2014 2210 |
| Ethyl-tert-butyl ether (ETBE) | ND | | 1 | 100 | 0.20 | ug/L | 04/08/2014 2210 |
| Methyl tertiary butyl ether (MTBE) | ND | | 1 | 1.0 | 0.40 | ug/L | 04/08/2014 2210 |
| Naphthalene | ND | | 1 | 1.0 | 0.40 | ug/L | 04/08/2014 2210 |
| tert-butyl alcohol (TBA) | ND | | 1 | 100 | 6.7 | ug/L | 04/08/2014 2210 |
| Toluene | ND | | 1 | 1.0 | 0.33 | ug/L | 04/08/2014 2210 |
| Xylenes (total) | ND | | 1 | 1.0 | 0.33 | ug/L | 04/08/2014 2210 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 118 | 70-130 |
| 1,2-Dichloroethane-d4 | | 118 | 70-130 |
| Toluene-d8 | | 124 | 70-130 |

## Volatile Organic Compounds by GC/MS - LCS

**Sample ID:** PQ44321-002
**Batch:** 44321
**Analytical Method:** 8260B
**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 1000 | 1100 | | 1 | 106 | 70-130 | 04/08/2014 2042 |
| tert-Amyl methyl ether (TAME) | 50 | 57 | | 1 | 113 | 70-130 | 04/08/2014 2042 |
| Benzene | 50 | 53 | | 1 | 106 | 70-130 | 04/08/2014 2042 |
| tert-Butyl formate (TBF) | 250 | 260 | | 1 | 103 | 70-130 | 04/08/2014 2042 |
| 1,2-Dichloroethane | 50 | 52 | | 1 | 104 | 70-130 | 04/08/2014 2042 |
| Diisopropyl ether (IPE) | 50 | 52 | | 1 | 104 | 70-130 | 04/08/2014 2042 |
| 3,3-Dimethyl-1-butanol | 1000 | 1000 | | 1 | 101 | 70-130 | 04/08/2014 2042 |
| Ethanol | 5000 | 5400 | | 1 | 109 | 60-140 | 04/08/2014 2042 |
| Ethylbenzene | 50 | 54 | | 1 | 109 | 70-130 | 04/08/2014 2042 |
| Ethyl-tert-butyl ether (ETBE) | 50 | 52 | | 1 | 104 | 70-130 | 04/08/2014 2042 |
| Methyl tertiary butyl ether (MTBE) | 50 | 53 | | 1 | 105 | 70-130 | 04/08/2014 2042 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## Volatile Organic Compounds by GC/MS - LCS

**Sample ID:** PQ44321-002
**Batch:** 44321
**Analytical Method:** 8260B
**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| Naphthalene | 50 | 52 | | 1 | 104 | 70-130 | 04/08/2014 2042 |
| tert-butyl alcohol (TBA) | 1000 | 1100 | | 1 | 107 | 70-130 | 04/08/2014 2042 |
| Toluene | 50 | 53 | | 1 | 106 | 70-130 | 04/08/2014 2042 |
| Xylenes (total) | 100 | 110 | | 1 | 111 | 70-130 | 04/08/2014 2042 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 119 | 70-130 |
| 1,2-Dichloroethane-d4 | | 112 | 70-130 |
| Toluene-d8 | | 121 | 70-130 |

## Volatile Organic Compounds by GC/MS - LCSD

**Sample ID:** PQ44321-003
**Batch:** 44321
**Analytical Method:** 8260B
**Matrix:** Aqueous
**Prep Method:** 5030B

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % RPD | % Rec Limit | % RPD Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|
| tert-Amyl alcohol (TAA) | 1000 | 970 | | 1 | 97 | 8.4 | 70-130 | 20 | 04/08/2014 2104 |
| tert-Amyl methyl ether (TAME) | 50 | 54 | | 1 | 108 | 4.9 | 70-130 | 20 | 04/08/2014 2104 |
| Benzene | 50 | 52 | | 1 | 104 | 1.7 | 70-130 | 20 | 04/08/2014 2104 |
| tert-Butyl formate (TBF) | 250 | 250 | | 1 | 99 | 3.6 | 70-130 | 20 | 04/08/2014 2104 |
| 1,2-Dichloroethane | 50 | 50 | | 1 | 100 | 3.7 | 70-130 | 20 | 04/08/2014 2104 |
| Diisopropyl ether (IPE) | 50 | 51 | | 1 | 102 | 2.4 | 70-130 | 20 | 04/08/2014 2104 |
| 3,3-Dimethyl-1-butanol | 1000 | 940 | | 1 | 94 | 7.2 | 70-130 | 20 | 04/08/2014 2104 |
| Ethanol | 5000 | 5000 | | 1 | 100 | 8.9 | 60-140 | 20 | 04/08/2014 2104 |
| Ethylbenzene | 50 | 53 | | 1 | 106 | 2.2 | 70-130 | 20 | 04/08/2014 2104 |
| Ethyl-tert-butyl ether (ETBE) | 50 | 50 | | 1 | 99 | 4.9 | 70-130 | 20 | 04/08/2014 2104 |
| Methyl tertiary butyl ether (MTBE) | 50 | 51 | | 1 | 102 | 3.4 | 70-130 | 20 | 04/08/2014 2104 |
| Naphthalene | 50 | 48 | | 1 | 95 | 8.7 | 70-130 | 20 | 04/08/2014 2104 |
| tert-butyl alcohol (TBA) | 1000 | 990 | | 1 | 99 | 7.6 | 70-130 | 20 | 04/08/2014 2104 |
| Toluene | 50 | 53 | | 1 | 106 | 0.098 | 70-130 | 20 | 04/08/2014 2104 |
| Xylenes (total) | 100 | 110 | | 1 | 108 | 3.2 | 70-130 | 20 | 04/08/2014 2104 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| Bromofluorobenzene | | 114 | 70-130 |
| 1,2-Dichloroethane-d4 | | 107 | 70-130 |
| Toluene-d8 | | 118 | 70-130 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

## EDB & DBCP by Microextraction - MB

**Sample ID:** PQ44316-001 **Matrix:** Aqueous
**Batch:** 44316 **Prep Method:** 8011
**Analytical Method:** 8011 **Prep Date:** 04/08/2014 2040

| Parameter | Result | Q | Dil | PQL | MDL | Units | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ND | | 1 | 0.020 | 0.020 | ug/L | 04/09/2014 0821 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 105 | 57-137 |

## EDB & DBCP by Microextraction - LCS

**Sample ID:** PQ44316-002 **Matrix:** Aqueous
**Batch:** 44316 **Prep Method:** 8011
**Analytical Method:** 8011 **Prep Date:** 04/08/2014 2040

| Parameter | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | 0.25 | 0.31 | | 1 | 124 | 60-140 | 04/09/2014 0831 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 109 | 57-137 |

## EDB & DBCP by Microextraction - MS

**Sample ID:** PD08037-002MS **Matrix:** Aqueous
**Batch:** 44316 **Prep Method:** 8011
**Analytical Method:** 8011 **Prep Date:** 04/08/2014 2040

| Parameter | Sample Amount (ug/L) | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % Rec Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ND | 0.24 | 0.29 | | 1 | 121 | 60-140 | 04/09/2014 0902 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 99 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

# EDB & DBCP by Microextraction - MSD

**Sample ID:** PD08037-002MD
**Batch:** 44316
**Analytical Method:** 8011
**Matrix:** Aqueous
**Prep Method:** 8011
**Prep Date:** 04/08/2014 2040

| Parameter | Sample Amount (ug/L) | Spike Amount (ug/L) | Result (ug/L) | Q | Dil | % Rec | % RPD | % Rec Limit | % RPD Limit | Analysis Date |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ND | 0.24 | 0.29 | | 1 | 121 | 0.54 | 60-140 | 20 | 04/09/2014 0912 |

| Surrogate | Q | % Rec | Acceptance Limit |
|---|---|---|---|
| 1,1,1,2-Tetrachloroethane | | 104 | 57-137 |

PQL = Practical quantitation limit
ND = Not detected at or above the MDL
P = The RPD between two GC columns exceeds 40%
J = Estimated result < PQL and ≥ MDL
N = Recovery is out of criteria
+ = RPD is out of criteria
Where applicable, all soil sample analysis are reported on a dry weight basis unless flagged with a "W"

**Note: Calculations are performed before rounding to avoid round-off errors in calculated results**

SHEALY

# Chain of Custody Record

Shealy Environmental Services, Inc.
106 Vantage Point Drive
West Columbia, South Carolina 29172
Telephone No. (803) 791-9700 Fax No. (803) 791-9111
www.shealylab.com

**Number** 25839

| | | | |
|---|---|---|---|
| Client: SCDHEC UST Div. | Report to Contact: Debra Thomas | Sampler (Printed Name): Shane Shull | Quote No.: 14610 |
| Address: 2600 Bull St | Telephone No. / Fax No. / Email: Thomad1@dhec.sc.gov | Waybill No. | Page: 1 of 1 |
| City: Columbia / State: SC / Zip Code: 29851 | Preservative: 1. Unpres. 2. NaOH/ZnA 3. H2SO4 4. HNO3 5. HCL 6. Na Thio. 7. NaOH | | |
| Project Name: Crawfords Country Store | | | |
| Project Number: UST Permit 12335 | P.O Number | | Lot No.: PD08037 |

| Sample ID / Description (Containers for each sample may be combined on one line) | Date | Time | G=Grab C=Composite | Matrix: GW | DW | WW | S | Other | Analysis: BTEXMNDA OXY | EDB | Remarks / Cooler ID |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 17 | 17 | |
| | | | | | | | | | A | A | |
| | | | | | | | | | 5 | 5 | |
| WSW | 4-8-14 | 11:30 | G | | X | | | | X | X | |
| WSW X | | 11:35 | | | X | | | | X | X | |
| SW 1 | | 11:45 | | X | | | | | X | X | |
| SW 2 | | 11:50 | | X | | | | | X | X | |
| FB | | 12:00 | | | | | | DI | X | X | |
| Trip Blank | | — | | | | | | | X | X | |

Turn Around Time Required (Prior lab approval required for expedited TAT): ☐ Standard ☑ Rush (Please Specify) 24 hr TAT

Sample Disposal: ☐ Return to Client ☐ Disposal by Lab

QC Requirements (Specify):

Possible Hazard Identification: ☐Non-Hazard ☐Flammable ☐Skin Irritant ☐Poison ☐Unknown

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| 1. Relinquished by / Sampler | 4-8-14 | 16 30 | 1. Received by | | |
| 2. Relinquished by | | | 2. Received by | | |
| 3. Relinquished by | | | 3. Received by | | |
| 4. Relinquished by | | | 4. Laboratory Received by | 4-8-14 | 1630 |

**Note: All samples are retained for six weeks from receipt unless other arrangements are made.**

LAB USE ONLY
Received on Ice (Check) ☐ Yes ☐ No ☐ Ice Pack
Receipt Temp. 2.9 °C
Temp. Blank ☐ Y ☐ N

# Sample Receipt Checklist (SRC)

Client: SCDHEC Cooler Inspected by/date: ECC / 4/8/14 Lot #: PD08037

Means of receipt: ☐ SESI ☑ Client ☐ UPS ☐ FedEx ☐ Airborne Exp ☐ Other

| | | | |
|---|---|---|---|
| Yes ☐ | No ☑ | | 1. Were custody seals present on the cooler? |
| Yes ☐ | No ☐ | NA ☐ | 2. If custody seals were present, were they intact and unbroken? |

Cooler ID/Original temperature upon receipt/Derived (corrected) temperature upon receipt:
1818 28 12-9 °C ___/___/___ °C ___/___/___ °C ___/___/___ °C
Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: #3 IR Gun Correction Factor: +0.1 °C
Method of coolant: ☑ Wet Ice ☐ Blue Ice ☐ Dry Ice ☐ None

| | | | |
|---|---|---|---|
| Yes ☐ | No ☐ | NA ☑ | 3. If temperature of any cooler exceeded 6.0°C, was Project Manager notified? PM notified by SRC, phone, note (circle one), other:_____. (For coolers received via commercial courier, PMs are to be notified immediately.) |
| Yes ☐ | No ☐ | NA ☑ | 4. Is the commercial courier's packing slip attached to this form? |
| Yes ☑ | No ☐ | | 5. Were proper custody procedures (relinquished/received) followed? |
| Yes ☐ | No ☐ | NA ☑ | 5a Were samples relinquished by client to commercial courier? |
| Yes ☑ | No ☐ | | 6. Were sample IDs listed on the COC? |
| Yes ☑ | No ☐ | | 7. Were sample IDs listed on all sample containers? |
| Yes ☑ | No ☐ | | 8. Was collection date & time listed on the COC? |
| Yes ☑ | No ☐ | | 9. Was collection date & time listed on all sample containers? |
| Yes ☑ | No ☐ | | 10. Did all container label information (ID, date, time) agree with the COC? |
| Yes ☑ | No ☐ | | 11. Were tests to be performed listed on the COC? |
| Yes ☑ | No ☐ | | 12. Did all samples arrive in the proper containers for each test? |
| Yes ☑ | No ☐ | | 13. Did all containers arrive in good condition (unbroken, lids on, etc.)? |
| Yes ☑ | No ☐ | | 14. Was adequate sample volume available? |
| Yes ☑ | No ☐ | | 15. Were all samples received within ½ the holding time or 48 hours, whichever comes first? |
| Yes ☐ | No ☑ | | 16. Were any samples containers missing? |
| Yes ☐ | No ☑ | | 17. Were there any excess samples not listed on COC? |
| Yes ☐ | No ☑ | NA ☐ | 18. Were bubbles present >"pea-size" (¼"or 6mm in diameter) in any VOA vials? |
| Yes ☐ | No ☐ | NA ☑ | 19. Were all metals/O&G/HEM/nutrient samples received at a pH of <2? |
| Yes ☐ | No ☐ | NA ☑ | 20. Were all cyanide and/or sulfide samples received at a pH >12? |
| Yes ☐ | No ☐ | NA ☑ | 21. Were all applicable NH3/TKN/cyanide/phenol (<0.2mg/L) samples free of residual chlorine? |
| Yes ☐ | No ☐ | NA ☑ | 22. Were collection temperatures documented on the COC for NC samples? |
| Yes ☐ | No ☐ | NA ☑ | 23. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS? |
| Yes ☐ | No ☑ | | 24. Was the quote number used taken from the container label? |

**Sample Preservation** (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s)_____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____ ($H_2SO_4$,$HNO_3$,HCl,NaOH) using SR # _____.

Sample(s) _____ were received with bubbles >6 mm in diameter.

Sample(s)_____ were received with TRC >0.2 mg/L (If #21 is No)

SC Drinking Water Project Sample(s) pH verified to be >2 by _____ Date: _____
Sample(s) _____ were not received at a pH of >2 and were adjusted accordingly using SR#_____

Sample labels applied by: ECC Verified by: _____ Date: 4/8/14

Comments:

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

*Promoting and protecting the health of the public and the environment*

**MR & MRS MCCULLOUGH**
**5804 HWY 28 NORTH**
**ABBEVILLE SC 29620-3447**

APR 2 3 2014

UST DOCKETING

Re: **Water Supply Well & Stream Sampling Results - Update**
Crawfords Country Store
5870 Hwy 28 North, Abbeville, SC 29620
UST Permit # 12335
Petroleum Release Reported December 3, 1991
Additional Assessment Report Received March 19, 2014
Report of Analysis Received April 14, 2014
Abbeville County

Dear Mr. and Mrs. McCullough:

On April 8, 2014, personnel from the Underground Storage Tank Management Division (UST Division) collected groundwater samples from your water supply well and the stream located on your property to monitor chemicals of concern that were detected during the previous sampling event conducted by Midlands Environmental Consultants, Inc. in February 2014. The lab results from your water supply well sample indicate that Methy tertiary butyl ether (MTBE) is present at a concentration of 2.2 µg/L, and Diisopropyl ether (DIPE) is present at an estimated concentration of 3.6 µg/L. The safe drinking water standard / Risk Based Screening Level (RBSL) for MTBE is 40 µg/L, and the Action Level (AL) for DIPE is 150 µg/L. Based on current scientific evidence, concentrations below RBSL and AL do not pose any risk to your health. Additionally, for the two samples collected from the stream located in your pasture, MTBE was detected at an estimated concentration of 0.81 µg/L and 0.74 µg/L respectively.

Based on these results, the UST Management Division plans to continue biannual sampling of your water supply well and stream to ensure that contaminants remain below the safe drinking water standards. A granular activated carbon (GAC) unit can be installed on your well to remove chemicals of concern if you so desire; however, as the chemicals of concern have remained under the safe drinking water standard, the UST Division does not plan to install a GAC at this time.

If you would like to discuss these results, and/or would like to request that a GAC unit to be installed on your water supply well, please contact me at (803) 898-0607, via email at ShullSS@dhec.sc.gov or via fax at (803) 898-0673. On all written correspondence, please reference UST Permit # 12335.

Sincerely,

Shane S. Shull, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

enc: Lab Results for Water Supply Well and Stream Samples
cc: Technical File (w/ enc.)

Shallow Monitoring Wells BTEX + N + EDB

## Domenico Model

UST # 12335
Site Name: Crawford's Country Store
Modeler: Ashleigh Thrash
Date: 11/25/2014

### Groundwater Flow Parameters

| | | |
|---|---|---|
| K | 70 | ft/yr |
| dh/dx | 0.1 | |
| θ | 0.25 | dec. % |
| $v_x$ | 57.58 | ft/yr |

### Transport Parameters

| | | |
|---|---|---|
| $x_{max}$ | 650 | ft |
| $y_{max}$ | 25 | ft |
| z | 0 | ft |
| Source Width | 30 | ft |
| Source Thickness | 15 | ft |
| Plume Length | 650 | ft |
| $\alpha_x$ | 20.26808 | ft |
| $\alpha_y$ | 2.026808 | ft |
| $\alpha_z$ | 1.00E-99 | ft |

### Simulation Time

| | | |
|---|---|---|
| $t_{sim}$ | 23 | yrs |

### Aquifer Characteristics

| | | |
|---|---|---|
| $\rho_d$ | 1.6 | kg/L |
| $f_{oc}$ | 0.0002 | |

### Source Area CoC Data / Retarded Velocity (ft/yr)

| CoC | $C_{source}$ (mg/L) | $K_{oc}$ (L/kg) | CoC | R | $v_R$ |
|---|---|---|---|---|---|
| Benzene | 9.3 | 81 | Benzene | 1.104 | 52.17 |
| Toluene | 58 | 133 | Toluene | 1.170 | 49.20 |
| Ethylbenzene | 4.5 | 176 | Ethylbenzene | 1.225 | 46.99 |
| Xylenes | 27 | 639 | Xylenes | 1.818 | 31.67 |
| Naphthalene | 6 | 1543 | Naphthalene | 2.975 | 19.35 |
| MtBE | | 11 | MtBE | 1.014 | 56.78 |
| EDB | 0.0032 | 28 | EDB | 1.036 | 55.59 |
| 1,2-DCA | | 17.5 | 1,2-DCA | 1.022 | 56.32 |

### Simulation Points for Breakthrough Curves

| | | |
|---|---|---|
| x | 0 | ft |
| y | 0 | ft |
| z | 0 | ft |

| | | |
|---|---|---|
| x | 0 | ft |
| y | 0 | ft |
| z | 0 | ft |

$$C(x,y,z,t) = \left(\frac{C_0}{8}\right)\exp\left[\left(\frac{x}{2\alpha_x}\right)\left(1-\sqrt{1+\frac{4\lambda\alpha_x}{v}}\right)\right] erfc\left[\frac{x-vt\sqrt{1+\frac{4\lambda\alpha_x}{v}}}{2\sqrt{\alpha_x vt}}\right]\left\{erf\left[\frac{y+\frac{Y}{2}}{2\sqrt{\alpha_y x}}\right]-erf\left[\frac{y-\frac{Y}{2}}{2\sqrt{\alpha_y x}}\right]\right\}\left\{erf\left[\frac{z+Z}{2\sqrt{\alpha_z x}}\right]-erf\left[\frac{z-Z}{2\sqrt{\alpha_z x}}\right]\right\}$$

UST 28 keep DOCKETING

## Benzene Calibration

### Spatial Calibration Data (centerline)

| x | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
|---|---|---|
| 0 | 9.3 | 9.3 |
| 65 | | 3.272 |
| 130 | | 1.348 |
| 195 | | 0.615 |
| 260 | | 0.294 |
| 325 | | 0.145 |
| 390 | 0.32 | 0.072 |
| 455 | | 0.037 |
| 520 | | 0.019 |
| 585 | | 0.010 |
| 650 | 0.005 | 0.005 |

### Temporal Calibration Data

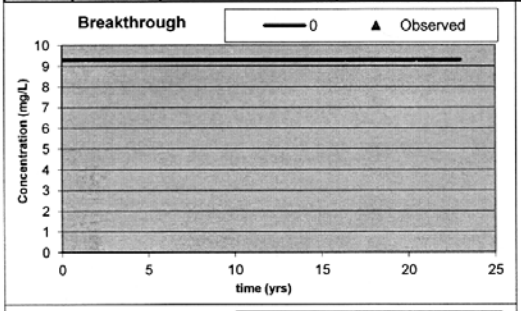
| | | 0 | | 0 | |
|---|---|---|---|---|---|
| t (yrs) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
| 0 | | 9.3 | | 9.3 |
| 2.3 | | 9.300 | | 9.300 |
| 4.6 | | 9.300 | | 9.300 |
| 6.9 | | 9.300 | | 9.300 |
| 9.2 | | 9.300 | | 9.300 |
| 11.5 | | 9.300 | | 9.300 |
| 13.8 | | 9.300 | | 9.300 |
| 16.1 | | 9.300 | | 9.300 |
| 18.4 | | 9.300 | | 9.300 |
| 20.7 | | 9.300 | | 9.300 |
| 23 | | 9.300 | | 9.300 |

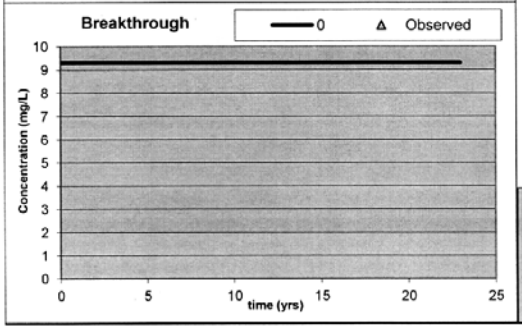
Site ID 12335

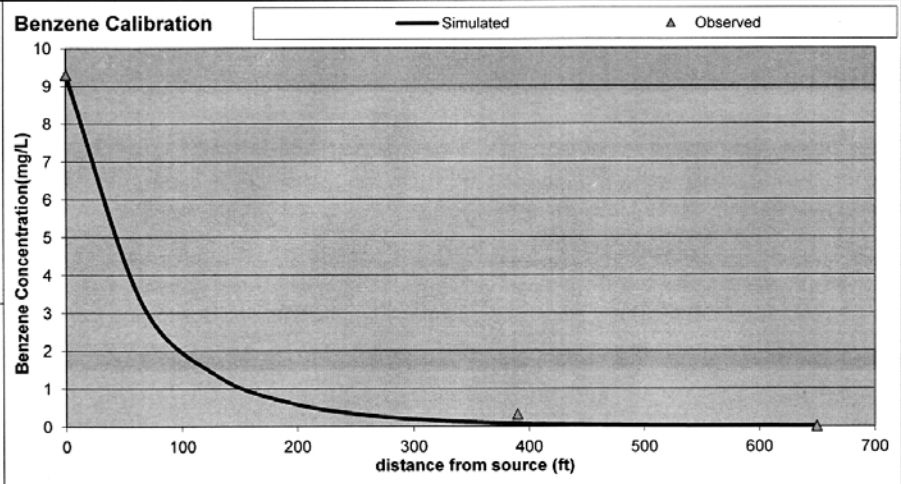
Site Name Crawford's Country Store

### Model Calibration Parameters

| | | | | | |
|---|---|---|---|---|---|
| $t_{1/2}$ | 1.2 | yrs | $\lambda$ | 0.5775 | $yr^{-1}$ |
| $v_x$ | 57.58 | ft/yr | | | |
| R | 1.104 | | | | |
| $v_R$ | 52.171 | ft/yr | $C_{source}$ | 9.3 | mg/L |
| $L_p$ | 650 | ft | | | |
| $\alpha_x$ | 20.26808 | ft | $t_{sim}$ | 23 | yrs |
| $\alpha_y$ | 2.026808 | ft | | | |
| $\alpha_z$ | 1E-99 | ft | | | |




| Source | 65 | 130 | 195 | 260 | 325 | 390 | 455 | 520 | 585 | 650 |
|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 1.33051834 | 0.8061368 | 0.42917691 | 0.22310148 | 0.11555638 | 0.0599507 | 0.031197 | 0.016287 | 0.00853 | 0.00448 |
| 12.5 | 2.62020837 | 1.18599835 | 0.56201508 | 0.27443213 | 0.13670092 | 0.0690542 | 0.035245 | 0.018132 | 0.009387 | 0.004884 |
| 0 | 3.27249336 | 1.34849541 | 0.61483452 | 0.29403809 | 0.14457511 | 0.0723858 | 0.036708 | 0.018792 | 0.009691 | 0.005027 |
| 12.5 | 2.62020837 | 1.18599835 | 0.56201508 | 0.27443213 | 0.13670092 | 0.0690542 | 0.035245 | 0.018132 | 0.009387 | 0.004884 |
| 25 | 1.33051834 | 0.8061368 | 0.42917691 | 0.22310148 | 0.11555638 | 0.0599507 | 0.031197 | 0.016287 | 0.00853 | 0.00448 |

## Toluene Calibration

### Spatial Calibration Data

(centerline)

| x | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
|---|---|---|
| 0 | 58 | 58 |
| 65 | | 17.207 |
| 130 | | 5.978 |
| 195 | | 2.298 |
| 260 | | 0.927 |
| 325 | | 0.384 |
| 390 | 0.25 | 0.162 |
| 455 | | 0.069 |
| 520 | | 0.030 |
| 585 | | 0.013 |
| 650 | 0.005 | 0.006 |

### Temporal Calibration Data

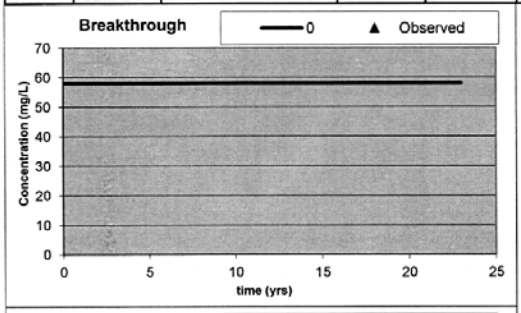
| t (yrs) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
|---|---|---|---|---|
| | 0 | | 0 | |
| 0 | | 58 | | 58 |
| 2.3 | | 58.000 | | 58.000 |
| 4.6 | | 58.000 | | 58.000 |
| 6.9 | | 58.000 | | 58.000 |
| 9.2 | | 58.000 | | 58.000 |
| 11.5 | | 58.000 | | 58.000 |
| 13.8 | | 58.000 | | 58.000 |
| 16.1 | | 58.000 | | 58.000 |
| 18.4 | | 58.000 | | 58.000 |
| 20.7 | | 58.000 | | 58.000 |
| 23 | | 58.000 | | 58.000 |

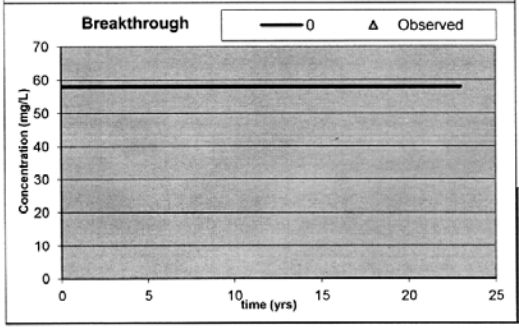
Site ID 12335

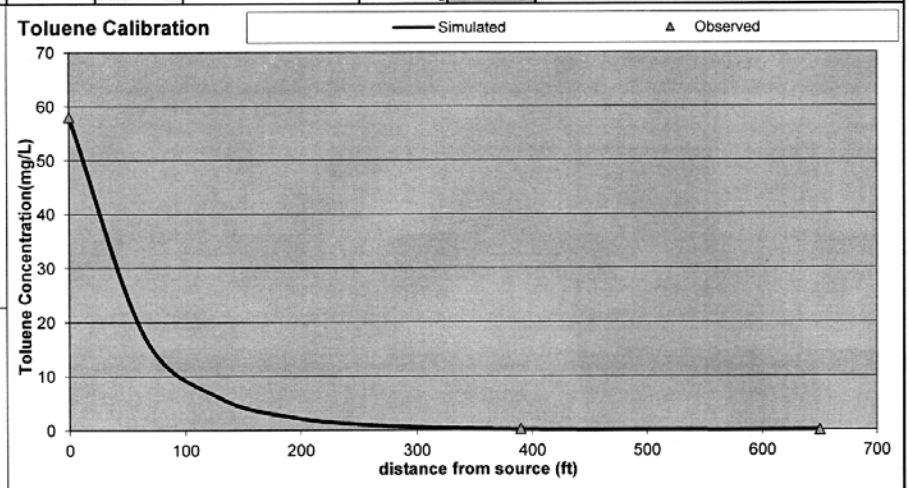
Site Name Crawford's Country Store

### Model Calibration Parameters

| | | | | | |
|---|---|---|---|---|---|
| $t_{1/2}$ | 0.95 | yrs | $\lambda$ | 0.72947 | $yr^{-1}$ |
| $v_x$ | 57.58 | ft/yr | | | |
| R | 1.170 | | | | |
| $v_R$ | 49.204 | ft/yr | $C_{source}$ | 58 | mg/L |
| $L_p$ | 650 | ft | | | |
| $\alpha_x$ | 20.26808 | ft | $t_{sim}$ | 23 | yrs |
| $\alpha_y$ | 2.026808 | ft | | | |
| $\alpha_z$ | 1E-99 | ft | | | |




| Source | 65 | 130 | 195 | 260 | 325 | 390 | 455 | 520 | 585 | 650 |
|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 6.99601461 | 3.57374355 | 1.60411606 | 0.70305078 | 0.30701739 | 0.1342914 | 0.058919 | 0.025934 | 0.011451 | 0.005071 |
| 12.5 | 13.7773494 | 5.2577354 | 2.10061958 | 0.86480698 | 0.3631955 | 0.1546835 | 0.066564 | 0.028872 | 0.012602 | 0.005528 |
| 0 | 17.207137 | 5.97811289 | 2.29804052 | 0.92659048 | 0.38411613 | 0.1621464 | 0.069326 | 0.029923 | 0.013011 | 0.00569 |
| 12.5 | 13.7773494 | 5.2577354 | 2.10061958 | 0.86480698 | 0.3631955 | 0.1546835 | 0.066564 | 0.028872 | 0.012602 | 0.005528 |
| 25 | 6.99601461 | 3.57374355 | 1.60411606 | 0.70305078 | 0.30701739 | 0.1342914 | 0.058919 | 0.025934 | 0.011451 | 0.005071 |

## Ethylbenzene Calibration

### Spatial Calibration Data (centerline)

| x | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
|---|---|---|
| 0 | 4.5 | 4.5 |
| 65 | | 1.706 |
| 130 | | 0.758 |
| 195 | | 0.372 |
| 260 | | 0.192 |
| 325 | | 0.102 |
| 390 | 0.25 | 0.055 |
| 455 | | 0.030 |
| 520 | | 0.017 |
| 585 | | 0.009 |
| 650 | 0.005 | 0.005 |

### Temporal Calibration Data

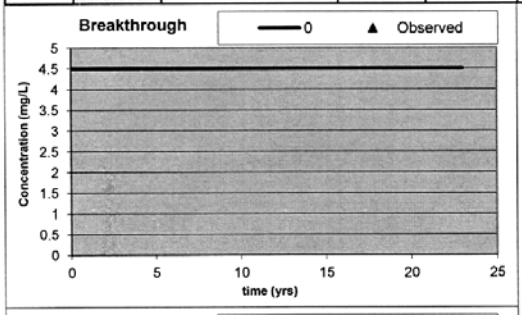
| t (yrs) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
|---|---|---|---|---|
| 0 | 0 | 4.5 | 0 | 4.5 |
| 2.3 | | 4.500 | | 4.500 |
| 4.6 | | 4.500 | | 4.500 |
| 6.9 | | 4.500 | | 4.500 |
| 9.2 | | 4.500 | | 4.500 |
| 11.5 | | 4.500 | | 4.500 |
| 13.8 | | 4.500 | | 4.500 |
| 16.1 | | 4.500 | | 4.500 |
| 18.4 | | 4.500 | | 4.500 |
| 20.7 | | 4.500 | | 4.500 |
| 23 | | 4.500 | | 4.500 |

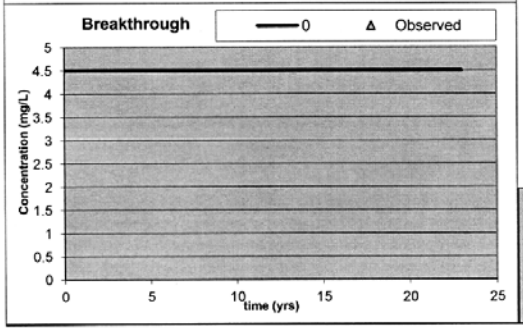
Site ID 12335

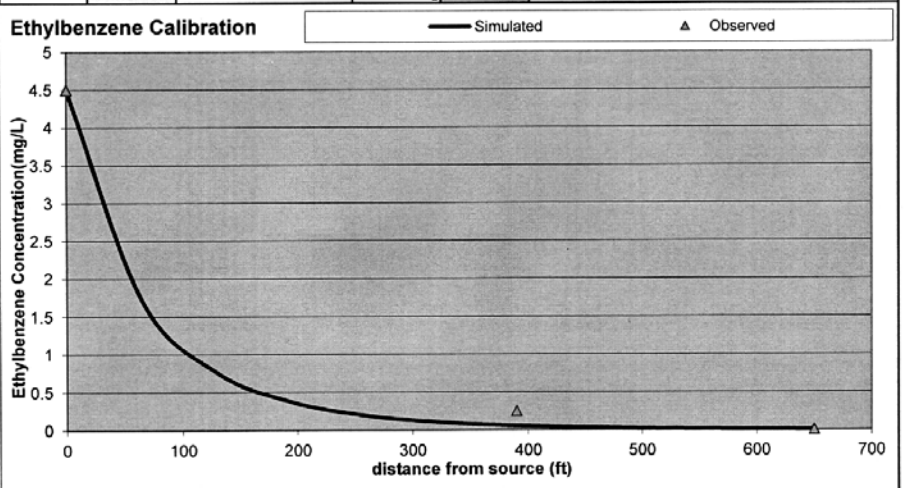
Site Name Crawford's Country Store

### Model Calibration Parameters

| | | | | | |
|---|---|---|---|---|---|
| $t_{1/2}$ | 1.55 | yrs | $\lambda$ | 0.4471 | $yr^{-1}$ |
| $v_x$ | 57.58 | ft/yr | | | |
| R | 1.225 | | | | |
| $v_R$ | 46.993 | ft/yr | $C_{source}$ | 4.5 | mg/L |
| $L_p$ | 650 | ft | | | |
| $\alpha_x$ | 20.26808 | ft | $t_{sim}$ | 23 | yrs |
| $\alpha_y$ | 2.026808 | ft | | | |
| $\alpha_z$ | 1E-99 | ft | | | |




| Source | 65 | 130 | 195 | 260 | 325 | 390 | 455 | 520 | 585 | 650 |
|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 0.69370159 | 0.45287967 | 0.25979614 | 0.14551945 | 0.08121472 | 0.0454002 | 0.025457 | 0.014321 | 0.008081 | 0.004573 |
| 12.5 | 1.36611624 | 0.66628213 | 0.34020783 | 0.17900021 | 0.09607541 | 0.0522941 | 0.02876 | 0.015942 | 0.008893 | 0.004986 |
| 0 | 1.70620259 | 0.75757137 | 0.37218133 | 0.19178834 | 0.10160951 | 0.0548171 | 0.029953 | 0.016523 | 0.009181 | 0.005131 |
| 12.5 | 1.36611624 | 0.66628213 | 0.34020783 | 0.17900021 | 0.09607541 | 0.0522941 | 0.02876 | 0.015942 | 0.008893 | 0.004986 |
| 25 | 0.69370159 | 0.45287967 | 0.25979614 | 0.14551945 | 0.08121472 | 0.0454002 | 0.025457 | 0.014321 | 0.008081 | 0.004573 |

## Xylenes Calibration

**Spatial Calibration Data** (centerline)

| x | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
|---|---|---|
| 0 | 27 | 27 |
| 65 | | 8.587 |
| 130 | | 3.198 |
| 195 | | 1.318 |
| 260 | | 0.570 |
| 325 | | 0.253 |
| 390 | 0.25 | 0.115 |
| 455 | | 0.053 |
| 520 | | 0.024 |
| 585 | | 0.011 |
| 650 | 0.005 | 0.005 |

**Temporal Calibration Data**

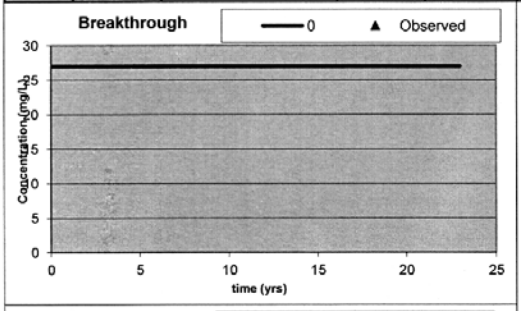
| t (yrs) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
|---|---|---|---|---|
| 0 | 0 | 27 | 0 | 27 |
| 2.3 | | 27.000 | | 27.000 |
| 4.6 | | 27.000 | | 27.000 |
| 6.9 | | 27.000 | | 27.000 |
| 9.2 | | 27.000 | | 27.000 |
| 11.5 | | 27.000 | | 27.000 |
| 13.8 | | 27.000 | | 27.000 |
| 16.1 | | 27.000 | | 27.000 |
| 18.4 | | 27.000 | | 27.000 |
| 20.7 | | 27.000 | | 27.000 |
| 23 | | 27.000 | | 27.000 |

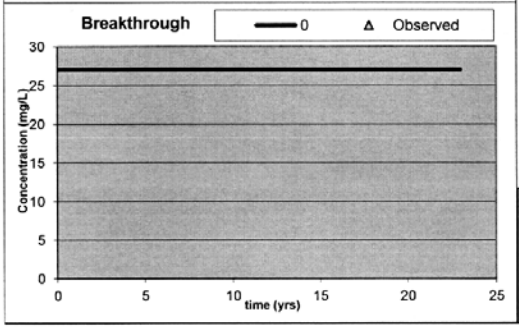
Site ID 12335

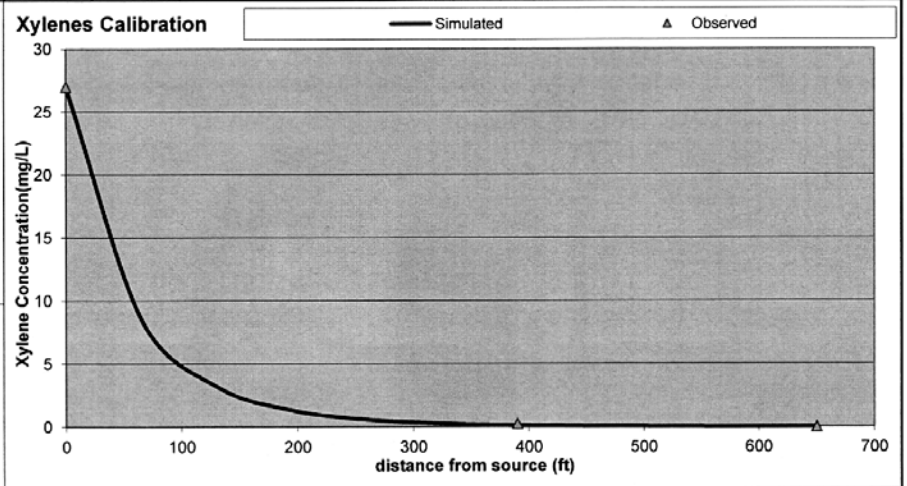
Site Name Crawford's Country Store

**Model Calibration Parameters**

| | | | | | |
|---|---|---|---|---|---|
| $t_{1/2}$ | 1.65 | yrs | $\lambda$ | 0.42 | $yr^{-1}$ |
| $v_x$ | 57.58 | ft/yr | | | |
| R | 1.818 | | | | |
| $v_R$ | 31.674 | ft/yr | $C_{source}$ | 27 | mg/L |
| $L_p$ | 650 | ft | | | |
| $\alpha_x$ | 20.26808 | ft | $t_{sim}$ | 23 | yrs |
| $\alpha_y$ | 2.026808 | ft | | | |
| $\alpha_z$ | 1E-99 | ft | | | |




| Source | 65 | 130 | 195 | 260 | 325 | 390 | 455 | 520 | 585 | 650 |
|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 3.49146002 | 1.91205478 | 0.92009613 | 0.43231859 | 0.20239338 | 0.0949032 | 0.044629 | 0.021044 | 0.009937 | 0.004686 |
| 12.5 | 6.87578105 | 2.81303848 | 1.20488287 | 0.53178539 | 0.23942737 | 0.1093141 | 0.05042 | 0.023428 | 0.010936 | 0.005109 |
| 0 | 8.58746504 | 3.19846099 | 1.31812046 | 0.56977718 | 0.25321877 | 0.1145881 | 0.052512 | 0.024281 | 0.011291 | 0.005259 |
| 12.5 | 6.87578105 | 2.81303848 | 1.20488287 | 0.53178539 | 0.23942737 | 0.1093141 | 0.05042 | 0.023428 | 0.010936 | 0.005109 |
| 25 | 3.49146002 | 1.91205478 | 0.92009613 | 0.43231859 | 0.20239338 | 0.0949032 | 0.044629 | 0.021044 | 0.009937 | 0.004686 |

## Naphthalene Calibration

### Spatial Calibration Data (centerline)

| x | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
|---|---|---|
| 0 | 6 | 6 |
| 65 | | 2.560 |
| 130 | | 1.279 |
| 195 | | 0.705 |
| 260 | | 0.405 |
| 325 | | 0.235 |
| 390 | 0.25 | 0.133 |
| 455 | | 0.071 |
| 520 | | 0.035 |
| 585 | | 0.015 |
| 650 | 0.005 | 0.006 |

### Temporal Calibration Data

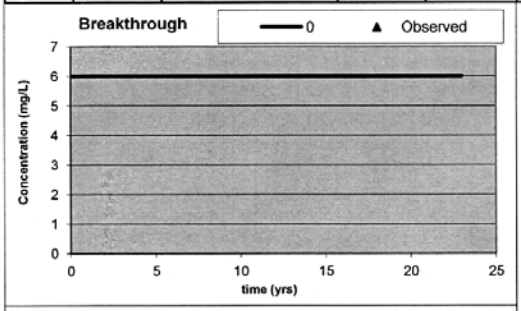
| | 0 | | 0 | |
|---|---|---|---|---|
| t (yrs) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
| 0 | | 6 | | 6 |
| 2.3 | | 6.000 | | 6.000 |
| 4.6 | | 6.000 | | 6.000 |
| 6.9 | | 6.000 | | 6.000 |
| 9.2 | | 6.000 | | 6.000 |
| 11.5 | | 6.000 | | 6.000 |
| 13.8 | | 6.000 | | 6.000 |
| 16.1 | | 6.000 | | 6.000 |
| 18.4 | | 6.000 | | 6.000 |
| 20.7 | | 6.000 | | 6.000 |
| 23 | | 6.000 | | 6.000 |

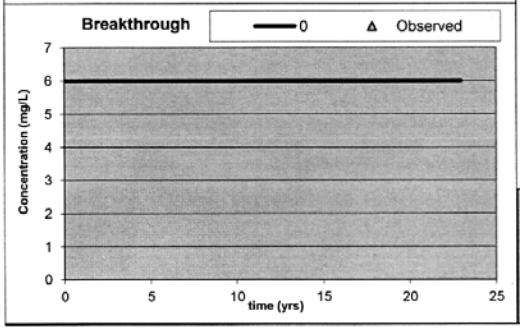
Site ID 12335

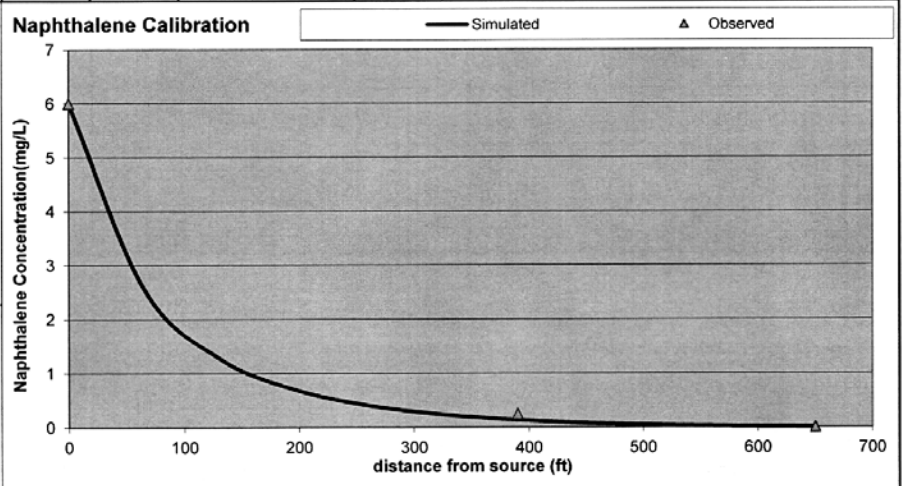
Site Name Crawford's Country Store

### Model Calibration Parameters

| | | | | | |
|---|---|---|---|---|---|
| $t_{1/2}$ | 5 | yrs | $\lambda$ | 0.1386 | $yr^{-1}$ |
| $v_x$ | 57.58 | ft/yr | | | |
| R | 2.975 | | | | |
| $v_R$ | 19.354 | ft/yr | $C_{source}$ | 6 | mg/L |
| $L_p$ | 650 | ft | | | |
| $\alpha_x$ | 20.26808 | ft | $t_{sim}$ | 23 | yrs |
| $\alpha_y$ | 2.026808 | ft | | | |
| $\alpha_z$ | 1E-99 | ft | | | |




| Source | 65 | 130 | 195 | 260 | 325 | 390 | 455 | 520 | 585 | 650 |
|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 1.04084882 | 0.76431828 | 0.49216096 | 0.30728965 | 0.18763951 | 0.1103053 | 0.060707 | 0.030278 | 0.013271 | 0.004982 |
| 12.5 | 2.04975813 | 1.12447444 | 0.64449386 | 0.3779901 | 0.22197383 | 0.1270551 | 0.068584 | 0.033708 | 0.014604 | 0.005432 |
| 0 | 2.56003298 | 1.27854193 | 0.70506484 | 0.40499445 | 0.23475988 | 0.133185 | 0.071431 | 0.034935 | 0.015078 | 0.00559 |
| 12.5 | 2.04975813 | 1.12447444 | 0.64449386 | 0.3779901 | 0.22197383 | 0.1270551 | 0.068584 | 0.033708 | 0.014604 | 0.005432 |
| 25 | 1.04084882 | 0.76431828 | 0.49216096 | 0.30728965 | 0.18763951 | 0.1103053 | 0.060707 | 0.030278 | 0.013271 | 0.004982 |

## EDB Calibration

### Spatial Calibration Data

(centerline)

| x | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
|---|---|---|
| 0 | 0.0032 | 0.00320 |
| 65 | | 0.00143 |
| 130 | | 0.00075 |
| 195 | | 0.00044 |
| 260 | | 0.00027 |
| 325 | | 0.00017 |
| 390 | 0.000031 | 0.00011 |
| 455 | | 0.00007 |
| 520 | | 0.00004 |
| 585 | | 0.00003 |
| 650 | 0.00002 | 0.00002 |

### Temporal Calibration Data

| | 0 | | 0 | |
|---|---|---|---|---|
| t (yrs) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
| 0 | | 0.00320 | | 0.00320 |
| 2.3 | | 0.00320 | | 0.00320 |
| 4.6 | | 0.00320 | | 0.00320 |
| 6.9 | | 0.00320 | | 0.00320 |
| 9.2 | | 0.00320 | | 0.00320 |
| 11.5 | | 0.00320 | | 0.00320 |
| 13.8 | | 0.00320 | | 0.00320 |
| 16.1 | | 0.00320 | | 0.00320 |
| 18.4 | | 0.00320 | | 0.00320 |
| 20.7 | | 0.00320 | | 0.00320 |
| 23 | | 0.00320 | | 0.00320 |

Site ID 12335

Site Name Crawford's Country Store

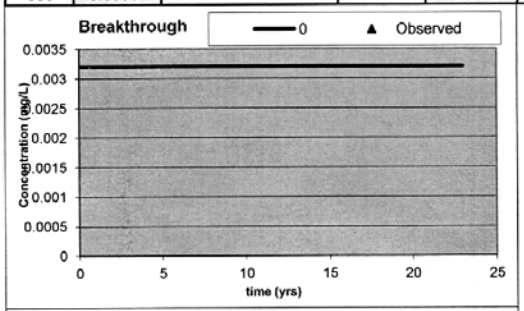
### Model Calibration Parameters

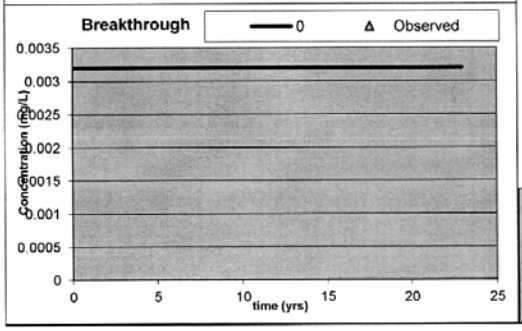
| | | |
|---|---|---|
| $t_{1/2}$ | 2 | yrs |
| $v_x$ | 57.58 | ft/yr |
| R | 1.036 | |
| $v_R$ | 55.588 | ft/yr |
| $L_p$ | 650 | ft |
| $\alpha_x$ | 20.26808 | ft |
| $\alpha_y$ | 2.026808 | ft |
| $\alpha_z$ | 1E-99 | ft |

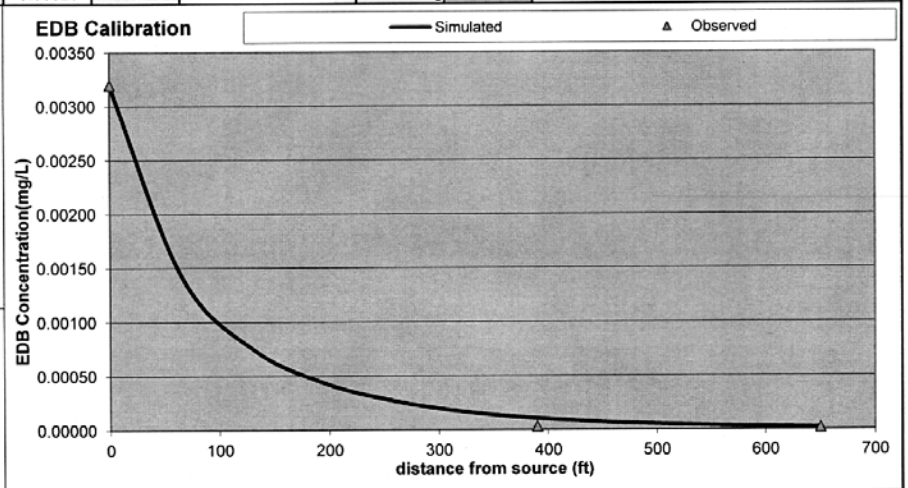
$\lambda$ 0.3465 $yr^{-1}$

$C_{source}$ 0.0032 mg/L

$t_{sim}$ 23 yrs




| Source | 65 | 130 | 195 | 260 | 325 | 390 | 455 | 520 | 585 | 650 |
|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 0.0005828 | 0.00044952 | 0.00030465 | 0.00020161 | 0.00013293 | 8.78E-05 | 5.82E-05 | 3.87E-05 | 2.58E-05 | 1.72E-05 |
| 12.5 | 0.00114772 | 0.00066133 | 0.00039895 | 0.00024799 | 0.00015726 | 0.0001011 | 6.57E-05 | 4.3E-05 | 2.84E-05 | 1.88E-05 |
| 0 | 0.00143344 | 0.00075195 | 0.00043645 | 0.00026571 | 0.00016632 | 0.000106 | 6.84E-05 | 4.46E-05 | 2.93E-05 | 1.93E-05 |
| 12.5 | 0.00114772 | 0.00066133 | 0.00039895 | 0.00024799 | 0.00015726 | 0.0001011 | 6.57E-05 | 4.3E-05 | 2.84E-05 | 1.88E-05 |
| 25 | 0.0005828 | 0.00044952 | 0.00030465 | 0.00020161 | 0.00013293 | 8.78E-05 | 5.82E-05 | 3.87E-05 | 2.58E-05 | 1.72E-05 |

UST Permit # 12335

**SSTLs** t 1000 yrs Site Name: Crawford's Country Store

| *SSTLs in mg/L* | | | RBSLs (mg/L): | 0.005 | 1.000 | 0.700 | 10.000 | | 0.025 | 0.00005 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW # | x (ft) | y (ft) | z (ft) | Benzene SSTL | Toluene SSTL | Ethylbenzene SSTL | Xylenes SSTL | | Naphthalene SSTL | EDB SSTL | |
| OMW-1 | 281 | 0 | 0 | 0.199 | 83.398 | 20.215 | 617.317 | | 0.433 | 0.00070 | |
| MW-1R | 275 | 0 | 0 | 0.187 | 76.854 | 19.056 | 572.544 | | 0.413 | 0.00067 | |
| MW-2 | 268 | 0 | 0 | 0.173 | 69.847 | 17.782 | 524.258 | | 0.390 | 0.00064 | |
| MW-3 | 281 | 0 | 0 | 0.199 | 83.398 | 20.215 | 617.317 | | 0.433 | 0.00070 | |
| MW-4 | 237 | 0 | 0 | 0.122 | 45.566 | 13.040 | 353.553 | | 0.303 | 0.00051 | |
| MW-10 | 250 | 0 | 0 | 0.141 | 54.548 | 14.863 | 417.395 | | 0.337 | 0.00056 | |
| MW-11 | 112 | 0 | 0 | 0.027 | 7.343 | 3.368 | 65.130 | | 0.098 | 0.00018 | |
| MW-13R | 107 | 0 | 0 | 0.026 | 6.785 | 3.172 | 60.510 | | 0.093 | 0.00017 | |
| MW-19 | 175 | 0 | 0 | 0.060 | 18.930 | 6.846 | 156.958 | | 0.178 | 0.00031 | |
| MW-20 | 112 | 0 | 0 | 0.027 | 7.343 | 3.368 | 65.130 | | 0.098 | 0.00018 | |
| MW-22 | 87 | 0 | 0 | 0.020 | 4.908 | 2.474 | 44.719 | | 0.075 | 0.00014 | |
| MW-25 | 50 | 0 | 0 | 0.011 | 2.566 | 1.487 | 24.320 | | 0.048 | 0.00009 | |
| MW-31 | 137 | 0 | 0 | 0.038 | 10.791 | 4.504 | 93.187 | | 0.125 | 0.00023 | |
| MW-35 | 100 | 0 | 0 | 0.023 | 6.068 | 2.912 | 54.519 | | 0.087 | 0.00016 | |
| | | | $\lambda$ ($yr^{-1}$): | 0.578 | 0.729 | 0.447 | 0.420 | | 0.139 | 0.347 | |
| | | | R: | 1.104 | 1.170 | 1.225 | 1.818 | | 2.975 | 1.036 | |
| | | | Pure Substance Solubility: | 1750 | 526 | 169 | 175 | | 31 | 4321 | |
| | | | Effective Solubility: | 44.39 | 26.54 | 3.7 | 21.68 | | 6.7 | 1.9 | |

shallow MW MtBE

## Domenico Model

UST # 12335
Site Name: Crawford's Country Store
Modeler: Ashleigh Thrash
Date: 11/25/2014

### Groundwater Flow Parameters

| | | |
|---|---|---|
| K | 70 | ft/yr |
| dh/dx | 0.1 | |
| θ | 0.25 | dec. % |
| $v_x$ | 57.58 | ft/yr |

### Transport Parameters

| | | |
|---|---|---|
| $x_{max}$ | 275 | ft |
| $y_{max}$ | 25 | ft |
| z | 0 | ft |
| Source Width | 30 | ft |
| Source Thickness | 15 | ft |
| Plume Length | 650 | ft |
| $\alpha_x$ | 20.26808 | ft |
| $\alpha_y$ | 2.026808 | ft |
| $\alpha_z$ | 1.00E-99 | ft |

### Simulation Time

$t_{sim}$ 23 yrs

### Aquifer Characteristics

| | | |
|---|---|---|
| $\rho_d$ | 1.6 | kg/L |
| $f_{oc}$ | 0.0002 | |

### Source Area CoC Data

| CoC | $C_{source}$ (mg/L) | $K_{oc}$ (L/kg) |
|---|---|---|
| Benzene | | 81 |
| Toluene | | 133 |
| Ethylbenzene | | 176 |
| Xylenes | | 639 |
| Naphthalene | | 1543 |
| MtBE | 8 | 11 |
| EDB | | 28 |
| 1,2-DCA | | 17.5 |

### Retarded Velocity (ft/yr)

| CoC | R | $v_R$ |
|---|---|---|
| Benzene | 1.104 | 52.17 |
| Toluene | 1.170 | 49.20 |
| Ethylbenzene | 1.225 | 46.99 |
| Xylenes | 1.818 | 31.67 |
| Naphthalene | 2.975 | 19.35 |
| MtBE | 1.014 | 56.78 |
| EDB | 1.036 | 55.59 |
| 1,2-DCA | 1.022 | 56.32 |

### Simulation Points for Breakthrough Curves

| | | |
|---|---|---|
| x | 0 | ft |
| y | 0 | ft |
| z | 0 | ft |

| | | |
|---|---|---|
| x | 0 | ft |
| y | 0 | ft |
| z | 0 | ft |

$$C(x,y,z,t) = \left(\frac{C_0}{8}\right)\exp\left[\left(\frac{x}{2\alpha_x}\right)\left(1-\sqrt{1+\frac{4\lambda\alpha_x}{v}}\right)\right] erfc\left[\frac{x-vt\sqrt{1+\frac{4\lambda\alpha_x}{v}}}{2\sqrt{\alpha_x vt}}\right]\left\{erf\left[\frac{y+\frac{Y}{2}}{2\sqrt{\alpha_y x}}\right]-erf\left[\frac{y-\frac{Y}{2}}{2\sqrt{\alpha_y x}}\right]\right\}\left\{erf\left[\frac{z+Z}{2\sqrt{\alpha_z x}}\right]-erf\left[\frac{z-Z}{2\sqrt{\alpha_z x}}\right]\right\}$$

## MtBE Calibration

### Spatial Calibration Data (centerline)

| x | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
|---|---|---|
| 0 | 8 | 8 |
| 27.5 | | 3.262 |
| 55 | | 1.277 |
| 82.5 | | 0.529 |
| 110 | | 0.227 |
| 137.5 | | 0.100 |
| 165 | | 0.044 |
| 192.5 | | 0.020 |
| 220 | | 0.009 |
| 247.5 | | 0.004 |
| 275 | 0.0014 | 0.002 |

### Temporal Calibration Data

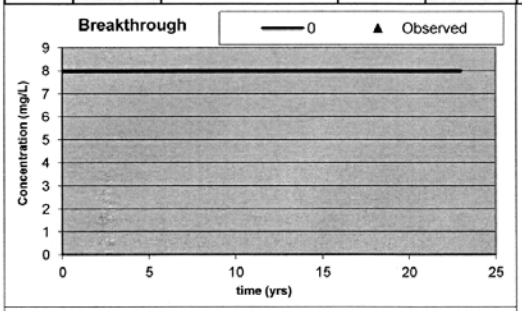
| | 0 | | 0 | |
|---|---|---|---|---|
| t (yrs) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
| 0 | | 8 | | 8 |
| 2.3 | | 8.000 | | 8.000 |
| 4.6 | | 8.000 | | 8.000 |
| 6.9 | | 8.000 | | 8.000 |
| 9.2 | | 8.000 | | 8.000 |
| 11.5 | | 8.000 | | 8.000 |
| 13.8 | | 8.000 | | 8.000 |
| 16.1 | | 8.000 | | 8.000 |
| 18.4 | | 8.000 | | 8.000 |
| 20.7 | | 8.000 | | 8.000 |
| 23 | | 8.000 | | 8.000 |

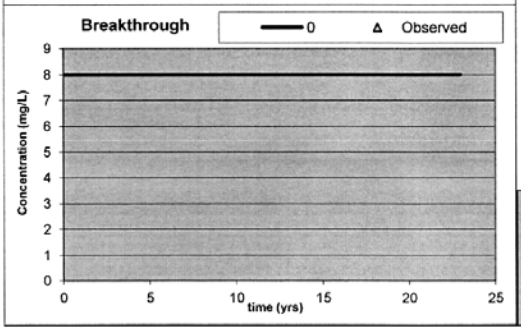
Site ID 12335

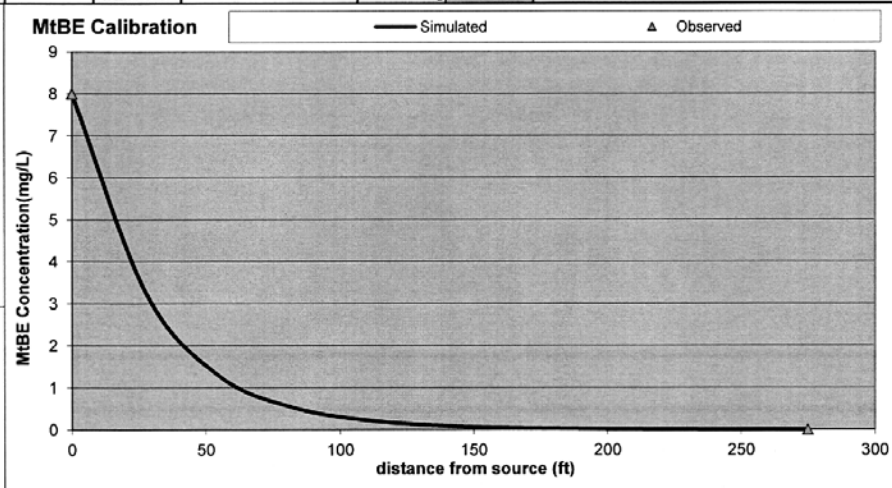
Site Name Crawford's Country Store

### Model Calibration Parameters

| | | | | | |
|---|---|---|---|---|---|
| $t_{1/2}$ | 0.3 | yrs | $\lambda$ | 2.31 | $yr^{-1}$ |
| $v_x$ | 57.58 | ft/yr | | | |
| R | 1.014 | | | | |
| $v_R$ | 56.781 | ft/yr | $C_{source}$ | 8 | mg/L |
| $L_p$ | 650 | ft | | | |
| $\alpha_x$ | 20.26808 | ft | $t_{sim}$ | 23 | yrs |
| $\alpha_y$ | 2.026808 | ft | | | |
| $\alpha_z$ | 1E-99 | ft | | | |




| Source | 27.5 | 55 | 82.5 | 110 | 137.5 | 165 | 192.5 | 220 | 247.5 | 275 |
|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 0.66325506 | 0.46219659 | 0.25023788 | 0.12557173 | 0.0610552 | 0.029246 | 0.013904 | 0.006585 | 0.003112 | 0.00147 |
| 12.5 | 2.27507021 | 0.99541851 | 0.43948799 | 0.1959674 | 0.0881967 | 0.0400065 | 0.018265 | 0.008384 | 0.003866 | 0.001789 |
| 0 | 3.26239972 | 1.27736668 | 0.52942338 | 0.22718433 | 0.09967663 | 0.0444052 | 0.020003 | 0.009087 | 0.004155 | 0.00191 |
| 12.5 | 2.27507021 | 0.99541851 | 0.43948799 | 0.1959674 | 0.0881967 | 0.0400065 | 0.018265 | 0.008384 | 0.003866 | 0.001789 |
| 25 | 0.66325506 | 0.46219659 | 0.25023788 | 0.12557173 | 0.0610552 | 0.029246 | 0.013904 | 0.006585 | 0.003112 | 0.00147 |

Shallow MW MtBE

**SSTLs** t 1000 yrs

UST Permit # 12335
Site Name: Crawford's Country Store

| *SSTLs in mg/L* | | RBSLs (mg/L): | | | | | | 0.040 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW # | x (ft) | y (ft) | z (ft) | | | | | MtBE SSTL | | | |
| OMW-1 | 281 | 0 | 0 | | | | | 198.348 | | | |
| MW-1R | 275 | 0 | 0 | | | | | 167.515 | | | |
| MW-2 | 268 | 0 | 0 | | | | | 137.512 | | | |
| MW-3 | 281 | 0 | 0 | | | | | 198.348 | | | |
| MW-4 | 237 | 0 | 0 | | | | | 57.161 | | | |
| MW-10 | 250 | 0 | 0 | | | | | 82.665 | | | |
| MW-11 | 112 | 0 | 0 | | | | | 1.496 | | | |
| MW-13R | 107 | 0 | 0 | | | | | 1.286 | | | |
| MW-19 | 175 | 0 | 0 | | | | | 9.641 | | | |
| MW-20 | 112 | 0 | 0 | | | | | 1.496 | | | |
| MW-22 | 87 | 0 | 0 | | | | | 0.696 | | | |
| MW-25 | 50 | 0 | 0 | | | | | 0.212 | | | |
| MW-31 | 137 | 0 | 0 | | | | | 3.163 | | | |
| MW-35 | 100 | 0 | 0 | | | | | 1.039 | | | |
| | | | $\lambda$ ($yr^{-1}$): | | | | | 2.310 | | | |
| | | | R: | | | | | 1.014 | | | |
| | | | Pure Substance Solubility: | | | | | 5110 | | | |
| | | | Effective Solubility: | | | | | 173 | | | |

shallow MW oxys

## Domenico Model (Oxygenates)

UST # 12335
Site Name: Crawford's Country Store
Modeler: Ashleigh Thrash
Date: 11/25/2014

### Groundwater Flow Parameters

| | | |
|---|---|---|
| K | 500 | ft/yr |
| dh/dx | 0.01 | |
| θ | 0.25 | dec. % |
| $v_x$ | 57.58 | ft/yr |

### Transport Parameters

| | | |
|---|---|---|
| $x_{max}$ | 650 | ft |
| $y_{max}$ | 25 | ft |
| z | 0 | ft |
| Source Width | 30 | ft |
| Source Thickness | 15 | ft |
| Plume Length | 650 | ft |
| $\alpha_x$ | 20.26808 | ft |
| $\alpha_y$ | 2.026808 | ft |
| $\alpha_z$ | 1.00E-99 | ft |

### Simulation Time

$t_{sim}$ 23 yrs

### Aquifer Characteristics

| | | |
|---|---|---|
| $\rho_d$ | 1.6 | kg/L |
| $f_{oc}$ | 0.0002 | |

### Source Area CoC Data

| CoC | $C_{source}$ (mg/L) | $K_{oc}$ (L/kg) |
|---|---|---|
| tBA | 100 | 1 |
| tAA | 110 | 1 |
| DIPE | 8.1 | 1.5 |
| tAME | 0.99 | 1.5 |
| EtBE | | 1.5 |
| Ethanol | | 0.5 |

### Retarded Velocity (ft/yr)

| CoC | R | $v_R$ |
|---|---|---|
| tBA | 1.001 | 57.51 |
| tAA | 1.001 | 57.51 |
| DIPE | 1.002 | 57.47 |
| tAME | 1.002 | 57.47 |
| EtBE | 1.002 | 57.47 |
| Ethanol | 1.001 | 57.54 |

### Simulation Points for Breakthrough Curves

| | | |
|---|---|---|
| x | 0 | ft |
| y | 0 | ft |
| z | 0 | ft |

| | | |
|---|---|---|
| x | 0 | ft |
| y | 0 | ft |
| z | 0 | ft |

$$C(x,y,z,t) = \left(\frac{C_0}{8}\right)\exp\left[\left(\frac{x}{2\alpha_x}\right)\left(1-\sqrt{1+\frac{4\lambda\alpha_x}{v}}\right)\right] erfc\left[\frac{x-vt\sqrt{1+\frac{4\lambda\alpha_x}{v}}}{2\sqrt{\alpha_x vt}}\right]\left\{erf\left[\frac{y+\frac{Y}{2}}{2\sqrt{\alpha_y x}}\right]-erf\left[\frac{y-\frac{Y}{2}}{2\sqrt{\alpha_y x}}\right]\right\}\left\{erf\left[\frac{z+Z}{2\sqrt{\alpha_z x}}\right]-erf\left[\frac{z-Z}{2\sqrt{\alpha_z x}}\right]\right\}$$

UST Permit # 12335

**SSTLs** t 1000 yrs Site Name: Crawford's Cc

| *SSTLs in mg/L* | | | RBSLs (mg/L): | 1.400 | 0.240 | 0.150 | 0.128 | | |
|---|---|---|---|---|---|---|---|---|---|
| MW # | x (ft) | y (ft) | z (ft) | tBA SSTL | tAA SSTL | DIPE SSTL | tAME SSTL | | |
| OMW-1 | 281 | 0 | 0 | 41.525 | 7.482 | 4.119 | 1.428 | | |
| MW-1R | 275 | 0 | 0 | 39.120 | 7.041 | 3.887 | 1.374 | | |
| MW-2 | 268 | 0 | 0 | 36.481 | 6.558 | 3.631 | 1.313 | | |
| MW-3 | 281 | 0 | 0 | 41.525 | 7.482 | 4.119 | 1.428 | | |
| MW-4 | 237 | 0 | 0 | 26.675 | 4.769 | 2.678 | 1.069 | | |
| MW-10 | 250 | 0 | 0 | 30.441 | 5.455 | 3.045 | 1.166 | | |
| MW-11 | 112 | 0 | 0 | 6.808 | 1.190 | 0.707 | 0.422 | | |
| MW-13R | 107 | 0 | 0 | 6.408 | 1.120 | 0.667 | 0.404 | | |
| MW-19 | 175 | 0 | 0 | 13.921 | 2.462 | 1.422 | 0.692 | | |
| MW-20 | 112 | 0 | 0 | 6.808 | 1.190 | 0.707 | 0.422 | | |
| MW-22 | 87 | 0 | 0 | 4.990 | 0.869 | 0.522 | 0.337 | | |
| MW-25 | 50 | 0 | 0 | 2.989 | 0.517 | 0.316 | 0.230 | | |
| MW-31 | 137 | 0 | 0 | 9.126 | 1.603 | 0.942 | 0.518 | | |
| MW-35 | 100 | 0 | 0 | 5.880 | 1.026 | 0.613 | 0.380 | | |
| | | | $\lambda$ ($yr^{-1}$): | 0.554 | 0.568 | 0.533 | 0.301 | | |
| | | | R: | 1.001 | 1.001 | 1.002 | 1.002 | | |

## tAME Calibration

### Spatial Calibration Data (centerline)

| x | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
|---|---|---|
| 0 | 0.99 | 0.99 |
| 65 | | 0.468 |
| 130 | | 0.259 |
| 195 | | 0.158 |
| 260 | | 0.102 |
| 325 | | 0.067 |
| 390 | 0.085 | 0.045 |
| 455 | | 0.031 |
| 520 | | 0.021 |
| 585 | | 0.015 |
| 650 | 0.01 | 0.010 |

### Temporal Calibration Data

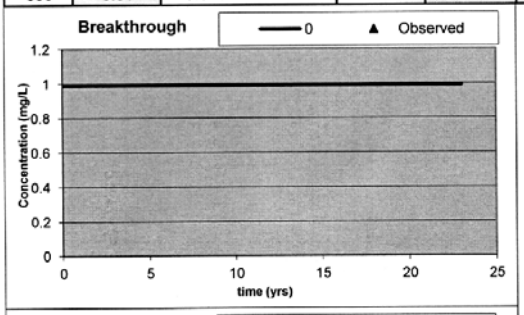
| t (yrs) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
|---|---|---|---|---|
| 0 | 0 | 0.99 | 0 | 0.99 |
| 2.3 | | 0.990 | | 0.990 |
| 4.6 | | 0.990 | | 0.990 |
| 6.9 | | 0.990 | | 0.990 |
| 9.2 | | 0.990 | | 0.990 |
| 11.5 | | 0.990 | | 0.990 |
| 13.8 | | 0.990 | | 0.990 |
| 16.1 | | 0.990 | | 0.990 |
| 18.4 | | 0.990 | | 0.990 |
| 20.7 | | 0.990 | | 0.990 |
| 23 | | 0.990 | | 0.990 |

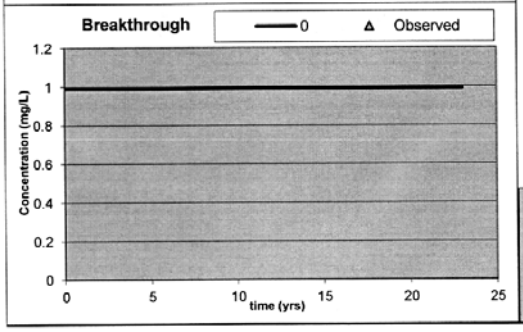
Site ID 12335

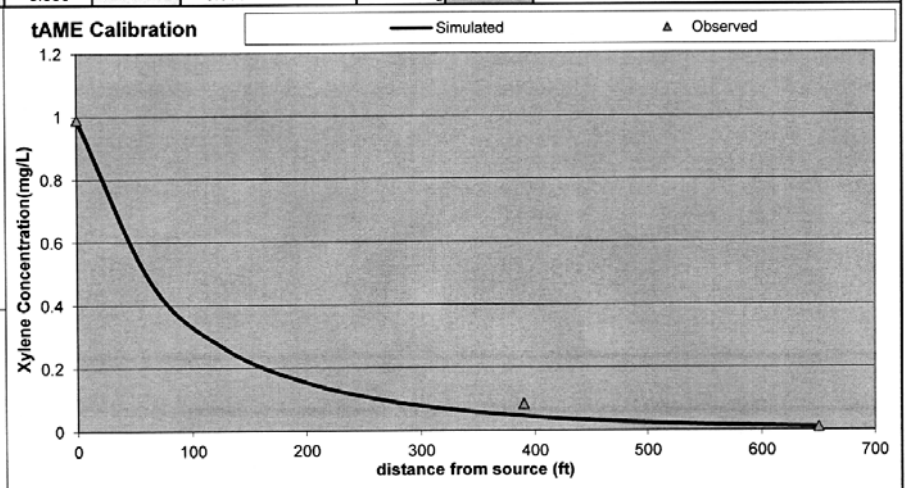
Site Name Crawford's Country Store

### Model Calibration Parameters

| | | | | | |
|---|---|---|---|---|---|
| $t_{1/2}$ | 2.3 | yrs | $\lambda$ | 0.3013 | $yr^{-1}$ |
| $v_x$ | 57.58 | ft/yr | | | |
| R | 1.002 | | | | |
| $v_R$ | 57.470 | ft/yr | $C_{source}$ | 0.99 | mg/L |
| $L_p$ | 650 | ft | | | |
| $\alpha_x$ | 20.26808 | ft | $t_{sim}$ | 23 | yrs |
| $\alpha_y$ | 2.026808 | ft | | | |
| $\alpha_z$ | 1E-99 | ft | | | |




| Source | 65 | 130 | 195 | 260 | 325 | 390 | 455 | 520 | 585 | 650 |
|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 0.19015638 | 0.15468085 | 0.110561 | 0.07716242 | 0.05365808 | 0.0373743 | 0.026111 | 0.018302 | 0.012869 | 0.009074 |
| 12.5 | 0.37447761 | 0.22756837 | 0.14478167 | 0.09491576 | 0.06347644 | 0.0430496 | 0.0295 | 0.020375 | 0.014162 | 0.009893 |
| 0 | 0.46770155 | 0.25874817 | 0.15838857 | 0.10169673 | 0.06713279 | 0.0451266 | 0.030724 | 0.021117 | 0.014621 | 0.010182 |
| 12.5 | 0.37447761 | 0.22756837 | 0.14478167 | 0.09491576 | 0.06347644 | 0.0430496 | 0.0295 | 0.020375 | 0.014162 | 0.009893 |
| 25 | 0.19015638 | 0.15468085 | 0.110561 | 0.07716242 | 0.05365808 | 0.0373743 | 0.026111 | 0.018302 | 0.012869 | 0.009074 |

## DIPE Calibration

### Spatial Calibration Data (centerline)

| x | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
|---|---|---|
| 0 | 8.1 | 8.1 |
| 65 | | 3.107 |
| 130 | | 1.396 |
| 195 | | 0.694 |
| 260 | | 0.362 |
| 325 | | 0.194 |
| 390 | 1.6 | 0.106 |
| 455 | | 0.059 |
| 520 | | 0.033 |
| 585 | | 0.018 |
| 650 | 0.01 | 0.010 |

### Temporal Calibration Data

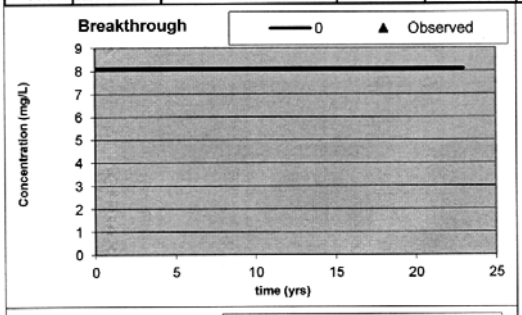
| t (yrs) | 0 $C_{obs}$ (mg/L) | 0 $C_{sim}$ (mg/L) | 0 $C_{obs}$ (mg/L) | 0 $C_{sim}$ (mg/L) |
|---|---|---|---|---|
| 0 | | 8.1 | | 8.1 |
| 2.3 | | 8.100 | | 8.100 |
| 4.6 | | 8.100 | | 8.100 |
| 6.9 | | 8.100 | | 8.100 |
| 9.2 | | 8.100 | | 8.100 |
| 11.5 | | 8.100 | | 8.100 |
| 13.8 | | 8.100 | | 8.100 |
| 16.1 | | 8.100 | | 8.100 |
| 18.4 | | 8.100 | | 8.100 |
| 20.7 | | 8.100 | | 8.100 |
| 23 | | 8.100 | | 8.100 |

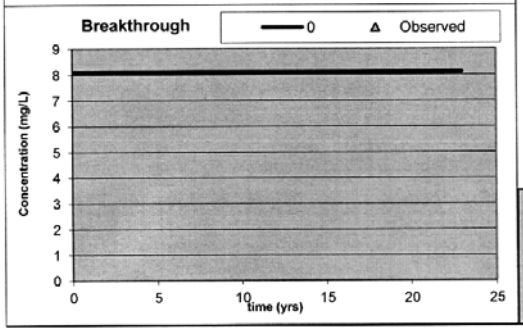
Site ID 12335

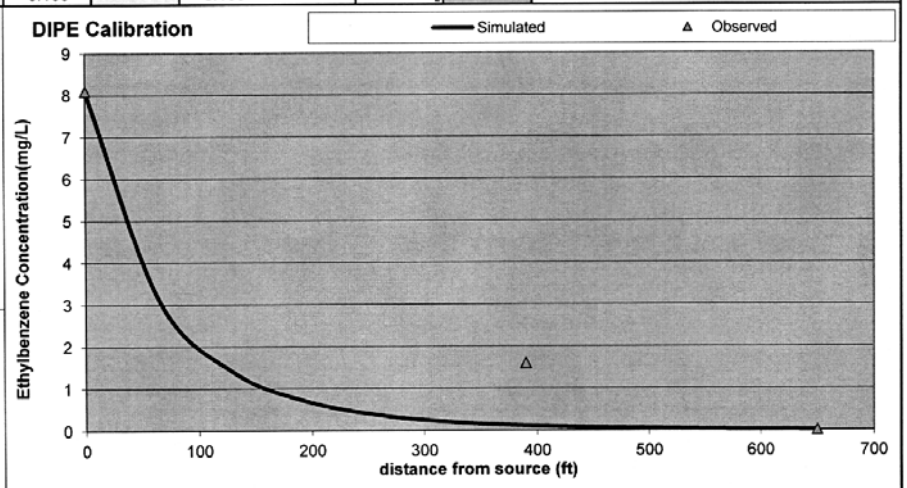
Site Name Crawford's Country Store

### Model Calibration Parameters

| | | | | | |
|---|---|---|---|---|---|
| $t_{1/2}$ | 1.3 | yrs | $\lambda$ | 0.53308 | $yr^{-1}$ |
| $v_x$ | 57.58 | ft/yr | | | |
| R | 1.002 | | | | |
| $v_R$ | 57.470 | ft/yr | $C_{source}$ | 8.1 | mg/L |
| $L_p$ | 650 | ft | | | |
| $\alpha_x$ | 20.26808 | ft | $t_{sim}$ | 23 | yrs |
| $\alpha_y$ | 2.026808 | ft | | | |
| $\alpha_z$ | 1E-99 | ft | | | |




| Source | 65 | 130 | 195 | 260 | 325 | 390 | 455 | 520 | 585 | 650 |
|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 1.26331709 | 0.83442956 | 0.48429136 | 0.27444939 | 0.15496841 | 0.0876462 | 0.049721 | 0.028299 | 0.016157 | 0.00925 |
| 12.5 | 2.487868 | 1.22762302 | 0.63418847 | 0.33759403 | 0.18332457 | 0.1009552 | 0.056173 | 0.031504 | 0.01778 | 0.010086 |
| 0 | 3.10720766 | 1.39582319 | 0.69379093 | 0.36171241 | 0.19388435 | 0.1058259 | 0.058504 | 0.032651 | 0.018357 | 0.01038 |
| 12.5 | 2.487868 | 1.22762302 | 0.63418847 | 0.33759403 | 0.18332457 | 0.1009552 | 0.056173 | 0.031504 | 0.01778 | 0.010086 |
| 25 | 1.26331709 | 0.83442956 | 0.48429136 | 0.27444939 | 0.15496841 | 0.0876462 | 0.049721 | 0.028299 | 0.016157 | 0.00925 |

## tAA Calibration

### Spatial Calibration Data (centerline)

| x | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
|---|---|---|
| 0 | 110 | 110 |
| 65 | | 40.976 |
| 130 | | 17.875 |
| 195 | | 8.628 |
| 260 | | 4.368 |
| 325 | | 2.274 |
| 390 | 5.6 | 1.205 |
| 455 | | 0.647 |
| 520 | | 0.351 |
| 585 | | 0.191 |
| 650 | 0.1 | 0.105 |

### Temporal Calibration Data

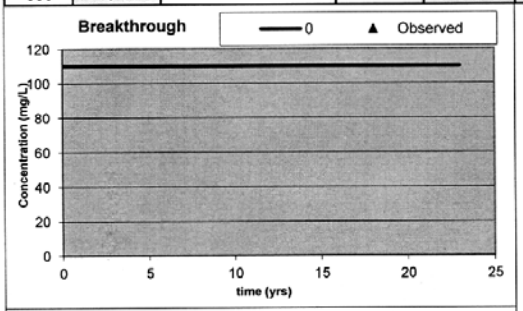
| | 0 | | 0 | |
|---|---|---|---|---|
| t (yrs) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
| 0 | | 110 | | 110 |
| 2.3 | | 110.000 | | 110.000 |
| 4.6 | | 110.000 | | 110.000 |
| 6.9 | | 110.000 | | 110.000 |
| 9.2 | | 110.000 | | 110.000 |
| 11.5 | | 110.000 | | 110.000 |
| 13.8 | | 110.000 | | 110.000 |
| 16.1 | | 110.000 | | 110.000 |
| 18.4 | | 110.000 | | 110.000 |
| 20.7 | | 110.000 | | 110.000 |
| 23 | | 110.000 | | 110.000 |

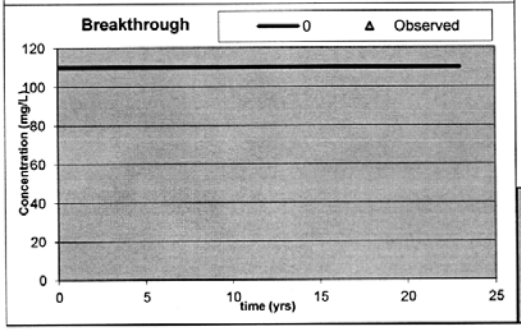
Site ID 12335

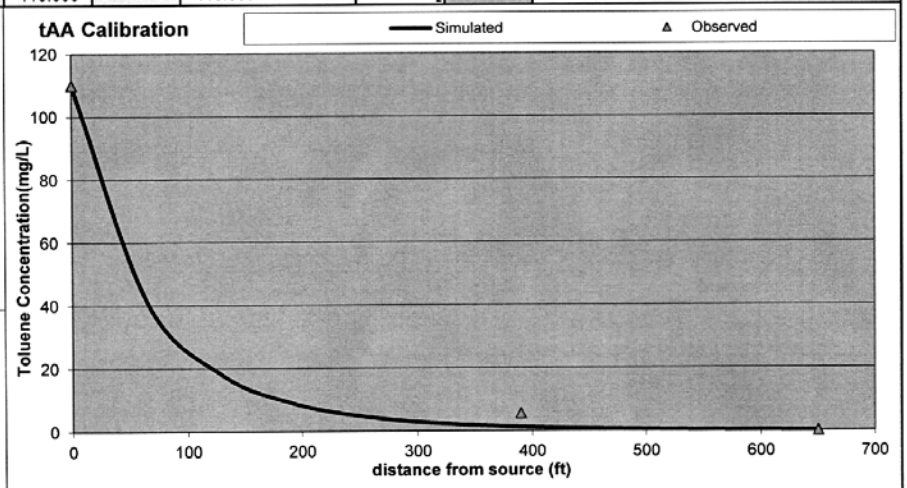
Site Name Crawford's Country Store

### Model Calibration Parameters

| | | | | | |
|---|---|---|---|---|---|
| $t_{1/2}$ | 1.22 | yrs | $\lambda$ | 0.56803 | $yr^{-1}$ |
| $v_x$ | 57.58 | ft/yr | | | |
| R | 1.001 | | | | |
| $v_R$ | 57.506 | ft/yr | $C_{source}$ | 110 | mg/L |
| $L_p$ | 650 | ft | | | |
| $\alpha_x$ | 20.26808 | ft | $t_{sim}$ | 23 | yrs |
| $\alpha_y$ | 2.026808 | ft | | | |
| $\alpha_z$ | 1E-99 | ft | | | |




| Source | 65 | 130 | 195 | 260 | 325 | 390 | 455 | 520 | 585 | 650 |
|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 16.6598368 | 10.6855963 | 6.02235719 | 3.31415459 | 1.81720692 | 0.9980334 | 0.549801 | 0.303867 | 0.168466 | 0.093663 |
| 12.5 | 32.8084496 | 15.7207806 | 7.88638788 | 4.07666717 | 2.14971986 | 1.1495839 | 0.62114 | 0.338284 | 0.185394 | 0.102121 |
| 0 | 40.9759142 | 17.87473 | 8.6275683 | 4.36791222 | 2.27354713 | 1.205047 | 0.646918 | 0.350601 | 0.191407 | 0.105107 |
| 12.5 | 32.8084496 | 15.7207806 | 7.88638788 | 4.07666717 | 2.14971986 | 1.1495839 | 0.62114 | 0.338284 | 0.185394 | 0.102121 |
| 25 | 16.6598368 | 10.6855963 | 6.02235719 | 3.31415459 | 1.81720692 | 0.9980334 | 0.549801 | 0.303867 | 0.168466 | 0.093663 |

## tBA Calibration

### Spatial Calibration Data (centerline)

| x | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
|---|---|---|
| 0 | 100 | 100 |
| 65 | | 37.682 |
| 130 | | 16.628 |
| 195 | | 8.119 |
| 260 | | 4.158 |
| 325 | | 2.189 |
| 390 | 5 | 1.174 |
| 455 | | 0.637 |
| 520 | | 0.349 |
| 585 | | 0.193 |
| 650 | 0.1 | 0.107 |

### Temporal Calibration Data

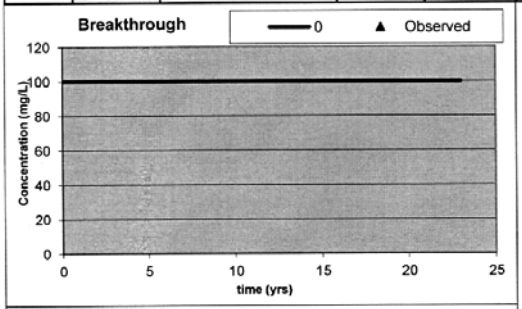
| | 0 | | 0 | |
|---|---|---|---|---|
| t (yrs) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
| 0 | | 100 | | 100 |
| 2.3 | | 100.000 | | 100.000 |
| 4.6 | | 100.000 | | 100.000 |
| 6.9 | | 100.000 | | 100.000 |
| 9.2 | | 100.000 | | 100.000 |
| 11.5 | | 100.000 | | 100.000 |
| 13.8 | | 100.000 | | 100.000 |
| 16.1 | | 100.000 | | 100.000 |
| 18.4 | | 100.000 | | 100.000 |
| 20.7 | | 100.000 | | 100.000 |
| 23 | | 100.000 | | 100.000 |

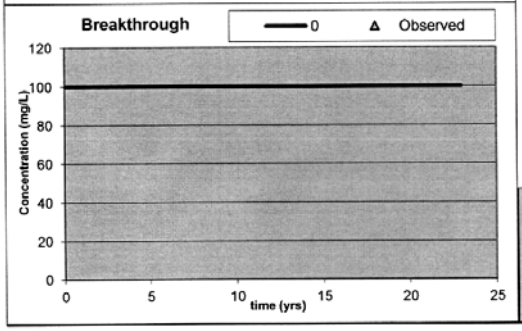
Site ID 12335

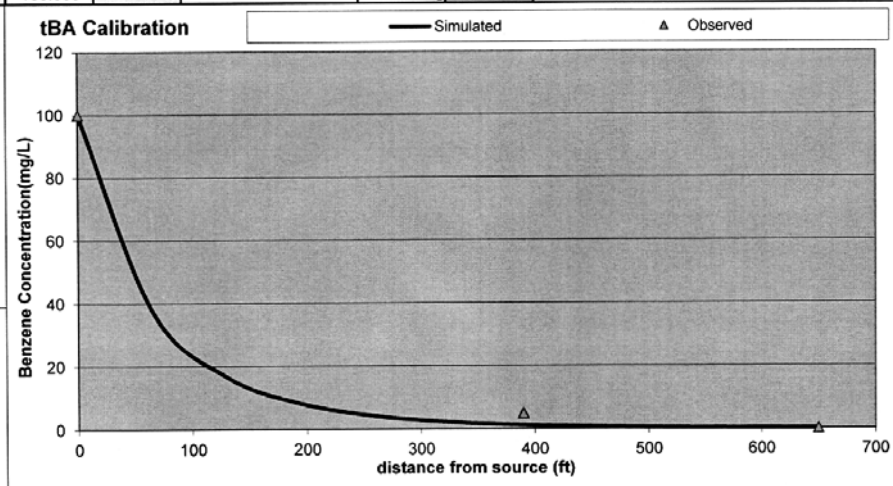
Site Name Crawford's Country Store

### Model Calibration Parameters

| | | | | | |
|---|---|---|---|---|---|
| $t_{1/2}$ | 1.25 | yrs | $\lambda$ | 0.5544 | $yr^{-1}$ |
| $v_x$ | 57.58 | ft/yr | | | |
| R | 1.001 | | | | |
| $v_R$ | 57.506 | ft/yr | $C_{source}$ | 100 | mg/L |
| $L_p$ | 650 | ft | | | |
| $\alpha_x$ | 20.26808 | ft | $t_{sim}$ | 23 | yrs |
| $\alpha_y$ | 2.026808 | ft | | | |
| $\alpha_z$ | 1E-99 | ft | | | |




| Source | 65 | 130 | 195 | 260 | 325 | 390 | 455 | 520 | 585 | 650 |
|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 15.320691 | 9.94046426 | 5.6672805 | 3.15486845 | 1.74989975 | 0.9721967 | 0.54177 | 0.302896 | 0.169872 | 0.095539 |
| 12.5 | 30.171251 | 14.6245331 | 7.42140841 | 3.88073287 | 2.07009681 | 1.119824 | 0.612067 | 0.337203 | 0.186942 | 0.104166 |
| 0 | 37.682201 | 16.6282826 | 8.11888901 | 4.15797999 | 2.18933767 | 1.1738513 | 0.637469 | 0.349481 | 0.193004 | 0.107211 |
| 12.5 | 30.171251 | 14.6245331 | 7.42140841 | 3.88073287 | 2.07009681 | 1.119824 | 0.612067 | 0.337203 | 0.186942 | 0.104166 |
| 25 | 15.320691 | 9.94046426 | 5.6672805 | 3.15486845 | 1.74989975 | 0.9721967 | 0.54177 | 0.302896 | 0.169872 | 0.095539 |

deep MW Benzene + MTBE

## Domenico Model

UST # 12335
Site Name: Crawford's Country Store
Modeler: Ashleigh Thrash
Date: 11/25/2014

### Groundwater Flow Parameters

| | | |
|---|---|---|
| K | 70 | ft/yr |
| dh/dx | 0.1 | |
| θ | 0.25 | dec. % |
| $v_x$ | 57.58 | ft/yr |

### Transport Parameters

| | | |
|---|---|---|
| $x_{max}$ | 450 | ft |
| $y_{max}$ | 25 | ft |
| z | 0 | ft |
| Source Width | 30 | ft |
| Source Thickness | 15 | ft |
| Plume Length | 650 | ft |
| $\alpha_x$ | 20.26808 | ft |
| $\alpha_y$ | 2.026808 | ft |
| $\alpha_z$ | 1.00E-99 | ft |

### Simulation Time

$t_{sim}$ 23 yrs

### Aquifer Characteristics

| | | |
|---|---|---|
| $\rho_d$ | 1.5 | kg/L |
| $f_{oc}$ | 0.0002 | |

### Source Area CoC Data

| CoC | $C_{source}$ (mg/L) | $K_{oc}$ (L/kg) |
|---|---|---|
| Benzene | 0.098 | 81 |
| Toluene | | 133 |
| Ethylbenzene | | 176 |
| Xylenes | | 639 |
| Naphthalene | | 1543 |
| MtBE | 0.49 | 11 |
| EDB | | 28 |
| 1,2-DCA | | 17.5 |

### Retarded Velocity (ft/yr)

| CoC | R | $v_R$ |
|---|---|---|
| Benzene | 1.097 | 52.48 |
| Toluene | 1.160 | 49.66 |
| Ethylbenzene | 1.211 | 47.54 |
| Xylenes | 1.767 | 32.59 |
| Naphthalene | 2.852 | 20.19 |
| MtBE | 1.013 | 56.83 |
| EDB | 1.034 | 55.71 |
| 1,2-DCA | 1.021 | 56.40 |

### Simulation Points for Breakthrough Curves

| | | |
|---|---|---|
| x | 0 | ft |
| y | 0 | ft |
| z | 0 | ft |

| | | |
|---|---|---|
| x | 0 | ft |
| y | 0 | ft |
| z | 0 | ft |

$$C(x,y,z,t) = \left(\frac{C_0}{8}\right)\exp\left[\left(\frac{x}{2\alpha_x}\right)\left(1-\sqrt{1+\frac{4\lambda\alpha_x}{v}}\right)\right] erfc\left[\frac{x-vt\sqrt{1+\frac{4\lambda\alpha_x}{v}}}{2\sqrt{\alpha_x vt}}\right]\left\{erf\left[\frac{y+\frac{Y}{2}}{2\sqrt{\alpha_y x}}\right]-erf\left[\frac{y-\frac{Y}{2}}{2\sqrt{\alpha_y x}}\right]\right\}\left\{erf\left[\frac{z+Z}{2\sqrt{\alpha_z x}}\right]-erf\left[\frac{z-Z}{2\sqrt{\alpha_z x}}\right]\right\}$$

## MtBE Calibration

### Spatial Calibration Data (centerline)

| x | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
|---|---|---|
| 0 | 0.49 | 0.49 |
| 45 | | 0.228 |
| 90 | | 0.112 |
| 135 | | 0.060 |
| 180 | | 0.033 |
| 225 | | 0.019 |
| 270 | | 0.011 |
| 315 | | 0.007 |
| 360 | | 0.004 |
| 405 | | 0.002 |
| 450 | 0.0011 | 0.001 |

### Temporal Calibration Data

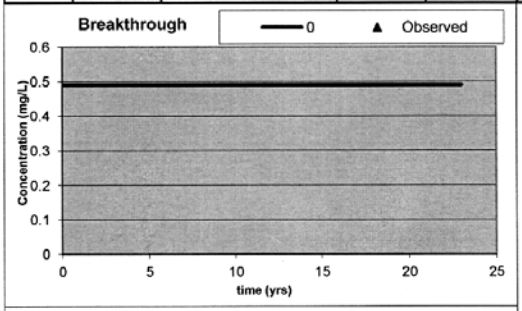
| | 0 | | 0 | |
|---|---|---|---|---|
| t (yrs) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
| 0 | | 0.49 | | 0.49 |
| 2.3 | | 0.490 | | 0.490 |
| 4.6 | | 0.490 | | 0.490 |
| 6.9 | | 0.490 | | 0.490 |
| 9.2 | | 0.490 | | 0.490 |
| 11.5 | | 0.490 | | 0.490 |
| 13.8 | | 0.490 | | 0.490 |
| 16.1 | | 0.490 | | 0.490 |
| 18.4 | | 0.490 | | 0.490 |
| 20.7 | | 0.490 | | 0.490 |
| 23 | | 0.490 | | 0.490 |

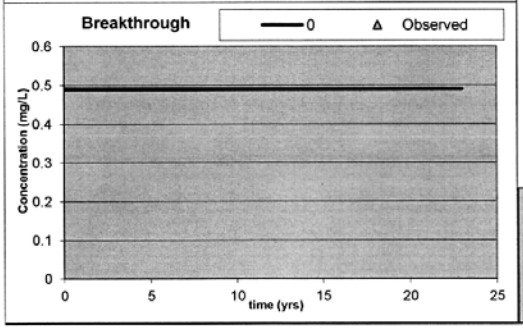
Site ID 12335

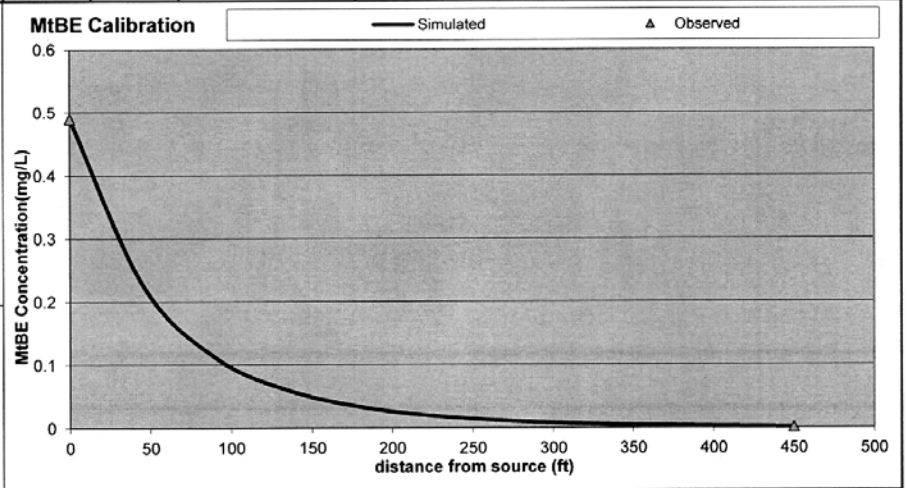
Site Name Crawford's Country Store

### Model Calibration Parameters

| | | | | | |
|---|---|---|---|---|---|
| $t_{1/2}$ | 1 | yrs | $\lambda$ | 0.693 | $yr^{-1}$ |
| $v_x$ | 57.58 | ft/yr | | | |
| R | 1.013 | | | | |
| $v_R$ | 56.830 | ft/yr | $C_{source}$ | 0.49 | mg/L |
| $L_p$ | 650 | ft | | | |
| $\alpha_x$ | 20.26808 | ft | $t_{sim}$ | 23 | yrs |
| $\alpha_y$ | 2.026808 | ft | | | |
| $\alpha_z$ | 1E-99 | ft | | | |




| Source | 45 | 90 | 135 | 180 | 225 | 270 | 315 | 360 | 405 | 450 |
|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 0.07085406 | 0.05561591 | 0.03636041 | 0.02269698 | 0.01395841 | 0.0085435 | 0.005224 | 0.003197 | 0.001959 | 0.001202 |
| 12.5 | 0.17171786 | 0.09403516 | 0.05283509 | 0.03032838 | 0.01768548 | 0.0104343 | 0.006211 | 0.003724 | 0.002245 | 0.00136 |
| 0 | 0.22787669 | 0.11189929 | 0.05982886 | 0.03340205 | 0.01913646 | 0.0111532 | 0.00658 | 0.003918 | 0.002349 | 0.001417 |
| 12.5 | 0.17171786 | 0.09403516 | 0.05283509 | 0.03032838 | 0.01768548 | 0.0104343 | 0.006211 | 0.003724 | 0.002245 | 0.00136 |
| 25 | 0.07085406 | 0.05561591 | 0.03636041 | 0.02269698 | 0.01395841 | 0.0085435 | 0.005224 | 0.003197 | 0.001959 | 0.001202 |

## Benzene Calibration

### Spatial Calibration Data (centerline)

| x | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) |
|---|---|---|
| 0 | 0.098 | 0.098 |
| 45 | | 0.061 |
| 90 | | 0.041 |
| 135 | | 0.029 |
| 180 | | 0.022 |
| 225 | | 0.017 |
| 270 | | 0.013 |
| 315 | | 0.011 |
| 360 | | 0.008 |
| 405 | | 0.007 |
| 450 | 0.005 | 0.006 |

### Temporal Calibration Data

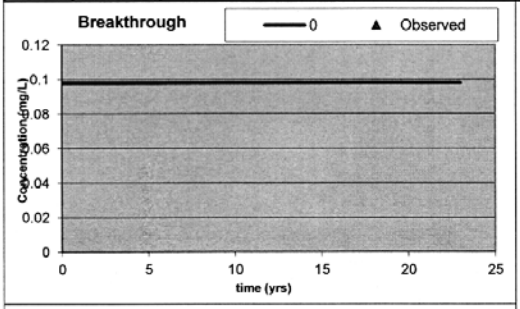
| t (yrs) | $C_{obs}$ (mg/L) | $C_{sim}$ (mg/L) | 0 $C_{obs}$ (mg/L) | 0 $C_{sim}$ (mg/L) |
|---|---|---|---|---|
| 0 | | 0.098 | | 0.098 |
| 2.3 | | 0.098 | | 0.098 |
| 4.6 | | 0.098 | | 0.098 |
| 6.9 | | 0.098 | | 0.098 |
| 9.2 | | 0.098 | | 0.098 |
| 11.5 | | 0.098 | | 0.098 |
| 13.8 | | 0.098 | | 0.098 |
| 16.1 | | 0.098 | | 0.098 |
| 18.4 | | 0.098 | | 0.098 |
| 20.7 | | 0.098 | | 0.098 |
| 23 | | 0.098 | | 0.098 |

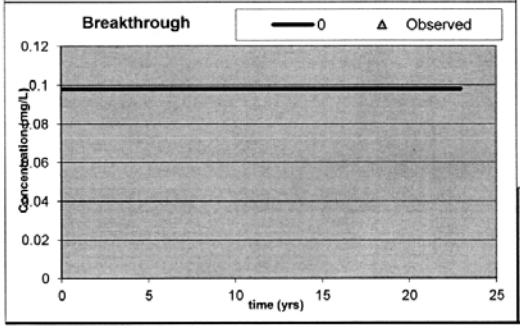
Site ID 12335

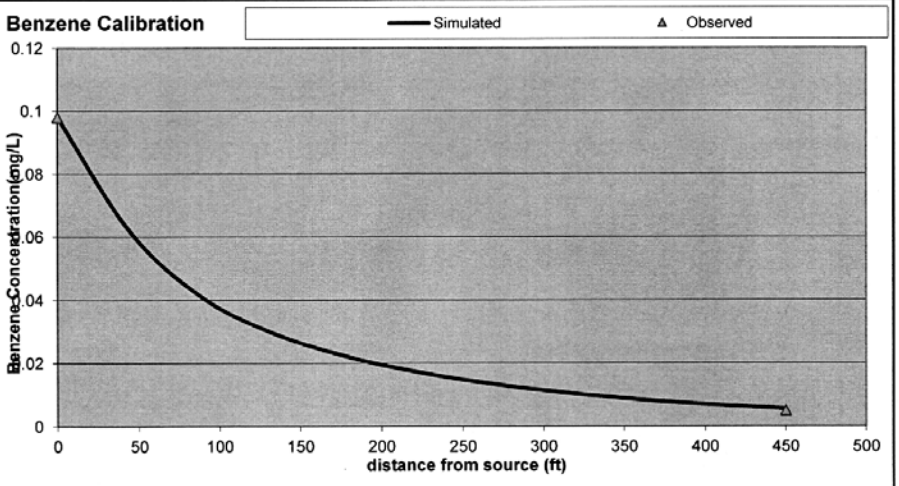
Site Name Crawford's Country Store

### Model Calibration Parameters

| | | | | | |
|---|---|---|---|---|---|
| $t_{1/2}$ | 3.5 | yrs | $\lambda$ | 0.198 | $yr^{-1}$ |
| $v_x$ | 57.58 | ft/yr | | | |
| R | 1.097 | | | | |
| $v_R$ | 52.479 | ft/yr | $C_{source}$ | 0.098 | mg/L |
| $L_p$ | 650 | ft | | | |
| $\alpha_x$ | 20.26808 | ft | $t_{sim}$ | 23 | yrs |
| $\alpha_y$ | 2.026808 | ft | | | |
| $\alpha_z$ | 1E-99 | ft | | | |




| Source | 45 | 90 | 135 | 180 | 225 | 270 | 315 | 360 | 405 | 450 |
|---|---|---|---|---|---|---|---|---|---|---|
| 25 | 0.01906906 | 0.02014179 | 0.01771994 | 0.01488456 | 0.01231795 | 0.0101455 | 0.008348 | 0.006874 | 0.005668 | 0.00468 |
| 12.5 | 0.04621469 | 0.03405566 | 0.02574874 | 0.0198892 | 0.015607 | 0.0123909 | 0.009926 | 0.008007 | 0.006496 | 0.005294 |
| 0 | 0.0613288 | 0.04052532 | 0.0291571 | 0.0219049 | 0.01688746 | 0.0132446 | 0.010515 | 0.008425 | 0.006798 | 0.005516 |
| 12.5 | 0.04621469 | 0.03405566 | 0.02574874 | 0.0198892 | 0.015607 | 0.0123909 | 0.009926 | 0.008007 | 0.006496 | 0.005294 |
| 25 | 0.01906906 | 0.02014179 | 0.01771994 | 0.01488456 | 0.01231795 | 0.0101455 | 0.008348 | 0.006874 | 0.005668 | 0.00468 |

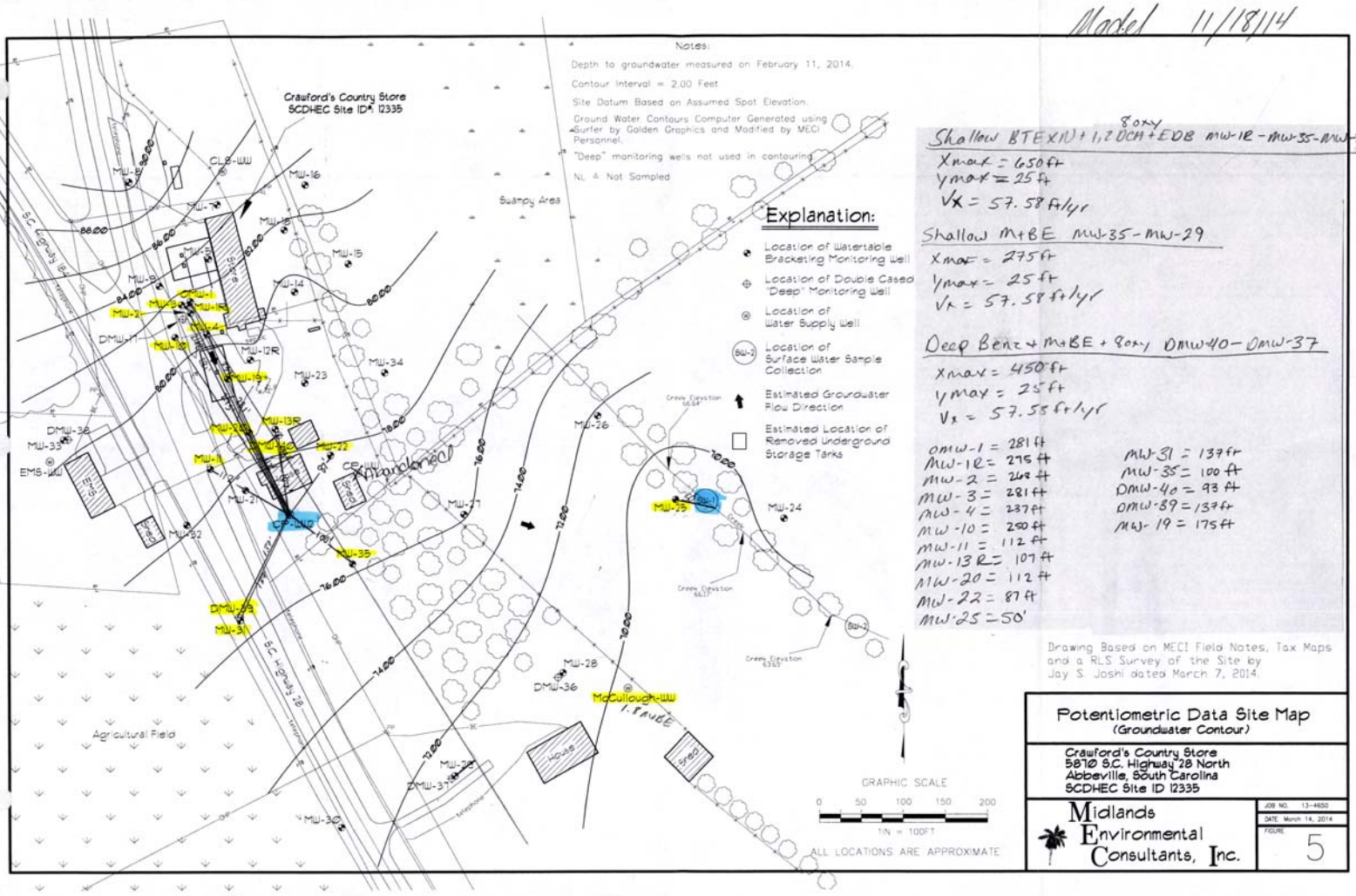
deep MWs Benzene + MtBE

**SSTLs** t 1000 yrs

UST Permit # 12335
Site Name: Crawford's Country Store

| *SSTLs in mg/L* | | RBSLs (mg/L): | | 0.005 | | | | 0.040 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW # | x (ft) | y (ft) | z (ft) | Benzene SSTL | | | | MtBE SSTL | | | |
| DMW-40 | 93 | 0 | 0 | 0.012 | | | | 0.183 | | | |
| DMW-39 | 137 | 0 | 0 | 0.017 | | | | 0.336 | | | |
| | | | $\lambda$ ($yr^{-1}$): | 0.198 | | | | 0.693 | | | |
| | | | R: | 1.097 | | | | 1.013 | | | |
| | | | Pure Substance Solubility: | 1750 | | | | 5110 | | | |
| | | | Effective Solubility: | 44.39 | | | | 173 | | | |

Model 11/18/14




Shallow BTEX(N) + 1,2DCA + EDB (8 oxy) MW-1R - MW-35 - MW-29
Xmax = 650 ft
Ymax = 25 ft
Vx = 57.58 ft/yr

Shallow MtBE MW-35 - MW-29
Xmax = 275 ft
Ymax = 25 ft
Vx = 57.58 ft/yr

Deep Benz + MtBE + 8 oxy DMW-40 - DMW-37
Xmax = 450 ft
Ymax = 25 ft
Vx = 57.58 ft/yr

DMW-1 = 281 ft
MW-1R = 275 ft
MW-2 = 269 ft
MW-3 = 281 ft
MW-4 = 237 ft
MW-10 = 250 ft
MW-11 = 112 ft
MW-13R = 107 ft
MW-20 = 112 ft
MW-22 = 87 ft
MW-25 = 50'
MW-31 = 137 ft
MW-35 = 100 ft
DMW-40 = 93 ft
DMW-39 = 137 ft
MW-19 = 175 ft

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

**Potentiometric Data Site Map**
(Groundwater Contour)

Crawford's Country Store
5810 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 13-4650
DATE March 14, 2014
FIGURE 5

# Midlands Environmental Consultants, Inc.

December 17, 2014

Ms. Ashleigh Thrash, Hydrogeologist
Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

UST
DEC 17 2014
DIVISION

UST
30 Tech
DOCKETING

Subject: Site-Specific Work Plan
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID Number 12335
MECI Project Number 14-5053
Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Thrash,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Site-Specific Work Plan for the referenced site.

On December 11, 2014, MECI personnel performed a site visit to the subject site to evaluate site conditions, locate monitoring wells and identify potential problems for future sampling activities.

If you have any question or comments please feel free to contact us at 803-808-2043.

Sincerely,
**Midlands Environmental Consultants, Inc.**

Kyle V. Pudney
Project Biologist

Jeff L. Coleman
Senior Scientist

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Midlands Environmental Consultants, Inc.

D H E C
PROMOTE PROTECT PROSPER

# Site-Specific Work Plan for Approved ACQAP
# Underground Storage Tank Management Division

To: Ms. Ashleigh Thrash (SCDHEC Project Manager)
From: Mr. Jeff Coleman (Contractor Project Manager)
Contractor: Midlands Environmental Consultants, Inc. UST Contractor Certification Number: 009

Facility Name: Crawford's Country Store UST Permit #: 12335
Facility Address: 5870 Highway 28 North, Abbeville, SC 29620
Responsible Party: Mr. Frank Crawford Phone: 864-446-2000
RP Address: 31 Turtle Pt., Abbeville, SC 29620
Property Owner (if different): SAA
Property Owner Address: SAA
Current Use of Property: Active Gas Station

**Scope of Work** (Please check all that apply)

- ☐ IGWA
- ☐ Tier I
- ☐ Tier II
- ☐ Monitoring Well Installation
- ☑ Groundwater Sampling
- ☑ Other **********96-Hour AFVR**********
- ☐ GAC

**Analyses** (Please check all that apply)

Groundwater/Surface Water:

- ☑ BTEXNMDCA (8260B)
- ☑ Oxygenates (8260B)
- ☑ EDB (8011)
- ☐ PAH (8270D)
- ☑ Lead
- ☐ 8 RCRA Metals
- ☐ TPH
- ☐ pH
- ☐ BOD
- ☐ Nitrate
- ☐ Sulfate
- ☐ Other
- ☐ Methane
- ☐ Ethanol
- ☐ Dissolved Iron

Soil:

- ☐ BTEXN
- ☐ PAH
- ☐ 8 RCRA Metals
- ☐ Oil & Grease (9071)
- ☐ TPH-DRO (3550B/8015B)
- ☐ TPH-GRO (5030B/8015B)
- ☐ Grain Size
- ☐ TOC

Air:

- ☐ BTEXN

**Sample Collection** (Estimate the number of samples of each matrix that are expected to be collected.)

| | | | |
|---|---|---|---|
| ____ Soil | ____ Water Supply Wells | ____ Air | 1 Field Blank |
| 40 Monitoring Wells | 2 Surface Water | 3 Duplicate | 1 Trip Blank |

**Field Screening Methodology**

Estimate number and total completed depth for each point, and include their proposed locations on the attached map.

# of shallow points proposed: _____ Estimated Footage: _____ feet per point
# of deep points proposed: _____ Estimated Footage: _____ feet per point
Field Screening Methodology: _____

**Permanent Monitoring Wells**

Estimate number and total completed depth for each well, and include their proposed locations on the attached map.

# of shallow wells: _____ Estimated Footage: _____ feet per point
# of deep wells: _____ Estimated Footage: _____ feet per point
# of recovery wells: _____ Estimated Footage: _____ feet per point
Monitoring Well development method (consistent with SOP): _____
Comments, if warranted:

_____
_____
_____

UST Permit #: 12335 Facility Name: Crawford's Country Store

**Implementation Schedule** (Number of calendar days from approval)
Field Work Start-Up: 1/2/2015 Field Work Completion: 2/2/2015
Report Submittal: 3/2/2015 # of Copies Provided to Property Owners: 2

**Aquifer Characterization**
Pump Test: ☐ Slug Test: ☐ (Check one and provide explanation below for choice)

**Investigation Derived Waste Disposal**
Soil: _____ Tons Purge Water: 400.0 Gallons
Drilling Fluids: _____ Gallons Free-Phase Product: _____ Gallons

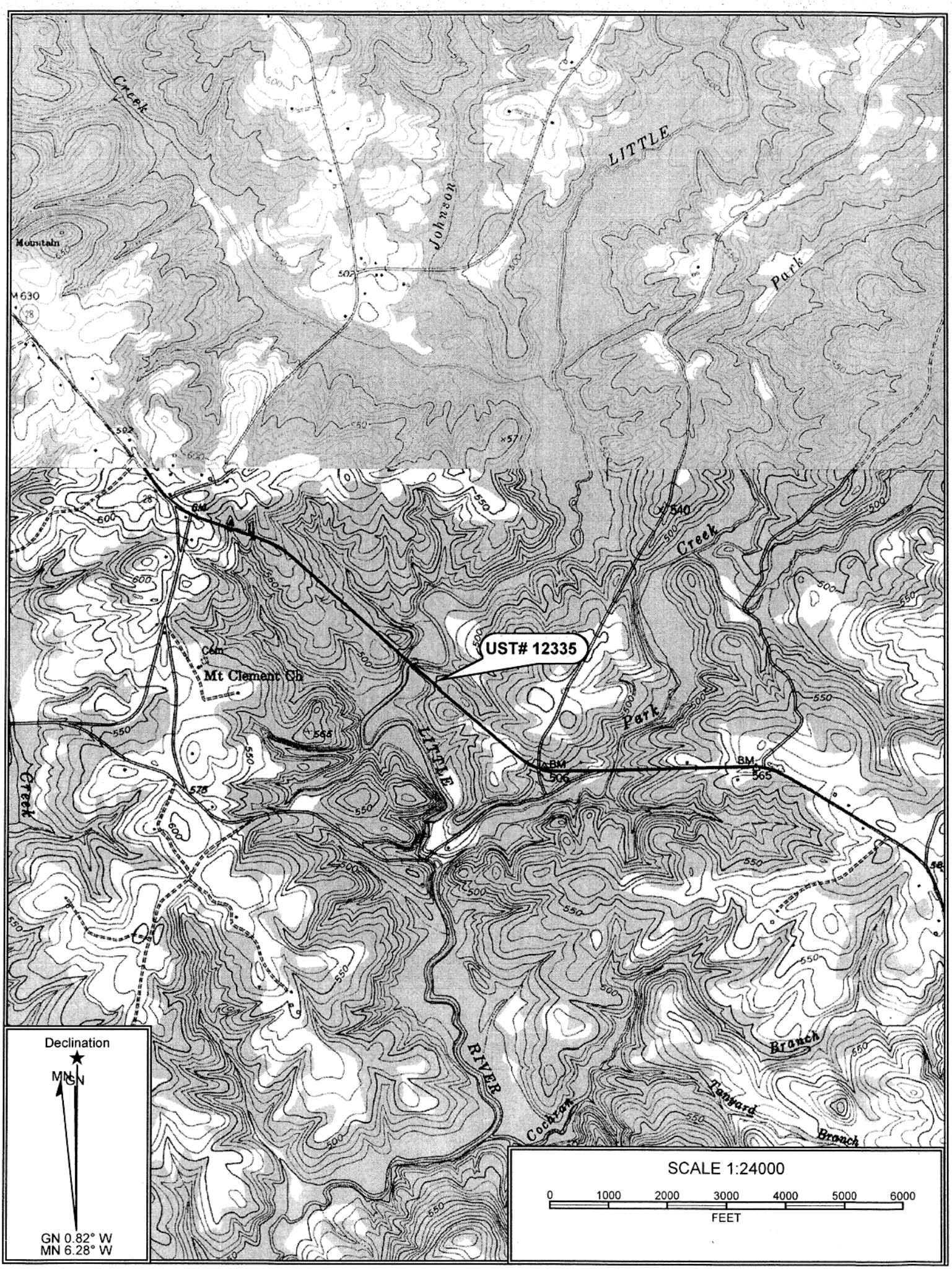
**Additional Details For This Scope of Work**
For example, list wells to be sampled, wells to be abandoned/repaired, well pads/bolts/caps to replace, details of AFVR event, etc.
-During the initial site visit, all monitoring wells were located and found to be in good condition.
-MECI will conduct a 96-Hour AFVR on monitoring wells OMW-1, MW-1R, and MW-3.
-Approximately 45 days following the AFVR event, MECI will conduct a comprehensive sampling event. All monitoring wells will be sampled for BTEX, Naphthalene, MTBE, 1,2 DCA, EDB, and Lead.
-The two (2) surface waters will be sampled for BTEX, Naphthalene, MTBE, 1,2 DCA, and EDB.

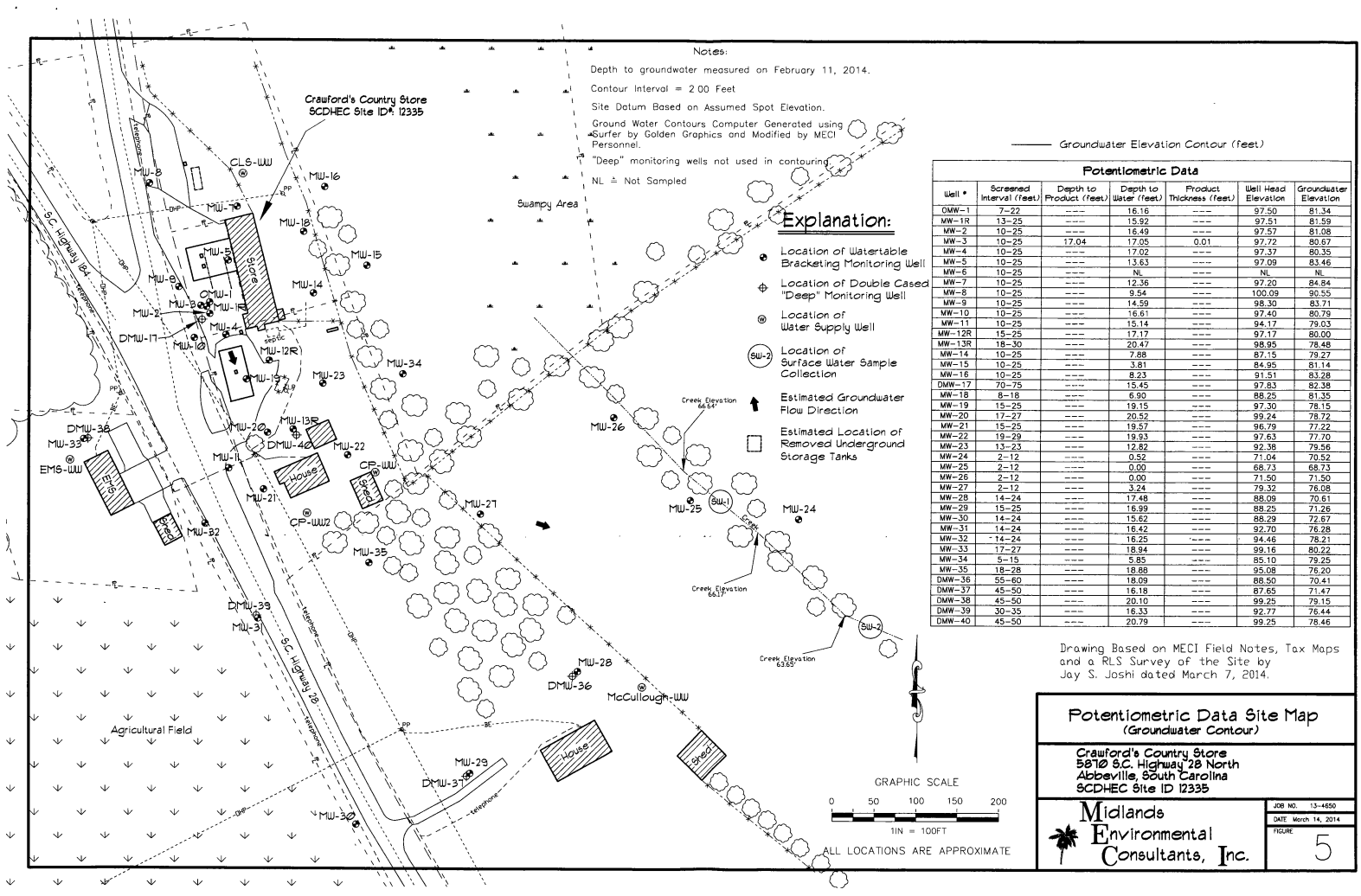
**Compliance With Annual Contractor Quality Assurance Plan (ACQAP)**
Yes Laboratory as indicated in ACQAP? (Yes/No) If no, indicate laboratory information below.
Name of Laboratory: _____
SCDHEC Certification Number: _____
Name of Laboratory Director: _____

Yes Well Driller as indicated in ACQAO? (Yes/No) If no, indicate driller information below.
Name of Well Driller: _____
SCLLR Certification Number: _____

N/A Other variations from ACQAP. Please describe below.

**Attachments**
1. Attach a copy of the relevant portion of the USGS topographic map showing the site location.
2. Prepare a site base map. This map must be accurately scaled, but does not need to be surveyed. The map must include the following:
   - North Arrow
   - Location of property lines
   - Location of buildings
   - Previous soil sampling locations
   - Previous monitoring well locations
   - Proposed soil boring locations
   - Proposed monitoring well locations
   - Legend with facility name and address, UST permit number, and bar scale
   - Streets or highways (indicate names and numbers)
   - Location of all present and former ASTs and USTs
   - Location of all potential receptors
3. Assessment Component Cost Agreement, SCDHEC Form D-3664


UST# 12335
Mt Clement Ch
Cem
LITTLE
RIVER
Johnson
Creek
Park
Branch
Cochran
Tanyard
Branch
Declination
MN
GN
GN 0.82° W
MN 6.28° W
SCALE 1:24000
0
1000
2000
3000
4000
5000
6000
FEET




**Potentiometric Data**

| Well # | Screened Interval (feet) | Depth to Product (feet) | Depth to Water (feet) | Product Thickness (feet) | Well Head Elevation | Groundwater Elevation |
|---|---|---|---|---|---|---|
| OMW-1 | 7-22 | --- | 16.16 | --- | 97.50 | 81.34 |
| MW-1R | 13-25 | --- | 15.92 | --- | 97.51 | 81.59 |
| MW-2 | 10-25 | --- | 16.49 | --- | 97.57 | 81.08 |
| MW-3 | 10-25 | 17.04 | 17.05 | 0.01 | 97.72 | 80.67 |
| MW-4 | 10-25 | --- | 17.02 | --- | 97.37 | 80.35 |
| MW-5 | 10-25 | --- | 13.63 | --- | 97.09 | 83.46 |
| MW-6 | 10-25 | --- | NL | --- | NL | NL |
| MW-7 | 10-25 | --- | 12.36 | --- | 97.20 | 84.84 |
| MW-8 | 10-25 | --- | 9.54 | --- | 100.09 | 90.55 |
| MW-9 | 10-25 | --- | 14.59 | --- | 98.30 | 83.71 |
| MW-10 | 10-25 | --- | 16.61 | --- | 97.40 | 80.79 |
| MW-11 | 10-25 | --- | 15.14 | --- | 94.17 | 79.03 |
| MW-12R | 15-25 | --- | 17.17 | --- | 97.17 | 80.00 |
| MW-13R | 18-30 | --- | 20.47 | --- | 98.95 | 78.48 |
| MW-14 | 10-25 | --- | 7.88 | --- | 87.15 | 79.27 |
| MW-15 | 10-25 | --- | 3.81 | --- | 84.95 | 81.14 |
| MW-16 | 10-25 | --- | 8.23 | --- | 91.51 | 83.28 |
| DMW-17 | 70-75 | --- | 15.45 | --- | 97.83 | 82.38 |
| MW-18 | 8-18 | --- | 6.90 | --- | 88.25 | 81.35 |
| MW-19 | 15-25 | --- | 19.15 | --- | 97.30 | 78.15 |
| MW-20 | 17-27 | --- | 20.52 | --- | 99.24 | 78.72 |
| MW-21 | 15-25 | --- | 19.57 | --- | 96.79 | 77.22 |
| MW-22 | 19-29 | --- | 19.93 | --- | 97.63 | 77.70 |
| MW-23 | 13-23 | --- | 12.82 | --- | 92.38 | 79.56 |
| MW-24 | 2-12 | --- | 0.52 | --- | 71.04 | 70.52 |
| MW-25 | 2-12 | --- | 0.00 | --- | 68.73 | 68.73 |
| MW-26 | 2-12 | --- | 0.00 | --- | 71.50 | 71.50 |
| MW-27 | 2-12 | --- | 3.24 | --- | 79.32 | 76.08 |
| MW-28 | 14-24 | --- | 17.48 | --- | 88.09 | 70.61 |
| MW-29 | 15-25 | --- | 16.99 | --- | 88.25 | 71.26 |
| MW-30 | 14-24 | --- | 15.62 | --- | 88.29 | 72.67 |
| MW-31 | 14-24 | --- | 16.42 | --- | 92.70 | 76.28 |
| MW-32 | 14-24 | --- | 16.25 | --- | 94.46 | 78.21 |
| MW-33 | 17-27 | --- | 18.94 | --- | 99.16 | 80.22 |
| MW-34 | 5-15 | --- | 5.85 | --- | 85.10 | 79.25 |
| MW-35 | 18-28 | --- | 18.88 | --- | 95.08 | 76.20 |
| DMW-36 | 55-60 | --- | 18.09 | --- | 88.50 | 70.41 |
| DMW-37 | 45-50 | --- | 16.18 | --- | 87.65 | 71.47 |
| DMW-38 | 45-50 | --- | 20.10 | --- | 99.25 | 79.15 |
| DMW-39 | 30-35 | --- | 16.33 | --- | 92.77 | 76.44 |
| DMW-40 | 45-50 | --- | 20.79 | --- | 99.25 | 78.46 |

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

# Potentiometric Data Site Map
## (Groundwater Contour)

Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 13-4650
DATE March 14, 2014
FIGURE 5

D H E C

PROMOTE PROTECT PROSPER

South Carolina Department of Health and Environmental Control

**ASSESSMENT COMPONENT COST AGREEMENT**

**SOUTH CAROLINA**

Department of Health and Environmental Control

Underground Storage Tank Management Division

State Underground Petroleum Environmental Response Bank Account

May 15, 2014

**Facility Name:** Crawford's Country Store

**UST Permit #:** 12335 **Cost Agreement #:** Proposal

| ITEM | QUANTITY | UNIT | UNIT PRICE | TOTAL |
|---|---|---|---|---|
| 1. **Plan Preparation** | | | | |
| A1. Site-specific Work Plan | 1 | each | $150.00 | $150.00 |
| B1. Tax Map | | each | $70.00 | $0.00 |
| C1. Tier II or Comp. Plan /QAPP Appendix B | | each | $250.00 | $0.00 |
| 2. A1. **Receptor Survey *** | | each | $551.00 | $0.00 |
| 3. **Survey (500 ft x 500 ft)** | | | | |
| A1. Comprehensive Survey | | each | $1,040.00 | $0.00 |
| B. Subsurface Geophysical Survey | | | | |
| 1B. < 10 meters below grade | | each | $1,300.00 | $0.00 |
| 2B. > 10 meters below grade | | each | $2,310.00 | $0.00 |
| C1. Geophysical UST or Drum Survey | | each | $910.00 | $0.00 |
| 4. **Mob/Demob** | | | | |
| A1. Equipment | | each | $1,020.00 | $0.00 |
| B1. Personnel | 4 | each | $423.00 | $1,692.00 |
| C1. Adverse Terrain Vehicle | | each | $500.00 | $0.00 |
| 5. A1. **Soil Borings (hand auger)*** | | foot | $5.00 | $0.00 |
| 6. **Soil Borings (requiring equipment, push technology, etc)* or Field Screening (including water ssample, soil sample, soil gas sample, etc.)*** | | | | |
| AA. Standard | | per foot | $15.00 | $0.00 |
| C1. Fractured Rock | | per foot | $20.20 | $0.00 |
| 7. A1. **Soil Leachability Model** | | each | $60.00 | $0.00 |
| 8. **Abandonment (per foot)*** | | | | |
| A1. 2" diameter or less | | per foot | $3.10 | $0.00 |
| B1. Greater than 2" to 6" diameter | | per foot | $4.50 | $0.00 |
| C1. Dug/Bored well (up to 6 feet diameter) | | per foot | $15.00 | $0.00 |
| 9. **Well Installation (per foot)*** | | | | |
| A1. Water Table (hand augered) | | per foot | $10.60 | $0.00 |
| B1. Water Table (drill rig) | | per foot | $38.00 | $0.00 |
| CC. Telescoping | | per foot | $50.00 | $0.00 |
| DD. Rock Drilling | | per foot | $58.00 | $0.00 |
| E1. 2" Rock Coring | | per foot | $30.90 | $0.00 |
| G1. Rock Multi-sampling ports/screens | | per foot | $33.40 | $0.00 |
| HH. Recovery Well (4" diameter) | | per foot | $45.00 | $0.00 |
| II. Pushed Pre-packed screen (1.25" dia) | | per foot | $15.00 | $0.00 |
| J1. Rotosonic (2" diameter) | | per foot | $44.00 | $0.00 |
| K. Re-develop Existing Well | | per foot | $11.00 | $0.00 |
| 10. **Groundwater Sample Collection / Gauge Depth to Water or Product *** | | | | |
| A1. Groundwater Purge | 6 | per well/receptor | $60.00 | $360.00 |
| B1. Air or Vapors | | per receptor | $12.00 | $0.00 |
| C1. Water Supply | 2 | per well/receptor | $22.00 | $44.00 |
| D1. Groundwater No Purge or Duplicate | 37 | per well/receptor | $28.00 | $1,036.00 |
| E1. Gauge Well only | | per well | $7.00 | $0.00 |
| F1. Sample Below Product | | per well | $12.00 | $0.00 |
| G1. Passive Diffusion Bag | | each | $26.00 | $0.00 |
| H1. Field Blank | 1 | each | $24.60 | $24.60 |

| | | | | | |
|---|---|---|---|---|---|
| **11. Laboratory Analyses-Groundwater** | | | | | |
| A2. BTEXNM+Oxyg's+1,2 DCA+Eth(8260B) | 47 | per sample | $122.00 | | $5,734.00 |
| AA1. Lead, Filtered | | per sample | $13.80 | | $0.00 |
| B2. Rush EPA Method 8260B (All of item A.) | | per sample | $153.60 | | $0.00 |
| C2. Trimethal, Butyl, and Isopropyl Benzenes | | per sample | $36.40 | | $0.00 |
| D1. PAH's | | per sample | $60.60 | | $0.00 |
| E1. Lead | 43 | per sample | $16.00 | | $688.00 |
| F1. EDB by EPA 8011 | 46 | per sample | $45.20 | | $2,079.20 |
| FF1. EDB by EPA Method 8011 Rush | | per sample | $68.20 | | $0.00 |
| G1. 8 RCRA Metals | | per sample | $63.40 | | $0.00 |
| H1. TPH (9070) | | per sample | $41.00 | | $0.00 |
| II. pH | | per sample | $5.20 | | $0.00 |
| J1. BOD | | per sample | $20.00 | | $0.00 |
| PP. Ethanol | | per sample | $14.80 | | $0.00 |
| 11. **Analyses-Soil** | | | | | |
| Q1. BTEX + Naphth. | | per sample | $64.00 | | $0.00 |
| R1. PAH's | | per sample | $64.04 | | $0.00 |
| S1. 8 RCRA Metals | | per sample | $56.40 | | $0.00 |
| U1. TPH-DRO (3550C/8015C) | | per sample | $40.00 | | $0.00 |
| V1. TPH- GRO (5030B/8015C) | | per sample | $35.96 | | $0.00 |
| W1. Grain size/hydrometer | | per sample | $104.00 | | $0.00 |
| X1. Total Organic Carbon | | per sample | $30.60 | | $0.00 |
| 11. **Analyses-Air** | | | | | |
| Y1. BTEX + Naphthalene | | per sample | $216.00 | | $0.00 |
| 11. **Analyses-Free Phase Product** | | | | | |
| Z1. Hydrocarbon Fuel Identification | | per sample | $357.00 | | $0.00 |
| 12. **Aquifer Characterization** | | | | | |
| A1. Pumping Test* | | per hour | $23.00 | | $0.00 |
| B1. Slug Test* | | per test | $191.00 | | $0.00 |
| C1. Fractured Rock | | per test | $100.00 | | $0.00 |
| 13. A1. **Free Product Recovery Rate Test*** | | each | $38.00 | | $0.00 |
| 14. **Fate/Transport Modeling** | | | | | |
| A1. Mathematical Model | | each | $100.00 | | $0.00 |
| B1. Computer Model | | each | $100.00 | | $0.00 |
| 15. **Risk Evaluation** | | | | | |
| A. Tier I Risk Evaluation | | each | $300.00 | | $0.00 |
| B1. Tier II Risk Evaluation | | each | $100.00 | | $0.00 |
| 16. A1. **Subsequent Survey*** | | each | $260.00 | | $0.00 |
| 17. **Disposal (gallons or tons)*** | | | | | |
| AA. Wastewater | 400 | gallon | $0.56 | | $224.00 |
| BB. Free Product | | gallon | $0.50 | | $0.00 |
| C1. Soil Treatment/Disposal | | ton | $60.00 | | $0.00 |
| D1. Drilling fluids | | gallon | $0.42 | | $0.00 |
| 18. **Miscellaneous (attach receipts)** | | | | | |
| | | each | $0.00 | | $0.00 |
| | | each | $0.00 | | $0.00 |
| | | each | $0.00 | | $0.00 |
| 20. **Tier I Assessment (Use DHEC 3665 form)** | | standard | | | $0.00 |
| 21. **IGWA (Use DHEC 3666 form)** | | standard | | | $0.00 |
| 22. **Corrective Action (Use DHEC 3667 form)** | | PFP Bid | | | $0.00 |

| | | | | | |
|---|---|---|---|---|---|
| 23. **Aggressive Fluid & Vapor Recovery (AFVR)** | | | | | |
| A1. 8-hour Event* | | each | $1,375.00 | | $0.00 |
| AA. 24-hour Event* | | each | $3,825.00 | | $0.00 |
| A3. 48-hour Event* | | each | $6,265.00 | | $0.00 |
| A4. 96-hour Event* | 1 | each | $12,567.50 | | $12,567.50 |
| C1. Off-gas Treatment 8 hour | | per event | $122.50 | | $0.00 |
| C2. Off-gas Treatment 24 hour | | per event | $241.50 | | $0.00 |
| C3. Off-gas Treatment 48 hour | | per event | $327.00 | | $0.00 |
| C4. Off-gas Treatment 96 hour | 1 | per event | $780.00 | | $780.00 |
| D. Site Reconnaissance | | each | $203.25 | | $0.00 |
| E1. Additional Hook-ups | | each | $25.75 | | $0.00 |
| F1. Effluent Disposal | 10,000 | gallon | $0.44 | | $4,400.00 |
| G. AFVR Mobilization/Demobilization | 1 | each | $391.50 | | $391.50 |
| 24. **Granulated Activated Carbon (GAC) filter system installation & service:** | | | | | |
| A1. New GAC System Installation* | | each | $1,900.00 | | $0.00 |
| BB. Refurbished GAC Sys. Install* | | each | $900.00 | | $0.00 |
| C1. Filter replacement/removal* | | each | $350.00 | | $0.00 |
| DD. GAC System removal, cleaning, & refurbishment* | | each | $275.00 | | $0.00 |
| E1. GAC System housing* | | each | $250.00 | | $0.00 |
| F. In-line particulate filter | | each | $150.00 | | $0.00 |
| G1. Additional piping & fittings | | foot | $1.50 | | $0.00 |
| 25. **Well Repair** | | | | | |
| A1. Additional Copies of the Report Delivered | | each | $50.00 | | $0.00 |
| B1. Repair 2x2 MW pad* | | each | $50.00 | | $0.00 |
| C1. Repair 4x4 MW pad* | | each | $88.00 | | $0.00 |
| D1. Repair well vault* | | each | $118.00 | | $0.00 |
| F1. Replace well cover bolts | | each | $2.60 | | $0.00 |
| G. Replace locking well cap & lock | | each | $15.00 | | $0.00 |
| H1. Replace/Repair stick-up* | | each | $134.00 | | $0.00 |
| I1. Convert Flush-mount to Stick-up* | | each | $150.00 | | $0.00 |
| J1. Convert Stick-up to Flush-mount* | | each | $130.00 | | $0.00 |
| K1. Replace missing/illegible well ID plate | | each | $12.00 | | $0.00 |
| **Report Prep & Project Management** | 12% | percent | $30,170.80 | | $3,620.50 |
| **TOTAL** | | | | | $33,791.30 |

*The appropriate mobilization cost can be added to complete these tasks, as necessary

# Midlands Environmental Consultants, Inc.

December 17, 2014

Ms. Ashleigh Thrash, Hydrogeologist
Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

UST
DEC 17 2014
DIVISION

UST
30 Tech
DOCKETING

Subject: Site-Specific Work Plan
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID Number 12335
MECI Project Number 14-5053
Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Thrash,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Site-Specific Work Plan for the referenced site.

On December 11, 2014, MECI personnel performed a site visit to the subject site to evaluate site conditions, locate monitoring wells and identify potential problems for future sampling activities.

If you have any question or comments please feel free to contact us at 803-808-2043.

Sincerely,
**Midlands Environmental Consultants, Inc.**

Kyle V. Pudney
Project Biologist

Jeff L. Coleman
Senior Scientist

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

Midlands Environmental Consultants, Inc.

D H E C
PROMOTE PROTECT PROSPER

# Site-Specific Work Plan for Approved ACQAP
# Underground Storage Tank Management Division

To: Ms. Ashleigh Thrash (SCDHEC Project Manager)
From: Mr. Jeff Coleman (Contractor Project Manager)
Contractor: Midlands Environmental Consultants, Inc. UST Contractor Certification Number: 009

Facility Name: Crawford's Country Store UST Permit #: 12335
Facility Address: 5870 Highway 28 North, Abbeville, SC 29620
Responsible Party: Mr. Frank Crawford Phone: 864-446-2000
RP Address: 31 Turtle Pt., Abbeville, SC 29620
Property Owner (if different): SAA
Property Owner Address: SAA
Current Use of Property: Active Gas Station

**Scope of Work** (Please check all that apply)

- ☐ IGWA
- ☐ Tier I
- ☐ Tier II
- ☐ Monitoring Well Installation
- ☑ Groundwater Sampling
- ☑ Other **********96-Hour AFVR**********
- ☐ GAC

**Analyses** (Please check all that apply)

Groundwater/Surface Water:

- ☑ BTEXNMDCA (8260B)
- ☑ Oxygenates (8260B)
- ☑ EDB (8011)
- ☐ PAH (8270D)
- ☑ Lead
- ☐ 8 RCRA Metals
- ☐ TPH
- ☐ pH
- ☐ BOD
- ☐ Nitrate
- ☐ Sulfate
- ☐ Other
- ☐ Methane
- ☐ Ethanol
- ☐ Dissolved Iron

Soil:

- ☐ BTEXN
- ☐ PAH
- ☐ 8 RCRA Metals
- ☐ Oil & Grease (9071)
- ☐ TPH-DRO (3550B/8015B)
- ☐ TPH-GRO (5030B/8015B)
- ☐ Grain Size
- ☐ TOC

Air:

- ☐ BTEXN

**Sample Collection** (Estimate the number of samples of each matrix that are expected to be collected.)

| | | | |
|---|---|---|---|
| ____ Soil | ____ Water Supply Wells | ____ Air | 1 Field Blank |
| 40 Monitoring Wells | 2 Surface Water | 3 Duplicate | 1 Trip Blank |

**Field Screening Methodology**

Estimate number and total completed depth for each point, and include their proposed locations on the attached map.

# of shallow points proposed: _____ Estimated Footage: _____ feet per point
# of deep points proposed: _____ Estimated Footage: _____ feet per point
Field Screening Methodology: _____

**Permanent Monitoring Wells**

Estimate number and total completed depth for each well, and include their proposed locations on the attached map.

# of shallow wells: _____ Estimated Footage: _____ feet per point
# of deep wells: _____ Estimated Footage: _____ feet per point
# of recovery wells: _____ Estimated Footage: _____ feet per point
Monitoring Well development method (consistent with SOP): _____
Comments, if warranted:

_____
_____
_____

UST Permit #: 12335 Facility Name: Crawford's Country Store

**Implementation Schedule** (Number of calendar days from approval)
Field Work Start-Up: 1/2/2015 Field Work Completion: 2/2/2015
Report Submittal: 3/2/2015 # of Copies Provided to Property Owners: 2

**Aquifer Characterization**
Pump Test: ☐ Slug Test: ☐ (Check one and provide explanation below for choice)

**Investigation Derived Waste Disposal**
Soil: _____ Tons Purge Water: 400.0 Gallons
Drilling Fluids: _____ Gallons Free-Phase Product: _____ Gallons

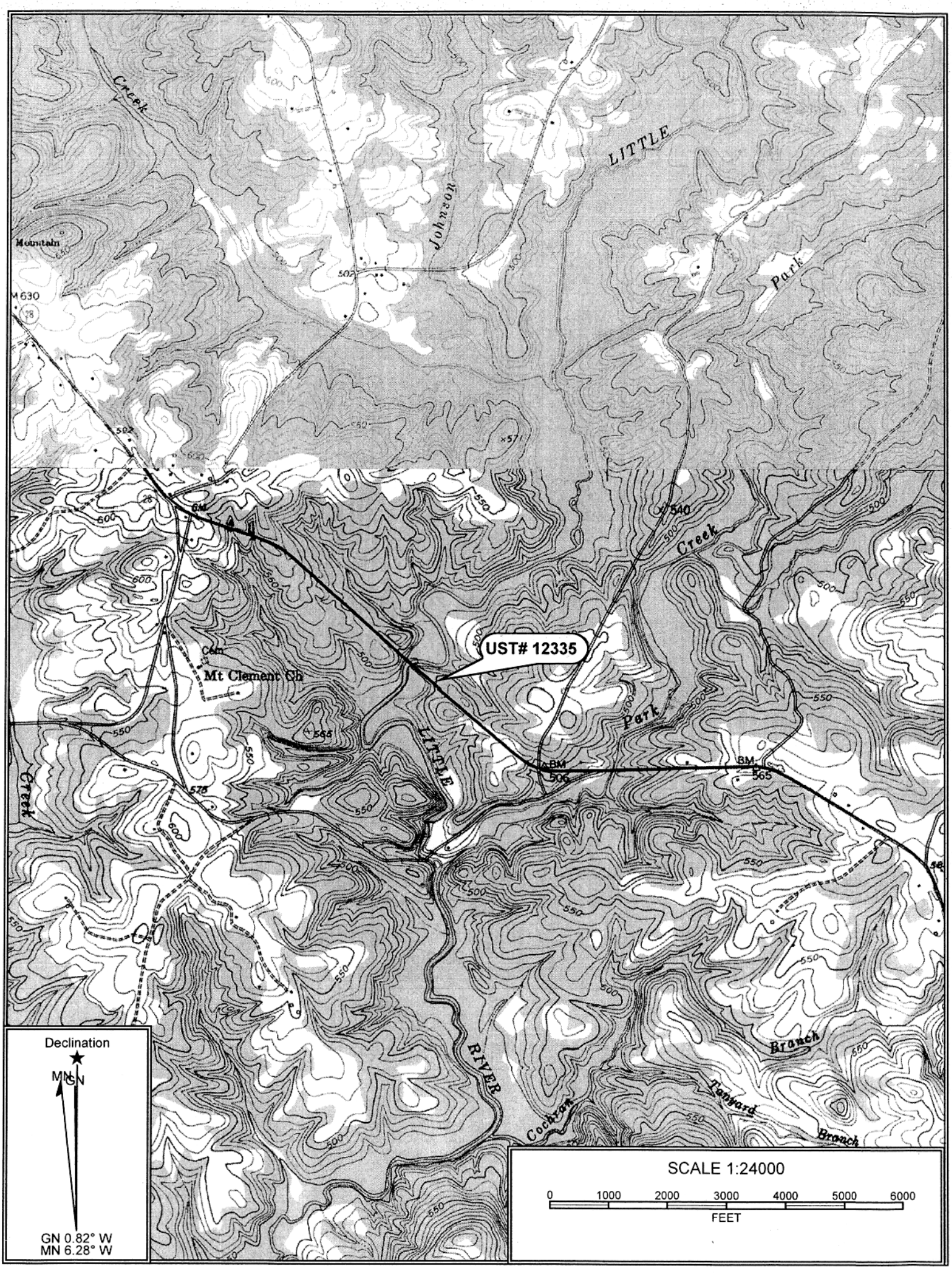
**Additional Details For This Scope of Work**
For example, list wells to be sampled, wells to be abandoned/repaired, well pads/bolts/caps to replace, details of AFVR event, etc.
-During the initial site visit, all monitoring wells were located and found to be in good condition.
-MECI will conduct a 96-Hour AFVR on monitoring wells OMW-1, MW-1R, and MW-3.
-Approximately 45 days following the AFVR event, MECI will conduct a comprehensive sampling event. All monitoring wells will be sampled for BTEX, Naphthalene, MTBE, 1,2 DCA, EDB, and Lead.
-The two (2) surface waters will be sampled for BTEX, Naphthalene, MTBE, 1,2 DCA, and EDB.

**Compliance With Annual Contractor Quality Assurance Plan (ACQAP)**
Yes Laboratory as indicated in ACQAP? (Yes/No) If no, indicate laboratory information below.
Name of Laboratory: _____
SCDHEC Certification Number: _____
Name of Laboratory Director: _____

Yes Well Driller as indicated in ACQAO? (Yes/No) If no, indicate driller information below.
Name of Well Driller: _____
SCLLR Certification Number: _____

N/A Other variations from ACQAP. Please describe below.

**Attachments**
1. Attach a copy of the relevant portion of the USGS topographic map showing the site location.
2. Prepare a site base map. This map must be accurately scaled, but does not need to be surveyed. The map must include the following:
   - North Arrow
   - Location of property lines
   - Location of buildings
   - Previous soil sampling locations
   - Previous monitoring well locations
   - Proposed soil boring locations
   - Proposed monitoring well locations
   - Legend with facility name and address, UST permit number, and bar scale
   - Streets or highways (indicate names and numbers)
   - Location of all present and former ASTs and USTs
   - Location of all potential receptors
3. Assessment Component Cost Agreement, SCDHEC Form D-3664


UST# 12335
Mt Clement Ch
Cem
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Park
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Tanyard
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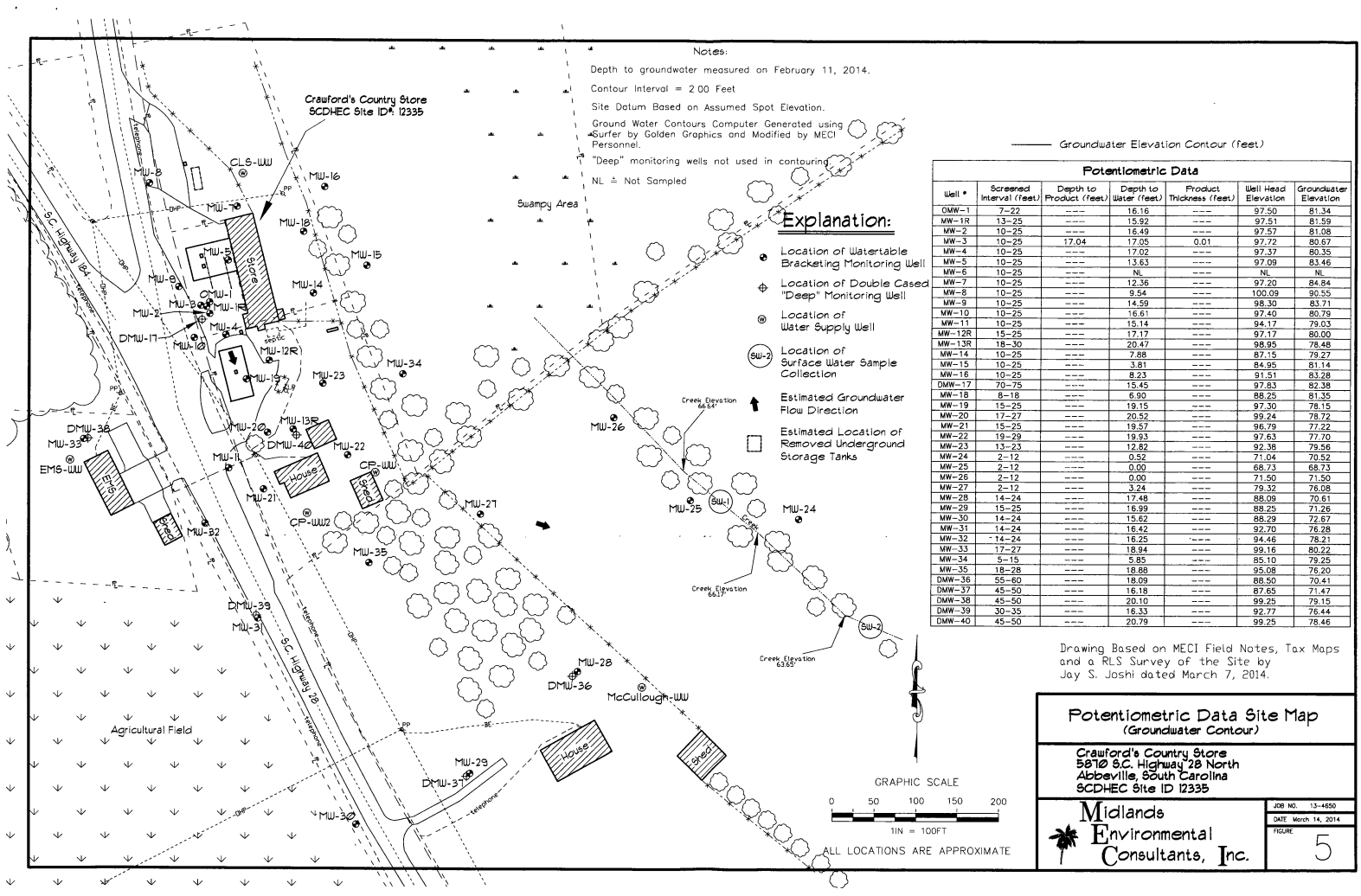



**Potentiometric Data**

| Well # | Screened Interval (feet) | Depth to Product (feet) | Depth to Water (feet) | Product Thickness (feet) | Well Head Elevation | Groundwater Elevation |
|---|---|---|---|---|---|---|
| OMW-1 | 7-22 | --- | 16.16 | --- | 97.50 | 81.34 |
| MW-1R | 13-25 | --- | 15.92 | --- | 97.51 | 81.59 |
| MW-2 | 10-25 | --- | 16.49 | --- | 97.57 | 81.08 |
| MW-3 | 10-25 | 17.04 | 17.05 | 0.01 | 97.72 | 80.67 |
| MW-4 | 10-25 | --- | 17.02 | --- | 97.37 | 80.35 |
| MW-5 | 10-25 | --- | 13.63 | --- | 97.09 | 83.46 |
| MW-6 | 10-25 | --- | NL | --- | NL | NL |
| MW-7 | 10-25 | --- | 12.36 | --- | 97.20 | 84.84 |
| MW-8 | 10-25 | --- | 9.54 | --- | 100.09 | 90.55 |
| MW-9 | 10-25 | --- | 14.59 | --- | 98.30 | 83.71 |
| MW-10 | 10-25 | --- | 16.61 | --- | 97.40 | 80.79 |
| MW-11 | 10-25 | --- | 15.14 | --- | 94.17 | 79.03 |
| MW-12R | 15-25 | --- | 17.17 | --- | 97.17 | 80.00 |
| MW-13R | 18-30 | --- | 20.47 | --- | 98.95 | 78.48 |
| MW-14 | 10-25 | --- | 7.88 | --- | 87.15 | 79.27 |
| MW-15 | 10-25 | --- | 3.81 | --- | 84.95 | 81.14 |
| MW-16 | 10-25 | --- | 8.23 | --- | 91.51 | 83.28 |
| DMW-17 | 70-75 | --- | 15.45 | --- | 97.83 | 82.38 |
| MW-18 | 8-18 | --- | 6.90 | --- | 88.25 | 81.35 |
| MW-19 | 15-25 | --- | 19.15 | --- | 97.30 | 78.15 |
| MW-20 | 17-27 | --- | 20.52 | --- | 99.24 | 78.72 |
| MW-21 | 15-25 | --- | 19.57 | --- | 96.79 | 77.22 |
| MW-22 | 19-29 | --- | 19.93 | --- | 97.63 | 77.70 |
| MW-23 | 13-23 | --- | 12.82 | --- | 92.38 | 79.56 |
| MW-24 | 2-12 | --- | 0.52 | --- | 71.04 | 70.52 |
| MW-25 | 2-12 | --- | 0.00 | --- | 68.73 | 68.73 |
| MW-26 | 2-12 | --- | 0.00 | --- | 71.50 | 71.50 |
| MW-27 | 2-12 | --- | 3.24 | --- | 79.32 | 76.08 |
| MW-28 | 14-24 | --- | 17.48 | --- | 88.09 | 70.61 |
| MW-29 | 15-25 | --- | 16.99 | --- | 88.25 | 71.26 |
| MW-30 | 14-24 | --- | 15.62 | --- | 88.29 | 72.67 |
| MW-31 | 14-24 | --- | 16.42 | --- | 92.70 | 76.28 |
| MW-32 | 14-24 | --- | 16.25 | --- | 94.46 | 78.21 |
| MW-33 | 17-27 | --- | 18.94 | --- | 99.16 | 80.22 |
| MW-34 | 5-15 | --- | 5.85 | --- | 85.10 | 79.25 |
| MW-35 | 18-28 | --- | 18.88 | --- | 95.08 | 76.20 |
| DMW-36 | 55-60 | --- | 18.09 | --- | 88.50 | 70.41 |
| DMW-37 | 45-50 | --- | 16.18 | --- | 87.65 | 71.47 |
| DMW-38 | 45-50 | --- | 20.10 | --- | 99.25 | 79.15 |
| DMW-39 | 30-35 | --- | 16.33 | --- | 92.77 | 76.44 |
| DMW-40 | 45-50 | --- | 20.79 | --- | 99.25 | 78.46 |

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

# Potentiometric Data Site Map
## (Groundwater Contour)

Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 13-4650
DATE March 14, 2014
FIGURE 5

D H E C

PROMOTE PROTECT PROSPER

South Carolina Department of Health and Environmental Control

**ASSESSMENT COMPONENT COST AGREEMENT**

**SOUTH CAROLINA**

Department of Health and Environmental Control

Underground Storage Tank Management Division

State Underground Petroleum Environmental Response Bank Account

May 15, 2014

**Facility Name:** Crawford's Country Store

**UST Permit #:** 12335 **Cost Agreement #:** Proposal

| ITEM | QUANTITY | UNIT | UNIT PRICE | TOTAL |
|---|---|---|---|---|
| 1. **Plan Preparation** | | | | |
| A1. Site-specific Work Plan | 1 | each | $150.00 | $150.00 |
| B1. Tax Map | | each | $70.00 | $0.00 |
| C1. Tier II or Comp. Plan /QAPP Appendix B | | each | $250.00 | $0.00 |
| 2. A1. **Receptor Survey *** | | each | $551.00 | $0.00 |
| 3. **Survey (500 ft x 500 ft)** | | | | |
| A1. Comprehensive Survey | | each | $1,040.00 | $0.00 |
| B. Subsurface Geophysical Survey | | | | |
| 1B. < 10 meters below grade | | each | $1,300.00 | $0.00 |
| 2B. > 10 meters below grade | | each | $2,310.00 | $0.00 |
| C1. Geophysical UST or Drum Survey | | each | $910.00 | $0.00 |
| 4. **Mob/Demob** | | | | |
| A1. Equipment | | each | $1,020.00 | $0.00 |
| B1. Personnel | 4 | each | $423.00 | $1,692.00 |
| C1. Adverse Terrain Vehicle | | each | $500.00 | $0.00 |
| 5. A1. **Soil Borings (hand auger)*** | | foot | $5.00 | $0.00 |
| 6. **Soil Borings (requiring equipment, push technology, etc)* or Field Screening (including water ssample, soil sample, soil gas sample, etc.)*** | | | | |
| AA. Standard | | per foot | $15.00 | $0.00 |
| C1. Fractured Rock | | per foot | $20.20 | $0.00 |
| 7. A1. **Soil Leachability Model** | | each | $60.00 | $0.00 |
| 8. **Abandonment (per foot)*** | | | | |
| A1. 2" diameter or less | | per foot | $3.10 | $0.00 |
| B1. Greater than 2" to 6" diameter | | per foot | $4.50 | $0.00 |
| C1. Dug/Bored well (up to 6 feet diameter) | | per foot | $15.00 | $0.00 |
| 9. **Well Installation (per foot)*** | | | | |
| A1. Water Table (hand augered) | | per foot | $10.60 | $0.00 |
| B1. Water Table (drill rig) | | per foot | $38.00 | $0.00 |
| CC. Telescoping | | per foot | $50.00 | $0.00 |
| DD. Rock Drilling | | per foot | $58.00 | $0.00 |
| E1. 2" Rock Coring | | per foot | $30.90 | $0.00 |
| G1. Rock Multi-sampling ports/screens | | per foot | $33.40 | $0.00 |
| HH. Recovery Well (4" diameter) | | per foot | $45.00 | $0.00 |
| II. Pushed Pre-packed screen (1.25" dia) | | per foot | $15.00 | $0.00 |
| J1. Rotosonic (2" diameter) | | per foot | $44.00 | $0.00 |
| K. Re-develop Existing Well | | per foot | $11.00 | $0.00 |
| 10. **Groundwater Sample Collection / Gauge Depth to Water or Product *** | | | | |
| A1. Groundwater Purge | 6 | per well/receptor | $60.00 | $360.00 |
| B1. Air or Vapors | | per receptor | $12.00 | $0.00 |
| C1. Water Supply | 2 | per well/receptor | $22.00 | $44.00 |
| D1. Groundwater No Purge or Duplicate | 37 | per well/receptor | $28.00 | $1,036.00 |
| E1. Gauge Well only | | per well | $7.00 | $0.00 |
| F1. Sample Below Product | | per well | $12.00 | $0.00 |
| G1. Passive Diffusion Bag | | each | $26.00 | $0.00 |
| H1. Field Blank | 1 | each | $24.60 | $24.60 |

| | | | | | |
|---|---|---|---|---|---|
| **11. Laboratory Analyses-Groundwater** | | | | | |
| A2. BTEXNM+Oxyg's+1,2 DCA+Eth(8260B) | 47 | per sample | $122.00 | | $5,734.00 |
| AA1. Lead, Filtered | | per sample | $13.80 | | $0.00 |
| B2. Rush EPA Method 8260B (All of item A.) | | per sample | $153.60 | | $0.00 |
| C2. Trimethal, Butyl, and Isopropyl Benzenes | | per sample | $36.40 | | $0.00 |
| D1. PAH's | | per sample | $60.60 | | $0.00 |
| E1. Lead | 43 | per sample | $16.00 | | $688.00 |
| F1. EDB by EPA 8011 | 46 | per sample | $45.20 | | $2,079.20 |
| FF1. EDB by EPA Method 8011 Rush | | per sample | $68.20 | | $0.00 |
| G1. 8 RCRA Metals | | per sample | $63.40 | | $0.00 |
| H1. TPH (9070) | | per sample | $41.00 | | $0.00 |
| II. pH | | per sample | $5.20 | | $0.00 |
| J1. BOD | | per sample | $20.00 | | $0.00 |
| PP. Ethanol | | per sample | $14.80 | | $0.00 |
| 11. **Analyses-Soil** | | | | | |
| Q1. BTEX + Naphth. | | per sample | $64.00 | | $0.00 |
| R1. PAH's | | per sample | $64.04 | | $0.00 |
| S1. 8 RCRA Metals | | per sample | $56.40 | | $0.00 |
| U1. TPH-DRO (3550C/8015C) | | per sample | $40.00 | | $0.00 |
| V1. TPH- GRO (5030B/8015C) | | per sample | $35.96 | | $0.00 |
| W1. Grain size/hydrometer | | per sample | $104.00 | | $0.00 |
| X1. Total Organic Carbon | | per sample | $30.60 | | $0.00 |
| 11. **Analyses-Air** | | | | | |
| Y1. BTEX + Naphthalene | | per sample | $216.00 | | $0.00 |
| 11. **Analyses-Free Phase Product** | | | | | |
| Z1. Hydrocarbon Fuel Identification | | per sample | $357.00 | | $0.00 |
| 12. **Aquifer Characterization** | | | | | |
| A1. Pumping Test* | | per hour | $23.00 | | $0.00 |
| B1. Slug Test* | | per test | $191.00 | | $0.00 |
| C1. Fractured Rock | | per test | $100.00 | | $0.00 |
| 13. A1. **Free Product Recovery Rate Test*** | | each | $38.00 | | $0.00 |
| 14. **Fate/Transport Modeling** | | | | | |
| A1. Mathematical Model | | each | $100.00 | | $0.00 |
| B1. Computer Model | | each | $100.00 | | $0.00 |
| 15. **Risk Evaluation** | | | | | |
| A. Tier I Risk Evaluation | | each | $300.00 | | $0.00 |
| B1. Tier II Risk Evaluation | | each | $100.00 | | $0.00 |
| 16. A1. **Subsequent Survey*** | | each | $260.00 | | $0.00 |
| 17. **Disposal (gallons or tons)*** | | | | | |
| AA. Wastewater | 400 | gallon | $0.56 | | $224.00 |
| BB. Free Product | | gallon | $0.50 | | $0.00 |
| C1. Soil Treatment/Disposal | | ton | $60.00 | | $0.00 |
| D1. Drilling fluids | | gallon | $0.42 | | $0.00 |
| 18. **Miscellaneous (attach receipts)** | | | | | |
| | | each | $0.00 | | $0.00 |
| | | each | $0.00 | | $0.00 |
| | | each | $0.00 | | $0.00 |
| 20. **Tier I Assessment (Use DHEC 3665 form)** | | standard | | | $0.00 |
| 21. **IGWA (Use DHEC 3666 form)** | | standard | | | $0.00 |
| 22. **Corrective Action (Use DHEC 3667 form)** | | PFP Bid | | | $0.00 |

| | | | | | |
|---|---|---|---|---|---|
| 23. **Aggressive Fluid & Vapor Recovery (AFVR)** | | | | | |
| A1. 8-hour Event* | | each | $1,375.00 | | $0.00 |
| AA. 24-hour Event* | | each | $3,825.00 | | $0.00 |
| A3. 48-hour Event* | | each | $6,265.00 | | $0.00 |
| A4. 96-hour Event* | 1 | each | $12,567.50 | | $12,567.50 |
| C1. Off-gas Treatment 8 hour | | per event | $122.50 | | $0.00 |
| C2. Off-gas Treatment 24 hour | | per event | $241.50 | | $0.00 |
| C3. Off-gas Treatment 48 hour | | per event | $327.00 | | $0.00 |
| C4. Off-gas Treatment 96 hour | 1 | per event | $780.00 | | $780.00 |
| D. Site Reconnaissance | | each | $203.25 | | $0.00 |
| E1. Additional Hook-ups | | each | $25.75 | | $0.00 |
| F1. Effluent Disposal | 10,000 | gallon | $0.44 | | $4,400.00 |
| G. AFVR Mobilization/Demobilization | 1 | each | $391.50 | | $391.50 |
| 24. **Granulated Activated Carbon (GAC) filter system installation & service:** | | | | | |
| A1. New GAC System Installation* | | each | $1,900.00 | | $0.00 |
| BB. Refurbished GAC Sys. Install* | | each | $900.00 | | $0.00 |
| C1. Filter replacement/removal* | | each | $350.00 | | $0.00 |
| DD. GAC System removal, cleaning, & refurbishment* | | each | $275.00 | | $0.00 |
| E1. GAC System housing* | | each | $250.00 | | $0.00 |
| F. In-line particulate filter | | each | $150.00 | | $0.00 |
| G1. Additional piping & fittings | | foot | $1.50 | | $0.00 |
| 25. **Well Repair** | | | | | |
| A1. Additional Copies of the Report Delivered | | each | $50.00 | | $0.00 |
| B1. Repair 2x2 MW pad* | | each | $50.00 | | $0.00 |
| C1. Repair 4x4 MW pad* | | each | $88.00 | | $0.00 |
| D1. Repair well vault* | | each | $118.00 | | $0.00 |
| F1. Replace well cover bolts | | each | $2.60 | | $0.00 |
| G. Replace locking well cap & lock | | each | $15.00 | | $0.00 |
| H1. Replace/Repair stick-up* | | each | $134.00 | | $0.00 |
| I1. Convert Flush-mount to Stick-up* | | each | $150.00 | | $0.00 |
| J1. Convert Stick-up to Flush-mount* | | each | $130.00 | | $0.00 |
| K1. Replace missing/illegible well ID plate | | each | $12.00 | | $0.00 |
| **Report Prep & Project Management** | 12% | percent | $30,170.80 | | $3,620.50 |
| **TOTAL** | | | | | $33,791.30 |

*The appropriate mobilization cost can be added to complete these tasks, as necessary

D H E C

PROMOTE PROTECT PROSPER

Catherine B. Templeton, Director

*Promoting and protecting the health of the public and the environment*

**MR FRANK CRAWFORD**
**5870 HIGHWAY 28 NORTH**
**ABBEVILLE SC 29620**

**JAN 0 7 2015**

Re: **AFVR and Groundwater Sampling Directive**
Crawford's Country Store
5870 Highway 28 North, Abbeville, SC 29620
UST Permit #12335; CA #49349
Release Reported December 3, 1991
Site Specific Work Plan Received December 17, 2014
Abbeville County

Dear Mr. Crawford:

The Underground Storage Tank (UST) Management Division (Division) of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the referenced Site Specific Work Plan submitted on your behalf by Midlands Environmental Consultants, Inc. This scope of work will include an Aggressive Fluid & Vapor Recovery (AFVR) event to remove residual free-phase product and reduce dissolved Chemicals of Concern (CoC), followed by a comprehensive groundwater sampling event. All work should be conducted in accordance with the UST Quality Assurance Program Plan (QAPP), Revision 2.0, and must be conducted in compliance with all applicable regulations. A copy of the Agency's QAPP Rev. 2.0, for the UST Management Division is available at http://www.scdhec.gov/environment/docs/QAPP_Rev-2_April2013.pdf.

AFVR activities at the site should begin immediately upon receipt of this letter. Cost agreement #49349 has been approved for the amount shown on the enclosed cost agreement form for one (1), 96-hour AFVR event and comprehensive groundwater sampling. The AFVR event should be conducted on OMW-1, MW-1R, and MW-3. The stingers shall be lowered at six inch intervals starting at the water table interface to the estimated historical low water table elevation for each well. Stingers should be placed as to maximize FP and/or vapor recovery. Approximately forty-five (45) days after the AFVR event has been completed, plan to conduct comprehensive groundwater sampling. Samples should be taken from all monitoring wells, water supply wells, and surface water locations and analyzed for BTEX, Naphthalene, Oxygenates, 1,2-DCA, MTBE, and EDB. If sampling occurs after February 18, 2015, all wells must be purged prior to sample collection since it will have been more than 12 months since the last sampling event. Sampling and analyses should be conducted in accordance with Appendix E of the QAPP, Rev. 2.0, and to include duplicate samples, field and trip blanks.

**The AFVR & Monitoring Report and invoice are due within 90 days from the date of this letter.** The report submitted at the completion of these activities should include the required information outlined in the QAPP. Please note that all applicable South Carolina certification requirements apply to the services and report preparation. All site rehabilitation activities must be performed and submitted by a South Carolina Certified Underground Storage Tank Site Rehabilitation Contractor.

Midlands Environmental Consultants, Inc. can submit an invoice for direct payment from State Underground Petroleum Environmental Response Bank (SUPERB) Account for pre-approved costs. By law, the SUPERB Account cannot compensate any costs that are not pre-approved. Please note that applicable South Carolina certification requirements regarding the services and report preparation must be satisfied. If the invoice is not submitted within 120 days from the date of this letter, monies allocated to pay this invoice will be uncommitted. This means that the invoice will not be processed for payment until all other committed funds are paid or monies become available.

Please note that Sections 44-2-110(4) and 44-2-130 of the SUPERB Statute state that no costs will be allowed unless prior approval from the Agency is obtained. If for any reason additional tasks will be completed, these additional tasks and the associated cost must be pre-approved by the Agency for the cost to be paid. The Agency reserves the authority to pay only for work properly performed and/or technically justified and will only pay rates in accordance with established criteria. Further, the Agency reserves the right to question and/or reject costs if deemed unreasonable and the right to audit project records at any time during the project or after completion of work.

Please note; if unnecessary dilutions are completed resulting in reporting limits of individual Chemicals of Concern in excess of Risk-Based Screening Levels (RBSLs), the data cannot be used. In those cases, the Division may deny payment for any non-detect analysis where the reporting limit exceeds the RBSL. The UST Management Division encourages the use of 'J' values as necessary so the appropriate action can be determined for a release.

The Agency grants pre-approval for transportation of virgin petroleum impacted soil and groundwater from the referenced site to a permitted treatment facility. The transport and disposal must be conducted in accordance with the QAPP. If the CoC concentrations based on laboratory analysis are below RBSLs, please contact the project manager for approval to dispose of soil and/or groundwater on site. The SUPERB Account will not reimburse for transportation or treatment of soil and/or groundwater with concentrations below RBSLs.

On all correspondence regarding this site, please reference UST Permit #12335 and CA #49349. If you have any questions regarding this correspondence, please contact me by telephone at (803) 898-0607 or by e-mail at thrasham@dhec.sc.gov.

Sincerely,

Ashleigh Thrash

Ashleigh Thrash, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Approved Cost Agreement

cc: Midlands Environmental Consultants, Inc., PO Box 854, Lexington, SC 29071 (w/ enc)
Technical File (w/ enc)

# Approved Cost Agreement 49349

Facility: 12335 CRAWFORDS COUNTRY STORE
THRASHAM
PO Number:

| Task / Description | Categories | Item | Description | Qty / Pct | Unit Price | Amount |
|---|---|---|---|---|---|---|
| 01 PLAN | | | | | | |
| | | A1 | SITE SPECIFIC WORK PLAN | 1.0000 | 150.00 | 150.00 |
| 04 MOB/DEMOB | | | | | | |
| | | B1 | PERSONNEL | 4.0000 | 423.00 | 1,692.00 |
| 10 SAMPLE COLLECTION | | | | | | |
| | | A1 | GROUNDWATER (PURGE) | 6.0000 | 60.00 | 360.00 |
| | | C1 | WATER SUPPLY | 12.0000 | 22.00 | 264.00 |
| | | D1 | GROUNDWATER NO PURGE/DUPLICATE | 38.0000 | 28.00 | 1,064.00 |
| | | H1 | FIELD BLANK | 1.0000 | 24.60 | 24.60 |
| 11 ANALYSES | GW GROUNDWATER | | | | | |
| | | A2 | BTEXNM+OXYGS+1,2-DCA+ETH-8260B | 58.0000 | 122.00 | 7,076.00 |
| | | F1 | EDB BY 8011 | 57.0000 | 45.20 | 2,576.40 |
| 17 DISPOSAL | | | | | | |
| | | AA | WASTEWATER | 400.0000 | 0.56 | 224.00 |
| 19 RPT/PROJECT MNGT & COORDINATIO | | | | | | |
| | | PRT | REPORT PREPARATION | 0.1200 | 31,773.25 | 3,812.79 |
| 23 EFR | | | | | | |
| | | A4 | 96 HOUR EVENT | 1.0000 | 12,567.50 | 12,567.50 |
| | | C4 | OFF GAS TREATMENT 96 HOUR | 1.0000 | 780.00 | 780.00 |
| | | D | SITE RECONNAISSANCE | 1.0000 | 203.25 | 203.25 |
| | | F1 | EFFLUENT DISPOSAL | 10,000.0000 | 0.44 | 4,400.00 |
| | | G | AFVR EQUIPMENT MOB | 1.0000 | 391.50 | 391.50 |
| | | | | **Total Amount** | | 35,586.04 |

S.C. DHEC Art Department
eProof 1
By Gregg Glymph at 1:46 pm, Jan 30, 2014

D H E C
PROMOTE PROTECT PROSPER

# AFVR Audit Form
## Underground Storage Tank Management Division

**RESULTS:**
- ☐ Satisfactory
- ☑ Issues

Date: 1/8/15 Project Manager: Asleigh Trash DHEC Field Staff: RYAN ARIAIL

Contractor: Midlands Contractor Field Staff: TODD & PETER

Site Number: 12335 Site Name: Crawfords Country Store

Time Arrived at Site: 11:25 Time Leaving Site: 12:45 Weather Conditions: Sunny/Cold

1. Operator on site? ☐ YES ☑ NO personnel went to get oil in Anderson for AFVR.
2. Proper safety devices employed (e.g. traffic cones, barriers, etc.)? ☑ YES ☐ NO could use more cones around AFVR unit
3. Correct extraction well(s) being used? ☑ YES ☐ NO
4. Vacuum gauge(s) installed on extraction well(s)? ☑ YES ☐ NO
5. Vacuum gauge(s) installed on adjacent monitoring well(s)? ☑ YES ☐ NO floating gauge for 3 wells
6. AFVR unit connected to grounded metal object? ☐ YES ☑ NO
7. Stinger(s) set at target depth(s)? ☐ YES ☐ NO ?
8. Other extraction and monitoring well(s) sealed? ☑ YES ☐ NO
9. Data recorded at appropriate time intervals? ☐ YES ☐ NO ? incomplete field sheets Last two recorded times? ☐ YES ☐ NO
10. Off-gas treatment (if applicable)? ☑ YES ☑ NO
11. Complete Data Records:
    - ☐ Stinger Depth ? Not recorded in presented field sheets
    - ☑ Airflow Rate/Velocity
    - ☑ Vacuum Readings for Extraction Well(s)
    - ☑ Vacuum Readings for Adjacent Monitoring Well(s)
    - ☑ Water Level Measurement for Adjacent Monitoring Well(s)
    - ☑ Pre-treatment Vapor Concentration Measurements
    - ☑ Post-treatment Vapor Concentration Measurements

UST 32nd DOCKETING

Signature: Ryan Ariail Date: 1/8/15

Notes: operator was not present when we arrived on-site. generator was running on AFVR unit but system not on. According to field personnel (arrived back on-site @ 11:40) they had to go to Anderson to pick Dekka oil for AFVR unit.

Notes (continued): Time was not documented in field sheets when Midlands shut system off due to mechanical issues. (System frozen)

- Field sheets were incomplete when presented to PM.
- Ask field personnel to contact PM when AFVR got up and running.
- Also requested field personnel put out more traffic cones. parking lot was congested with customers.
- Requested that drain valve on off-gas GAC unit be closed at all times unless draining condensed fluid. Valve was open entire event leading to drainage flowing onto ground. (concrete parking lot).
- Contacted MECI QA Manager about issues, assured they would be corrected and unit was going to manufactor for maintenance after event.

DHEC 1364 (07/2014)

S.C. DHEC Art Department
eProof 1
By Gregg Glymph at 1:40 pm, Jul 30, 2014

D H E C
PROMOTE PROTECT PROSPER

# AFVR Audit Form
## Underground Storage Tank Management Division

**RESULTS:**
- ☐ Satisfactory
- ☑ Issues

Date: 1/8/15 Project Manager: Ashleigh Thrash DHEC Field Staff: Ryan Arigil

Contractor: Midlands Contractor Field Staff: todd edler, peter wiley

Site Number: 12335 Site Name: Crawford's Country Store

Time Arrived at Site: 11:25 Time Leaving Site: 12:45 Weather Conditions: sunny / cold

1. Operator on site? ☐ YES ☑ NO * arrived at 11:41
2. Proper safety devices employed (e.g. traffic cones, barriers, etc.)? ☑ YES ☐ NO * no cones around AFVR visit or tanker
3. Correct extraction well(s) being used? ☑ YES ☐ NO
4. Vacuum gauge(s) installed on extraction well(s)? ☑ YES ☐ NO
5. Vacuum gauge(s) installed on adjacent monitoring well(s)? ☑ YES ☐ NO * floating gauge for 3 wells
6. AFVR unit connected to grounded metal object? ☐ YES ☑ NO
7. Stinger(s) set at target depth(s)? ☐ YES ☐ NO ? unknown; not recorded.
8. Other extraction and monitoring well(s) sealed? ☑ YES ☐ NO
9. Data recorded at appropriate time intervals? ☐ YES ☑ NO * field info incomplete Last two recorded times? ☐ YES ☐ NO
10. Off-gas treatment (if applicable)? ☑ YES ☐ NO * carbon GAC unit
11. Complete Data Records:
    - ☐ Stinger Depth
    - ☑ Airflow Rate/Velocity
    - ☑ Vacuum Readings for Extraction Well(s)
    - ☑ Vacuum Readings for Adjacent Monitoring Well(s)
    - ☑ Water Level Measurement for Adjacent Monitoring Well(s)
    - ☑ Pre-treatment Vapor Concentration Measurements
    - ☐ Post-treatment Vapor Concentration Measurements

Signature: Ashleigh Thrash Date: 1/8/15

Notes: generator running but extraction system not on (according to field staff - experienced unit malfunction) for unknown period of time

CRAWFORDS COUNTRY STORE SITE # 12335 1/8/15

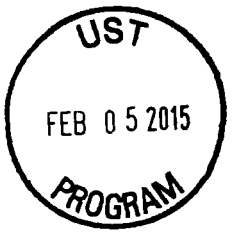
CRAWFORDS COUNTRY STORE SITE #12335 1/8/15

Crawfords Country Store SITE # 12335 1/8/15

Crawford's Country Store
Site # 12335 1/8/15

Crawfords Country Store Site #12335 1/8/15

Midlands
Environmental
Consultants, Inc.



January 27, 2015

Ms. Ashleigh Thrash, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Subject: Aggressive Fluid Vapor Recovery Report
Crawford's Country Store
5870 Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID # 12335; CA # 49349
MECI Project Number 14-5053
Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Thrash,

On behalf of Mr. Frank Crawford, Midlands Environmental Consultants, Inc. (MECI) is pleased to submit the attached Aggressive Fluid Vapor Recovery Report for the referenced site. This describes the aggressive fluid vapor recovery activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines set forth in the UST Quality Assurance Program Plan (QAPP), Revision 2.0.

**AGGRESSIVE FLUID VAPOR RECOVERY**

A site visit was conducted at Crawford's Country Store on December 11, 2014 to locate/gauge monitoring wells and to evaluate current site conditions. MECI personnel commenced a 96-Hour Aggressive Fluid Vapor Recovery (AFVR) event at Crawford's Country Store on January 5th, 2015 and completed the event on January 9th, 2015. The event was conducted on monitoring wells OMW-1, MW-1R and MW-3 to reduce elevated dissolved CoC concentrations at the referenced site. Prior to the AFVR event, MECI personnel gauged each monitoring well for free phase petroleum product utilizing a Heron H.Oil Oil/Water Interface Meter. The following table presents depth to product, depth to water, and product thickness measurements obtained prior to the commencement of the 96-Hour:

| *Pre-AFVR Well Data* | | | |
|---|---|---|---|
| ***Well ID#*** | ***Depth to Product (ft.)*** | ***Depth to Water (ft.)*** | ***Product Thickness (ft.)*** |
| OMW-1 | Not Detected | 19.15 | Not Detected |
| MW-1R | Not Detected | 18.26 | Not Detected |
| MW-3 | Not Detected | 19.21 | Not Detected |

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

The event was continuously conducted for Seventy-two and a half (72.5) hours by MECI personnel utilizing a vacuum extraction unit until mechanical failure suspended the event at 10:30am on January 8, 2015. MECI personnel had to retrieve dekker oil from nearby and move the AFVR unit into the sun in order to thaw out some of the frozen AFVR components as a result of cold weather. The event was continued at 2pm on January 8th, 2015 and operated until 2pm on January 9th, 2015 to complete the entire ninety-six (96) hour event. Following the extended AFVR event, free product and groundwater levels were measured and recorded. The following table presents the post-AFVR free product and groundwater measurements obtained after completion of the AFVR event:

| ***Post-AFVR Well Data*** | | | |
|---|---|---|---|
| ***Well ID#*** | ***Depth to Product (ft.)*** | ***Depth to Water (ft.)*** | ***Product Thickness (ft.)*** |
| OMW-1 | Not Detected | 19.29 | Not Detected |
| MW-1R | Not Detected | 19.13 | Not Detected |
| MW-3 | Not Detected | 19.22 | Not Detected |

MECI treated the off gas produced during the AFVR event using an activated carbon filter system, which achieved an average calculated reduction rate of 99.41% throughout the duration of the referenced event. Calculated total petroleum hydrocarbons removed during the event were 34.25 pounds or approximately 5.92 equivalent gallons. The average rate of removal for the hydrocarbons was calculated to be 0.36 pounds per hour. Concentrations of off gas (Pre-Treatment) produced during the event were recorded from 50 parts per million by volume (PPM) to 502 PPM. Vacuum readings were recorded at a range of 20.0 to 22.0 inches of mercury during the event. A complete compilation of measurements recorded is presented in attached Table 1.

Differential pressures and groundwater levels were measured and recorded for selected site monitoring wells at regular intervals. This data is summarized in the attached Table 2. Monitoring well locations are depicted on attached Figure 2.

A total of 1,688 gallons of liquid was removed from the site during this event. Free Phase Petroleum product was not observed in the holding tanks at the end of the event. The fluids produced were transported to VLS Recovery Services, LLC of Mauldin, SC for disposal. A disposal manifest for these fluids is attached at the end of this report.

## QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assignment are consistent with those normally employed in enhanced fluid recovery events and waste management projects of this type. Contents of this report are intended for the use by MECI, Mr. Frank Crawford, and the South Carolina Department of Health and Environmental Control, under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

Midlands Environmental appreciates the opportunity to offer our professional environmental related services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
**Midlands Environmental Consultants, Inc.**

Kyle V. Pudney
Project Biologist

Jeff L. Coleman
Senior Scientist

**TABLE 1**
**AFVR MONITORING DATA**
**CRAWFORD'S COUNTRY STORE**
**ABBEVILLE, SOUTH CAROLINA**
**MECI PROJECT NUMBER 14-5053**
**SCDHEC SITE ID NUMBER 12335**

| Extraction Well | Date | Time (hh:mm) | Differential Time (hr) | Extraction Well Head Vacuum (in. Hg) | Off Gas Measurements: Pre-Treatment Concentration (PPM) | Post-Treatment Concentration (PPM) | Treatment Reduction Rate (%) | Offgas Velocity (ft/min) | Flow Rate (CFM) | Removal Rate (Lbs/Hr) | Interval Removal (Lbs) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 01/05/15 | 10:00 | 0.50 | 21.0 | 50.5 | 0.8 | 98.42% | 800 | 72.00 | 0.04 | 0.02 |
| MW-1R | 01/05/15 | 10:30 | 0.50 | 21.0 | 51.7 | 0.6 | 98.84% | 780 | 70.20 | 0.04 | 0.02 |
| MW-3 | 01/05/15 | 11:00 | 0.50 | 22.0 | 53.8 | 0.7 | 98.70% | 760 | 68.40 | 0.04 | 0.02 |
| | 01/05/15 | 11:30 | 0.50 | 21.0 | 54.9 | 0.9 | 98.36% | 780 | 70.20 | 0.05 | 0.02 |
| ▼ | 01/05/15 | 12:00 | 0.50 | 22.0 | 54.2 | 0.8 | 98.52% | 800 | 72.00 | 0.05 | 0.02 |
| | 01/05/15 | 12:30 | 0.50 | 21.0 | 56.0 | 0.9 | 98.39% | 810 | 72.90 | 0.05 | 0.02 |
| ▼ | 01/05/15 | 13:00 | 0.50 | 21.0 | 57.3 | 0.8 | 98.60% | 810 | 72.90 | 0.05 | 0.03 |
| | 01/05/15 | 13:30 | 0.50 | 21.0 | 64.3 | 0.8 | 98.76% | 800 | 72.00 | 0.06 | 0.03 |
| ▼ | 01/05/15 | 14:00 | 0.50 | 22.0 | 71.7 | 0.8 | 98.88% | 800 | 72.00 | 0.06 | 0.03 |
| | 01/05/15 | 14:30 | 0.50 | 21.0 | 82.9 | 0.9 | 98.91% | 790 | 71.10 | 0.07 | 0.04 |
| ▼ | 01/05/15 | 15:00 | 0.50 | 21.0 | 88.1 | 0.9 | 98.98% | 760 | 68.40 | 0.07 | 0.04 |
| | 01/05/15 | 15:30 | 0.50 | 21.0 | 92.4 | 0.8 | 99.13% | 790 | 71.10 | 0.08 | 0.04 |
| ▼ | 01/05/15 | 16:00 | 0.50 | 21.0 | 94.0 | 0.6 | 99.36% | 750 | 67.50 | 0.08 | 0.04 |
| | 01/05/15 | 16:30 | 0.50 | 21.0 | 98.5 | 0.9 | 99.09% | 740 | 66.60 | 0.08 | 0.04 |
| ▼ | 01/05/15 | 17:00 | 0.50 | 21.0 | 101 | 0.6 | 99.41% | 780 | 70.20 | 0.09 | 0.04 |
| | 01/05/15 | 17:30 | 0.50 | 22.0 | 103 | 0.9 | 99.13% | 800 | 72.00 | 0.09 | 0.04 |
| ▼ | 01/05/15 | 18:00 | 0.50 | 22.0 | 116 | 0.6 | 99.48% | 760 | 68.40 | 0.10 | 0.05 |
| ▼ | 01/05/15 | 19:00 | 1.00 | 22.0 | 131 | 0.9 | 99.31% | 840 | 75.60 | 0.12 | 0.12 |
| | 01/05/15 | 20:00 | 1.00 | 22.0 | 142 | 0.1 | 99.93% | 850 | 76.50 | 0.13 | 0.13 |
| | 01/05/15 | 21:00 | 1.00 | 21.0 | 147 | 0.9 | 99.39% | 860 | 77.40 | 0.14 | 0.14 |
| | 01/05/15 | 22:00 | 1.00 | 21.0 | 159 | 0.9 | 99.43% | 860 | 77.40 | 0.15 | 0.15 |
| | 01/05/15 | 23:00 | 1.00 | 20.0 | 169 | 1.0 | 99.41% | 880 | 79.20 | 0.16 | 0.16 |
| | 01/06/15 | 0:00 | 1.00 | 21.0 | 180 | 1.0 | 99.44% | 900 | 81.00 | 0.17 | 0.17 |
| | 01/06/15 | 1:00 | 1.00 | 21.0 | 192 | 1.1 | 99.43% | 900 | 81.00 | 0.19 | 0.19 |
| | 01/06/15 | 2:00 | 1.00 | 21.0 | 199 | 1.5 | 99.25% | 910 | 81.90 | 0.20 | 0.20 |
| | 01/06/15 | 3:00 | 1.00 | 21.0 | 209 | 1.6 | 99.23% | 900 | 81.00 | 0.20 | 0.20 |
| | 01/06/15 | 4:00 | 1.00 | 22.0 | 217 | 1.0 | 99.54% | 860 | 77.40 | 0.20 | 0.20 |
| | 01/06/15 | 5:00 | 1.00 | 22.0 | 228 | 1.1 | 99.52% | 840 | 75.60 | 0.21 | 0.21 |
| | 01/06/15 | 6:00 | 1.00 | 21.0 | 235 | 1.2 | 99.49% | 850 | 76.50 | 0.22 | 0.22 |
| | 01/06/15 | 7:00 | 1.00 | 21.0 | 247 | 1.2 | 99.51% | 840 | 75.60 | 0.22 | 0.22 |
| | 01/06/15 | 8:00 | 1.00 | 21.0 | 256 | 1.3 | 99.49% | 840 | 75.60 | 0.23 | 0.23 |
| | 01/06/15 | 9:00 | 1.00 | 21.0 | 316 | 1.2 | 99.62% | 850 | 76.50 | 0.29 | 0.29 |
| | 01/06/15 | 10:00 | 1.00 | 22.0 | 321 | 1.9 | 99.41% | 820 | 73.80 | 0.28 | 0.28 |
| | 01/06/15 | 12:00 | 2.00 | 22.0 | 326 | 1.4 | 99.57% | 810 | 72.90 | 0.29 | 0.57 |
| | 01/06/15 | 14:00 | 2.00 | 21.0 | 332 | 1.5 | 99.55% | 820 | 73.80 | 0.29 | 0.59 |
| | 01/06/15 | 16:00 | 2.00 | 21.0 | 337 | 1.2 | 99.64% | 860 | 77.40 | 0.31 | 0.63 |
| | 01/06/15 | 18:00 | 2.00 | 22.0 | 342 | 1.2 | 99.65% | 830 | 74.70 | 0.31 | 0.61 |
| | 01/06/15 | 20:00 | 2.00 | 22.0 | 356 | 1.2 | 99.66% | 810 | 72.90 | 0.31 | 0.62 |
| | 01/06/15 | 22:00 | 2.00 | 21.0 | 356 | 1.2 | 99.66% | 820 | 73.80 | 0.32 | 0.63 |
| | 01/07/15 | 0:00 | 2.00 | 22.0 | 361 | 1.3 | 99.64% | 860 | 77.40 | 0.34 | 0.67 |
| | 01/07/15 | 2:00 | 2.00 | 22.0 | 369 | 1.3 | 99.65% | 840 | 75.60 | 0.33 | 0.67 |
| | 01/07/15 | 4:00 | 2.00 | 22.0 | 375 | 1.3 | 99.65% | 850 | 76.50 | 0.34 | 0.69 |
| | 01/07/15 | 6:00 | 2.00 | 21.0 | 382 | 1.3 | 99.66% | 860 | 77.40 | 0.35 | 0.71 |
| | 01/07/15 | 8:00 | 2.00 | 22.0 | 401 | 1.4 | 99.65% | 850 | 76.50 | 0.37 | 0.74 |
| | 01/07/15 | 10:00 | 2.00 | 22.0 | 409 | 1.4 | 99.66% | 840 | 75.60 | 0.37 | 0.74 |
| | 01/07/15 | 12:00 | 2.00 | 21.0 | 421 | 1.4 | 99.67% | 860 | 77.40 | 0.39 | 0.78 |
| | 01/07/15 | 14:00 | 2.00 | 21.0 | 430 | 1.3 | 99.70% | 880 | 79.20 | 0.41 | 0.82 |
| | 01/07/15 | 16:00 | 2.00 | 20.0 | 451 | 1.5 | 99.67% | 920 | 82.80 | 0.45 | 0.90 |
| | 01/07/15 | 18:00 | 2.00 | 21.0 | 457 | 1.5 | 99.67% | 900 | 81.00 | 0.44 | 0.89 |
| | 01/07/15 | 20:00 | 2.00 | 22.0 | 468 | 1.6 | 99.66% | 910 | 81.90 | 0.46 | 0.92 |
| | 01/07/15 | 22:00 | 2.00 | 22.0 | 475 | 1.6 | 99.66% | 930 | 83.70 | 0.48 | 0.95 |
| | 01/08/15 | 0:00 | 2.00 | 22.0 | 483 | 1.7 | 99.65% | 940 | 84.60 | 0.49 | 0.98 |
| | 01/08/15 | 2:00 | 2.00 | 21.0 | 487 | 1.7 | 99.65% | 930 | 83.70 | 0.49 | 0.98 |
| | 01/08/15 | 4:00 | 2.00 | 21.0 | 492 | 1.8 | 99.63% | 950 | 85.50 | 0.50 | 1.01 |
| | 01/08/15 | 6:00 | 2.00 | 22.0 | 498 | 1.7 | 99.66% | 960 | 86.40 | 0.52 | 1.03 |
| | 01/08/15 | 8:00 | 2.00 | 22.0 | 472 | 1.8 | 99.62% | 940 | 84.60 | 0.48 | 0.96 |
| | 01/08/15 | 10:00 | 2.00 | 21.0 | 502 | 1.9 | 99.63% | 960 | 86.40 | 0.52 | 1.04 |
| ** | 01/08/15 | 12:00 | 2.00 | *** | *** | *** | *** | *** | *** | *** | *** |
| *** | 01/08/15 | 14:00 | 2.00 | 20.0 | 401 | 1.2 | 99.70% | 850 | 76.50 | 0.37 | 0.74 |
| | 01/08/15 | 16:00 | 2.00 | 20.0 | 407 | 1.4 | 99.66% | 860 | 77.40 | 0.38 | 0.76 |
| | 01/08/15 | 18:00 | 2.00 | 21.0 | 419 | 1.5 | 99.64% | 880 | 79.20 | 0.40 | 0.80 |
| | 01/08/15 | 20:00 | 2.00 | 21.0 | 440 | 1.7 | 99.61% | 900 | 81.00 | 0.43 | 0.86 |
| | 01/08/15 | 22:00 | 2.00 | 21.0 | 462 | 1.9 | 99.59% | 870 | 78.30 | 0.43 | 0.87 |
| | 01/09/15 | 0:00 | 2.00 | 21.0 | 468 | 1.9 | 99.59% | 880 | 79.20 | 0.44 | 0.89 |
| | 01/09/15 | 2:00 | 2.00 | 22.0 | 475 | 2.1 | 99.56% | 860 | 77.40 | 0.44 | 0.88 |
| | 01/09/15 | 4:00 | 2.00 | 22.0 | 481 | 2.0 | 99.58% | 850 | 76.50 | 0.44 | 0.88 |
| | 01/09/15 | 6:00 | 2.00 | 22.0 | 486 | 2.1 | 99.57% | 890 | 80.10 | 0.47 | 0.93 |
| | 01/09/15 | 8:00 | 2.00 | 20.0 | 489 | 2.0 | 99.59% | 900 | 81.00 | 0.48 | 0.95 |
| | 01/09/15 | 10:00 | 2.00 | 21.0 | 493 | 2.2 | 99.55% | 900 | 81.00 | 0.48 | 0.96 |
| | 01/09/15 | 12:00 | 2.00 | 21.0 | 497 | 2.2 | 99.56% | 940 | 84.60 | 0.50 | 1.01 |
| | 01/09/15 | 14:00 | 2.00 | 22.0 | 492 | 2.1 | 99.57% | 900 | 81.00 | 0.48 | 0.96 |

| Well Data: | | | Pre AFVR Event | | | Post AFVR Event | | | Corrected Depth to Water Change (ft) |
|---|---|---|---|---|---|---|---|---|---|
| Well No. | Diameter (in) | Screened Interval (ft) | Depth to Product (ft) | Depth to Water (ft) | Product Thickness (ft) | Depth to Product (ft) | Depth to Water (ft) | Product Thickness (ft) | |
| OMW-1 | 2" | 7-22 | *** | 19.15 | *** | *** | 19.29 | *** | 0.14 |
| MW-1R | 2" | 13-25 | *** | 18.26 | *** | *** | 19.13 | *** | 0.87 |
| MW-3 | 2" | 10-25 | *** | 19.21 | *** | *** | 19.22 | *** | 0.01 |

| Vacuum Truck Information | | Well ID | Initial Stinger Depth (ft) |
|---|---|---|---|
| *Contractor:* | MECI | OMW-1 | 20.00 |
| *Truck Operator:* | A. Best | MW-1R | 20.00 |
| | T. Abbott | MW-3 | 20.00 |
| | T. Elder | | |
| | A. Looper | | |
| *Stack I.D. (feet)* | 0.33 feet | | |

Notes:

▼= Stinger Depth lowered 0.50 Feet
(Maximum Stinger Depth = 21.0 Feet in OMW-1)
(Maximum Stinger Depth = 24.0 Feet in MW-1R and MW-3)

** = AFVR event suspended due to mechanical failure at 10:30am.
*** = AFVR event restarted at 2pm

| Recovery / Disposal Information | | |
|---|---|---|
| *Hydrocarbons Removed (vapor):* | 34.25 | Pounds |
| *Hydrocarbons Removed (liquid):* | 0 | Gallons |
| *Total Hydrocarbons Removed:* | 5.92 | Equivilant Gallons |
| *Molecular Weight Utilized:* | 75 | g / mole |
| *Total Liquids Removed* | 1,688 | Gallons |
| *Disposal Facility* | VLS Recovery Services, LLC | |
| *Average Treatment System Reduction Rate:* | 99.41% | |

**TABLE 2**
**DIFFERENTIAL PRESSURE AND GROUNDWATER DRAWDOWN DATA**
**CRAWFORD'S COUNTRY STORE**
**ABBEVILLE, SOUTH CAROLINA**
**MECI PROJECT NUMBER 14-5053**
**SCDHEC SITE ID NUMBER 12335**

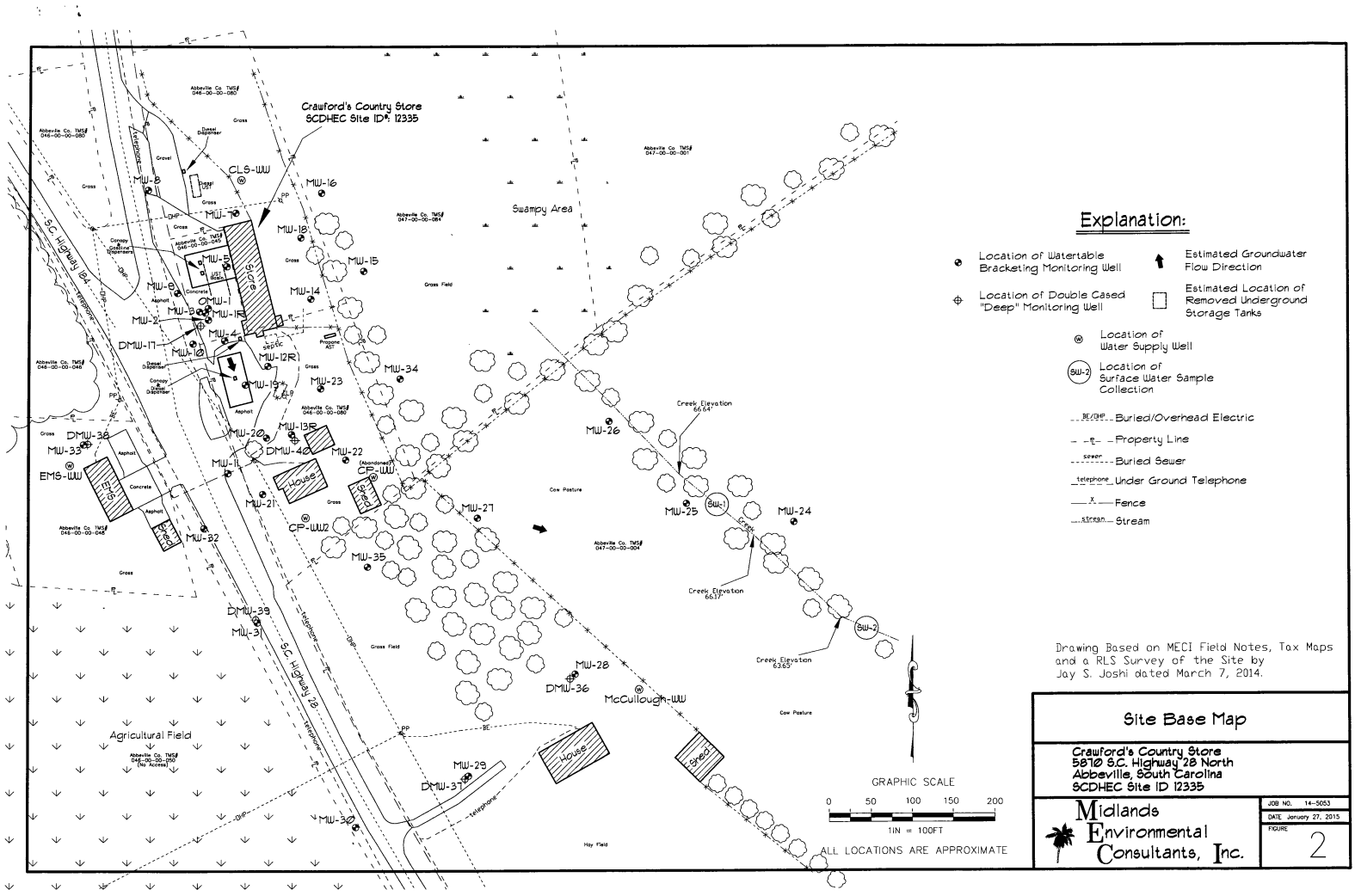
## DIFFERENTIAL PRESSURE DATA

| | | Well Designation: | | |
|---|---|---|---|---|
| | | MW-4 | MW-5 | MW-9 |
| Nearest Extraction Well: | | MW-1R | OMW-1 | MW-3 |
| Approximate Distance: | | 41 ft | 55 ft | 35 ft |
| Time | Elapsed Time | Differential Pressure Readings (inches of water) | | |
| Prior to AFVR | | 0.0 | 0.0 | 0.0 |
| 10:00 | 0.0 | 0.0 | 1.0 | 0.0 |
| 10:30 | 0.5 | 0.0 | 1.0 | 0.0 |
| 11:00 | 1.0 | 0.0 | 1.0 | 0.0 |
| 11:30 | 1.5 | 0.0 | 1.0 | 0.0 |
| 12:00 | 2.0 | 0.0 | 1.0 | 0.0 |
| 12:30 | 2.5 | 0.0 | 1.0 | 0.0 |
| 13:00 | 3.0 | 0.0 | 1.0 | 0.0 |
| 13:30 | 3.5 | 0.0 | 1.0 | 0.0 |
| 14:00 | 4.0 | 0.0 | 1.0 | 0.0 |
| 14:30 | 4.5 | 0.0 | 1.0 | 0.0 |
| 15:00 | 5.0 | 0.0 | 1.0 | 0.0 |
| 15:30 | 5.5 | 0.0 | 1.0 | 0.0 |
| 16:00 | 6.0 | 0.0 | 1.0 | 0.0 |
| 16:30 | 6.5 | 0.0 | 1.0 | 0.0 |
| 17:00 | 7.0 | 0.0 | 1.0 | 0.0 |
| 17:30 | 7.5 | 0.0 | 1.0 | 0.0 |
| 18:00 | 8.0 | 0.0 | 1.0 | 0.0 |
| 19:00 | 9.0 | 0.0 | 1.0 | 0.0 |
| 20:00 | 10.0 | 0.0 | 1.0 | 0.0 |
| 21:00 | 11.0 | 0.0 | 1.0 | 0.0 |
| 22:00 | 12.0 | 0.0 | 1.0 | 0.0 |
| 23:00 | 13.0 | 0.0 | 1.0 | 0.0 |
| 0:00 | 14.0 | 0.0 | 1.0 | 0.0 |
| 1:00 | 15.0 | 0.0 | 1.0 | 0.0 |
| 2:00 | 16.0 | 0.0 | 1.0 | 0.0 |
| 3:00 | 17.0 | 0.0 | 1.0 | 0.0 |
| 4:00 | 18.0 | 0.0 | 1.0 | 0.0 |
| 5:00 | 19.0 | 0.0 | 1.0 | 0.0 |
| 6:00 | 20.0 | 0.0 | 1.0 | 0.0 |
| 7:00 | 21.0 | 0.0 | 1.0 | 0.0 |
| 8:00 | 22.0 | 0.0 | 1.0 | 0.0 |
| 9:00 | 23.0 | 0.0 | 1.0 | 0.0 |
| 10:00 | 24.0 | 0.0 | 1.0 | 0.0 |
| 12:00 | 26.0 | 0.0 | 1.0 | 0.0 |
| 14:00 | 28.0 | 0.0 | 1.0 | 0.0 |
| 16:00 | 30.0 | 0.0 | 1.0 | 0.0 |
| 18:00 | 32.0 | 0.0 | 1.0 | 0.0 |
| 20:00 | 34.0 | 0.0 | 1.0 | 0.0 |
| 22:00 | 36.0 | 0.0 | 1.0 | 0.0 |
| 0:00 | 38.0 | 0.0 | 1.0 | 0.0 |
| 2:00 | 40.0 | 0.0 | 1.0 | 0.0 |
| 4:00 | 42.0 | 0.0 | 1.0 | 0.0 |
| 6:00 | 44.0 | 0.0 | 1.0 | 0.0 |
| 8:00 | 46.0 | 0.0 | 1.0 | 0.0 |
| 10:00 | 48.0 | 0.0 | 1.0 | 0.0 |
| 12:00 | 50.0 | 0.0 | 1.0 | 0.0 |
| 14:00 | 52.0 | 0.0 | 1.0 | 0.0 |
| 16:00 | 54.0 | 0.0 | 1.0 | 0.0 |
| 18:00 | 56.0 | 0.0 | 1.0 | 0.0 |
| 20:00 | 58.0 | 0.0 | 1.0 | 0.0 |
| 22:00 | 60.0 | 0.0 | 1.0 | 0.0 |
| 0:00 | 62.0 | 0.0 | 1.0 | 0.0 |
| 2:00 | 64.0 | 0.0 | 1.0 | 0.0 |
| 4:00 | 66.0 | 0.0 | 1.0 | 0.0 |
| 6:00 | 68.0 | 0.0 | 1.0 | 0.0 |
| 8:00 | 70.0 | 0.0 | 1.0 | 0.0 |
| 10:00 | 72.0 | 0.0 | 1.0 | 0.0 |
| 12:00 | *** | *** | *** | *** |
| 14:00 | *** | *** | *** | *** |
| 16:00 | 74.0 | 0.0 | 1.0 | 0.0 |
| 18:00 | 76.0 | 0.0 | 1.0 | 0.0 |
| 20:00 | 78.0 | 0.0 | 1.0 | 0.0 |
| 22:00 | 80.0 | 0.0 | 1.0 | 0.0 |
| 0:00 | 82.0 | 0.0 | 1.0 | 0.0 |
| 2:00 | 84.0 | 0.0 | 1.0 | 0.0 |
| 4:00 | 86.0 | 0.0 | 1.0 | 0.0 |
| 6:00 | 88.0 | 0.0 | 1.0 | 0.0 |
| 8:00 | 90.0 | 0.0 | 1.0 | 0.0 |
| 10:00 | 92.0 | 0.0 | 1.0 | 0.0 |
| 12:00 | 94.0 | 0.0 | 1.0 | 0.0 |
| 14:00 | 96.0 | 0.0 | 1.0 | 0.0 |
| Maximum Change: | | 0.0 | 1.0 | 0.0 |

## GROUNDWATER DRAWDOWN DATA

| | | Well Designation: | | |
|---|---|---|---|---|
| | | MW-4 | MW-5 | MW-9 |
| Nearest Extraction Well: | | MW-1R | OMW-1 | MW-3 |
| Approximate Distance: | | 41 ft | 55 ft | 35 ft |
| Time | Elapsed Time | Depth to Liquid (feet below of casing): | | |
| Prior to AFVR | | 17.23 | 13.72 | 14.28 |
| 14:00 | 4 hours | 17.25 | 13.73 | 14.28 |
| 18:00 | 8 hours | 17.28 | 13.75 | 14.30 |
| 22:00 | 12 hours | 17.29 | 13.76 | 14.30 |
| 2:00 | 16 hours | 17.29 | 13.74 | 14.30 |
| 6:00 | 20 hours | 17.30 | 13.75 | 14.30 |
| 10:00 | 24 hours | 17.29 | 13.75 | 14.31 |
| 14:00 | 28 hours | 17.28 | 13.76 | 14.32 |
| 18:00 | 32 hours | 17.33 | 13.80 | 14.34 |
| 22:00 | 36 hours | 17.33 | 13.79 | 14.34 |
| 2:00 | 40 hours | 17.33 | 13.80 | 14.35 |
| 6:00 | 44 hours | 17.34 | 13.81 | 14.35 |
| 10:00 | 48 hours | 17.34 | 13.81 | 14.36 |
| 14:00 | 52 hours | 17.35 | 13.82 | 14.37 |
| 18:00 | 56 hours | 17.36 | 13.82 | 14.38 |
| 22:00 | 60 hours | 17.36 | 13.83 | 14.39 |
| 2:00 | 64 hours | 17.37 | 13.83 | 14.40 |
| 6:00 | 68 hours | 17.38 | 13.84 | 14.40 |
| 10:00 | 72 hours | 17.39 | 13.83 | 14.44 |
| 14:00 | *** | *** | *** | *** |
| 18:00 | 76 hours | 17.22 | 13.24 | 14.09 |
| 22:00 | 80 hours | 17.21 | 13.24 | 14.12 |
| 2:00 | 84 hours | 17.21 | 13.25 | 14.15 |
| 6:00 | 88 hours | 17.23 | 13.25 | 14.19 |
| 10:00 | 92 hours | 17.23 | 13.26 | 14.21 |
| 14:00 | 96 hours | 17.24 | 13.27 | 14.23 |
| Maximum Change: | | -0.16 | 0.45 | -0.16 |

Notes: *** = AFVR event suspended at 10:30AM on Thursday 1/8/2014 due to mechanical failure and restarted at 2PM.




## Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased "Deep" Monitoring Well
- Estimated Groundwater Flow Direction
- Estimated Location of Removed Underground Storage Tanks
- (W) Location of Water Supply Well
- (SW-2) Location of Surface Water Sample Collection
- BE/OHP — Buried/Overhead Electric
- —P— Property Line
- sewer — Buried Sewer
- telephone — Under Ground Telephone
- —X— Fence
- stream — Stream

GRAPHIC SCALE
0 50 100 150 200
1IN = 100FT

ALL LOCATIONS ARE APPROXIMATE

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

# Site Base Map

Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 14-5053
DATE January 27, 2015
FIGURE 2

VLS recovery services, llc

| NON-HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Waste Tracking Number |
|---|---|---|---|---|
| | | | | MLO10915-B |

**GENERATOR**

5. Generator's Name and Mailing Address
MIDLAND ENVIRONMENTAL - ABBEVILLE
5870 SC HIGHWAY 28 NORTH
ABBEVILLE, SC 29620

Generator's Site Address (if different than mailing address)

Generator's Phone:

6. Transporter 1 Company Name: SPARKS INDUSTRIAL SERVICES — U.S. EPA ID Number:

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: VLS RECOVERY SERVICES, LLC
305 S. MAIN STREET
MAULDIN, SC 29662
U.S. EPA ID Number: SCR000762468

Facility's Phone: 864-962-9953

| | 9. Waste Shipping Name and Description | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | |
|---|---|---|---|---|---|---|
| 1. | NON HAZ NON REGULATED PETROLEUM CONTAMINATED WATER #17895 | 001 | | EST 2500 | GAL | |
| 2. | | | | | | |
| 3. | | | | | | |
| 4. | | | | | | |

13. Special Handling Instructions and Additional Information

#35 TRL30 Vac Time 100 HR

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Signature on File — Signature: — Month: 07 Day: 09 Year: 15

**INT'L**

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

**TRANSPORTER**

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Mitchell Loperena — Signature: Mitchell Loperena — Month: 07 Day: 09 Year: 15

Transporter 2 Printed/Typed Name — Signature — Month Day Year

**DESIGNATED FACILITY**

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Steven Watson — Signature: Steven Watson — Month: 7 Day: 9 Year: 15

№ 34439

# SCALE TICKET

| | |
|---|---|
| 01/09/2015 | 04:38PM |
| RcPD I.D. number | S 35 30 |
| Gross | 47480 lb |
| Tare(*) | 33400 lb |
| * Preset weight | |
| Net | 14080 lb |

1688

Scale Company: VLS

Weighed By: MLop

Carrier: SPARKS

Customer: Midland Envi

PO/BOL/Manifest: MLOD915-B

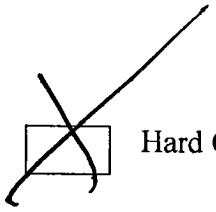
Tractor Number: 35

Trailer Number: 30

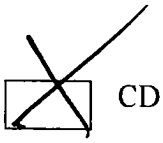
Driver Signature: MLopez

**WHITE - Driver YELLOW - Driver CARD - Scale**

# Document Receipt Information



Hard Copy



CD

Email

Date Received 3-20-15

Permit Number 12335

Project Manager Ashleigh Thrash

Name of Contractor MECI

UST Certification Number

Docket Number 34 tech

Scanned

EWS / Chemical Analyses

# REPORT OF GROUNDWATER SAMPLING AND CHEMICAL ANALYSES

Crawford's Country Store
5870 Highway 28 North
Abbeville, South Carolina
SCDHEC SITE ID 12335
CA # 46938

*Prepared By:*

Midlands Environmental Consultants, Inc.
231 Dooley Road, Lexington, SC 29073
(803) 808-2043 fax: 808-2048

March 11, 2015

MECI Project No. 15-5105

Midlands Environmental Consultants, Inc.

March 11, 2015

Ms. Ashleigh Thrash, Hydrogeologist
Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land & Waste Management
South Carolina Department of Health and
Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Subject: Report of Groundwater Sampling and Chemical Analyses
Crawford's Country Store
5870 Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID# 12335, CA# 49349
MECI Project Number 15-5105
Certified Site Rehabilitation Contractor UCC-0009

Dear Ms. Thrash,

On behalf of Mr. Frank Crawford, Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Report of Groundwater Sampling and Chemical Analyses for the referenced site. This report describes assessment activities conducted at the site and results of those activities in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines, including adherence to the UST Division Programmatic Quality Assurance Program Plan (QAPP, Revision 2.0).

Midlands Environmental appreciates the opportunity to offer our professional environmental services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
**Midlands Environmental Consultants, Inc.**

Jeff L. Coleman
Senior Scientist

Bryan T. Shane, P.G.
Principal Geologist

Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

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**NOTE: ITEMS LISTED WITH AN ** BESIDE IT WERE NOT NEEDED AS A PART OF THIS SCOPE OF WORK**

## 1.0 INTRODUCTION

A. **Owner/Operator Information**

| | | | |
|---|---|---|---|
| Facility Name: | Crawford's Country Store | UST Permit #: | 12335 |
| Facility Address: | 5870 S.C. Highway 28, Abbeville, SC 29620 | | |
| Name: | Mr. Harold Franklin Crawford | | |
| Address: | 31 Turtle Point, Abbeville, SC 29620 | | |
| Telephone #: | (864) 993-3210 | | |

B. **Property Owner Information**

| | |
|---|---|
| Name | Mr. Harold Franklin Crawford |
| Tax Map #: | Abbeville County Tax Map #'s: 046-00-00-045 & 046-00-00-080 |
| Address | 5870 S.C. Highway 28 North, Abbeville, SC 29620 |
| Telephone # | (864) 993-3210 |

C. **Contractor Information**

| | |
|---|---|
| Name: | Midlands Environmental Consultants, Inc. |
| Certification #: | 9 |
| Address: | P. O. Box 854, Lexington, SC 29071 |
| Telephone #: | (803) 808-2043 |

D. **SCDHEC Certified Well Driller**

| | |
|---|---|
| Name: | N/A |
| Driller: | N/A |
| Certification #: | N/A |
| Address: | N/A |
| Telephone #: | N/A |

E. **SCDHEC Certified Laboratory**

| | |
|---|---|
| Name: | Pace Analytical Services, Inc. |
| Certification #: | 99006001 |
| Address: | 9800 Kincey Avenue / Suite 100, Huntersville, NC 28078 |
| Telephone #: | (704) 875-9092 |

## 1.1 PROJECT INFORMATION

The subject site (Crawford's Country Store) is located at 5870 S.C. Highway 28 North in Abbeville, Abbeville County, South Carolina (see Figure 1). The subject site is currently an active gasoline service station and convenience store. Previously, the subject site maintained one 2,000 gallon gasoline underground storage tank (UST), one 1,000 gallon kerosene UST, one 560 gallon diesel UST, one 8,000 gallon gasoline UST, and one 10,000 gallon gasoline UST. The former UST's were removed from the ground in October of 1991. The South Carolina Department of Health and Environmental Control (SCDHEC) reported a release of petroleum product in December of 1991 and confirmed the release in March of 1993. Currently, the subject site maintains one 3,000 gallon diesel UST, one 6,000 gallon off-road diesel UST, one 6,000 gallon premium gasoline UST, one regular unleaded gasoline UST, and one 10,000 gallon regular unleaded gasoline UST.

The above information is based on reports and correspondence obtained from SCDHEC files and MECI field notes.

## 2.0 SURROUNDING PROPERTY USAGE

The subject site is located outside the town limits of Abbeville in an area known as Antreville, Abbeville County, South Carolina. The site is currently an active gasoline service station and convenience store. A wildlife processing center and residence is located directly south of the site, beyond which is residential farm. East of the site is bordered by a grass field, beyond which is a swampy area and grass fields. South Caroline Highway 28 forms the western border of the site, beyond which is an Abbeville County EMS facility. South of the EMS facility is a large agricultural field and residences. Northwest of the site is a Café and old gasoline service station.

## 3.0 AREA GEOLOGY AND HYDROGEOLOGY

The mean elevation of the property, as depicted on the local USGS quadrangle (Moore, SC), appears to be approximately 710 feet above sea level. The site is located in the Piedmont Physiographic Province of South Carolina, an area underlain by ancient igneous and metamorphic rocks. The soils in this province are generally residual soils that are underlain by rock at highly varying depths.

The soils encountered in this area are the product of in-place weathering of rocks similar to the rocks underlying the site. In areas not altered by erosion or disturbed by the activities of man, the typical residual soil profile consists of near surface clayey soils and underlying sandy silt and sand. The boundary between soil and rock is gradational. A transitional zone termed "weathered rock" is normally found overlying the parent bedrock. This zone is typically the most transmissive zone for groundwater movement. Consequently, the topography of the bedrock surface is uneven, even over short horizontal distances. It is not unusual to find lenses and boulders of hard rock and zones of weathered rock within the soil mantle well above the general bedrock level.

Local precipitation is the source of practically all of the groundwater in Abbeville County. A portion of the precipitation infiltrates into the ground and moves under the influence of gravity to the surficial aquifer. After the water has reached the surficial aquifer, the direction of movement is generally parallel to the hydraulic gradient. In the Piedmont Province, the slope of the surficial aquifer's surface under static conditions (no pumping interference) approximates the topography of an area. Thus, the movement of groundwater within the soil mantel is typically in the direction of the topographic slope. Local groundwater flow patterns may be affected by disturbed areas such as tank pits, utility trenches, building foundations, borings, wells, etc. Groundwater flow in fractured rock is often difficult to interpret due to the variability of fracture connectivity and orientation.

Locally, in the surficial aquifer, groundwater discharges into streams, lakes or springs where the groundwater table intersects lows occupied by these water bodies. The apparent direction (based on hydraulic gradient) of groundwater flow from the release is to the south and southeast, towards the unnamed intermittent creek associated with the Spur Creek. Analytical data indicates this unnamed creek may be impacted with petroleum contamination.

### 3.1 LOCAL SUBSURFACE CONDITIONS

Piedmont residual soils were encountered during drilling activities conducted at the site during previous assessment performed at the site. The soils encountered generally consisted of micaceous

fine sandy clayey silts. Residual soils were underlain by coarser grained saprolitic soils at depths of approximately 20' feet BGS. Partially weathered rock was encountered at a depth of 32' feet BGS during the installation of monitoring well DMW-39. Mud-rotary refusal was encountered at 35' BGS during the installation of DMW-39 and the well is set on top of a potential confining formation.

On February 25th, 2015, stabilized groundwater levels were measured in the surrounding monitoring wells. Depth to groundwater ranged from 0.00 to 19.97 feet BGS in the wells measured. The groundwater measurements are summarized in tabular form in Table 2 and on Figure 5. A groundwater contour map illustrating the groundwater flow direction at the site is also depicted on Figure 5.

Groundwater levels may fluctuate several feet with seasonal and rainfall variations and with change in the water level of adjacent drainage features. Normally, the highest groundwater levels occur in late winter and spring. The lowest levels occur in late summer and fall.

## 4.0 FIELD EXPLORATION

Field exploration conducted at the site included:

- comprehensive sampling of the entire well network;
- sampling of several nearby water supply wells;
- sampling of one surface water body; and,
- chemical analyses of groundwater samples.

## 4.1 MONITORING WELL SAMPLING AND CHEMICAL ANALYSES

On February 25th, 2014, MECI personnel collected groundwater samples from the thirty-nine (39) monitoring wells at the subject site. Monitoring wells MW-3 was gauged and determined to contain 0.01 feet of measurable free phase petroleum product. All newly installed monitoring wells and pre-existing monitoring wells were purged prior to sample collection. Thirty-nine (39) monitoring wells were purged prior to sample collection.

Purging of the monitoring wells was completed utilizing a prepackaged, clear, disposable polyethylene bailer and nylon rope. Purging was completed by bailing three to five well volumes of water from the well, until pH, conductivity, dissolved oxygen, and turbidity stabilized or until all available water was evacuated from the well, whichever occurred first. A new set of nitrile gloves were worn at each monitoring well, and at all times samples were handled. Field measurements of turbidity, pH, conductivity, dissolved oxygen, and water temperature were obtained before the well sampling process. MECI utilized YSI550A meters for DO (mg/L) and temperature readings ($^{o}$C), YSI63 meters for pH and conductivity (uS) readings, and a MicroTPI/TPW Turbidimeter for turbidity readings (NTU). The attached Field Data Information Sheets presents the results of the field measurements obtained during sampling processes. All wells were sampled in accordance with SCDHEC's Quality Assurance Program Plan for the Underground Storage Tank Management Division (QAPP, Revision 2.0) and MECI's Standard Operating Procedures (MECI SOP, January 2014). Groundwater samples obtained were sent to Shealy Environmental Services, Inc. of West Columbia, SC (SCDHEC Laboratory Certification #32010) for analysis.

The following sampling matrix contains well development and requested analyses for each well:

| Monitoring Well | Purge | No Purge | Gauge Only | BTEX, Naphthalene, MTBE (EPA Method 8260-B) | EDB (EPA Method 8011) | 1,2 DCA (EPA Method 8260-B) | 8 Oxygenates (EPA Method 8260-B) | Total Lead (EPA Method 6010) | Filtered Lead (EPA Method 6010) | Sulfate (EPA Method 375.2) | Nitrate (EPA Method 335.2) | Methane (RSK Method) | PAH's (EPA Method 8270) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Analyte Sampled | | | | | | | | | |
| OMW-1 | X | | | X | X | X | X | | | | | | |
| MW-1R | X | | | X | X | X | X | | | | | | |
| MW-2 | X | | | X | X | X | X | | | | | | |
| MW-3 | X | | | X | X | X | X | | | | | | |
| MW-4 | X | | | X | X | X | X | | | | | | |
| MW-5 | X | | | X | X | X | X | | | | | | |
| MW-7 | X | | | X | X | X | X | | | | | | |
| MW-8 | X | | | X | X | X | X | | | | | | |
| MW-9 | X | | | X | X | X | X | | | | | | |
| MW-10 | X | | | X | X | X | X | | | | | | |
| MW-11 | X | | | X | X | X | X | | | | | | |
| MW-12 | X | | | X | X | X | X | | | | | | |
| MW-13 | X | | | X | X | X | X | | | | | | |
| MW-14 | X | | | X | X | X | X | | | | | | |
| MW-15 | X | | | X | X | X | X | | | | | | |
| MW-16 | X | | | X | X | X | X | | | | | | |
| DMW-17 | X | | | X | X | X | X | | | | | | |
| MW-18 | X | | | X | X | X | X | | | | | | |
| MW-19 | X | | | X | X | X | X | | | | | | |
| MW-20 | X | | | X | X | X | X | | | | | | |
| MW-21 | X | | | X | X | X | X | | | | | | |
| MW-22 | X | | | X | X | X | X | | | | | | |
| MW-23 | X | | | X | X | X | X | | | | | | |
| MW-24 | X | | | X | X | X | X | | | | | | |
| MW-25 | X | | | X | X | X | X | | | | | | |
| MW-26 | X | | | X | X | X | X | | | | | | |
| MW-27 | X | | | X | X | X | X | | | | | | |
| MW-28 | X | | | X | X | X | X | | | | | | |
| MW-29 | X | | | X | X | X | X | | | | | | |
| MW-30 | X | | | X | X | X | X | | | | | | |

**Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane PAH = polycyclic aromatic hydrocarbons**

**** = Indicates Field Duplicate**

| Monitoring Well | Purge | No Purge | Gauge Only | BTEX, Naphthalene, MTBE (EPA Method 8260-B) | EDB (EPA Method 8011) | 1,2 DCA (EPA Method 8260-B) | 8 Oxygenates (EPA Method 8260-B) | Total Lead (EPA Method 6010) | Filtered Lead (EPA Method 6010) | Sulfate (EPA Method 375.2) | Nitrate (EPA Method 335.2) | Methane (RSK Method) | PAH's (EPA Method 8270) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Analyte Sampled | | | | | | | | | |
| MW-31 | X | | | X | X | X | X | | | | | | |
| MW-32 | X | | | X | X | X | X | | | | | | |
| MW-33 | X | | | X | X | X | X | | | | | | |
| MW-34 | X | | | X | X | X | X | | | | | | |
| MW-35 | X | | | X | X | X | X | | | | | | |
| DMW-36 | X | | | X | X | X | X | | | | | | |
| DMW-37 | X | | | X | X | X | X | | | | | | |
| DMW-38 | X | | | X | X | X | X | | | | | | |
| DMW-39 | X | | | X | X | X | X | | | | | | |
| DMW-40 | X | | | X | X | X | X | | | | | | |
| OHM-1 Dup.** | | X | | X | X | X | X | | | | | | |
| MW-2 Dup.** | | X | | X | X | X | X | | | | | | |
| MW-10 Dup.** | | X | | X | X | X | X | | | | | | |
| Field Blank | | | | X | X | X | X | | | | | | |
| Trip Blank #1 | | | | X | | X | X | | | | | | |
| Trip Blank #2 | | | | X | | X | X | | | | | | |

**Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane PAH = polycyclic aromatic hydrocarbons**

**** = Indicates Field Duplicate**

The results of the laboratory analyses are summarized in Tables 3, Table 3A and presented in Appendix B.

Purge water produced by the purging process was treated on-site utilizing a granular activated carbon unit. A total of 262.25 gallons of purge water was disposed of in this manner. A disposal manifest for the referenced purge water is presented in Appendix G.

## 4.2 WATER SUPPLY WELL SAMPLING AND CHEMICAL ANALYSES

On February 25th, 2015, MECI collected samples from seven (7) water supply wells. Water supply well CP-WW is abandoned and the Gin House-WW could not be sampled due to the well being locked inside a fence and the property owner was unable to be located. In addition, the CP-WW2, Major-WW and Driver-WW were unable to be sampled due to freezing conditions.

The following table presents detailed information about each water supply well located near the subject site.

| Water Supply Well Number | Approximate Distance from MW-3 | Abbeville County Tax Map Number: | Notes: | Well Status |
|---|---|---|---|---|
| CLS-WW | 167' Feet NE | 046-00-00-080 | 5870 S.C. Highway 28 N. (Onsite) | Active |
| CP-WW | 291' Feet SE | 046-00-00-049 | 5846 S.C. Highway 28 N | Abandoned |
| CP-WW2 | 281' Feet S | 046-00-00-049 | 5846 S.C. Highway 28 N | Frozen |
| EMS-WW | 244' Feet SW | 046-00-00-048 | 3 Highway 184 N | Active |
| McCullough-WW | 703' Feet SE | 047-00-00-004 | 5804 Highway 28 N | Active |
| Café-WW | Approx. 580' Feet NW | 046-00-00-044 | Fork @ S.C. Hwy. 28 & S.C. Hwy. 184 | Active |
| Old Service Station-WW | 976' Feet N | 046-00-00-043 | 3174 South Carolina Highway 260 | Active |
| Scott-WW | 1,041' Feet NW | 046-00-00-037 | 88 S.C. Highway N | Active |
| Farm-WW | 1,044' Feet SW | 046-00-00-106 | Dry Hollow Rd. & Parker Rd. | Active |
| Major-WW | 1,257' Feet S | 046-00-00-051 | 45 Parker Road | Frozen |
| Driver-WW | 1,387' Feet S | 046-00-00-050 | 5733 S.C. Highway 28 N | Frozen |
| Gin House-WW | 682' Feet W | 046-00-00-041 | Dry Hollow Rd. & Gin House Road | Unknown |

The samples obtained from the water supply wells were analyzed for volatile organic compounds including BTEX, naphthalene, methyl-tertiary-butyl-ether, 1,2 DCA, 8 oxygenates (EPA Method 8260B) and EDB (EPA method 8011). Results of the laboratory analyses are discussed in Section 5.2 and summarized in Table 3 & 3A. The analytical results are also presented in Appendix B.

### 4.3 SURFACE WATER SAMPLING AND CHEMICAL ANALYSIS

Two surface water samples were collected on February 25th, 2015. SW-1 and SW-2 were collected from an unnamed intermittent creek associated with the Spur Creek. Surface water samples were collected adjacent to monitoring well MW-25 (SW-1) and approximately 250' feet southeast of MW-25 (SW-2). This creek may act as a point of local groundwater discharge.

The samples obtained from the surface water locales were analyzed for volatile organic compounds including BTEX, naphthalene, methyl-tertiary-butyl-ether, 1,2 DCA, 8 oxygenates (EPA Method 8260B) and EDB (EPA method 8011). Results of the laboratory analyses are discussed in Section 5.2 and summarized in Table 3 & 3A. The analytical results are also presented in Appendix B.

## 5.0 TEST RESULTS AND EVALUATION

The following sections discuss groundwater test results for the subject site.

### 5.1 GROUNDWATER ANALYTICAL RESULTS

As discussed in Section 4.1, groundwater samples obtained from the monitoring wells during the February 25th, 2015 comprehensive groundwater sampling event were analyzed for dissolved phase petroleum constituents. Free phase petroleum product was not detected in any of the monitoring wells during sampling activities. The analytical results indicate petroleum impact to the surficial aquifer ("Shallow" Zone), with the highest dissolved concentrations being detected in the area of OMW-1, MW-1R and MW-3. Of the forty monitoring wells sampled, twelve monitoring wells (OMW-1, MW-1R, MW-2, MW-4, MW-10, MW-11, MW-13R, MW-20, MW-25, MW-31, MW-35 and DMW-40) detected petroleum constituents above Risked Based Screening Levels (RBSL's). Petroleum constituents detected above the established RBSL include:

| ***Compound*** | ***RBSL (ug/l)*** | ***Wells Above RBSL*** |
|---|---|---|
| Benzene | 5 | OMW-1, MW-1R, MW-2, MW-4, MW-10, MW-11, MW-35, & DMW-40 |
| Toluene | 1,000 | OMW-1, MW-1R, MW-2, & MW-10 |
| Ethylbenzene | 700 | OMW-1, MW-1R, MW-2, MW-3 & MW-10 |
| Total Xylenes | 10,000 | OMW-1, MW-1R, MW-3 & MW-10 |
| Naphthalene | 25 | OMW-1, MW-1R, MW-2, MW-4, MW-10 & MW-35 |
| MTBE | 40 | OMW-1, MW-1R, MW-2, MW-4, MW-10, MW-11, MW-13R, MW-20, MW-31, MW-35 & DMW-40 |
| EDB | 0.05 | OMW-1, MW-1R, MW-3, MW-4, & MW-10 |

In addition, the analytical results also detected petroleum constituents above the laboratory method detection limit in monitoring wells MW-9, MW-19, MW-21, MW-22, MW-23 and MW-25; however the concentrations detected did not exceed the RBSL. The results of the analyses for each monitoring well and specific parameters are listed on Table 3, Table 3A, and provided in Appendix B.

## 5.2 WATER SUPPLY WELL ANALYTICAL RESULTS

As discussed in section 4.2, water samples were obtained from seven water supply wells during the February 25, 2015 groundwater sampling event. The samples obtained from the above mentioned water supply wells were analyzed for petroleum constituents. The laboratory results from the samples obtained from CLS-WW, EMS-WW, Café-WW, Old Service Station-WW, Scott-WW and Farm-WW did not indicate petroleum impact and all petroleum compounds were below detection limits. MTBE and Diisopropyl ether (DIPE) was detected above the method detection limit in the sample obtained from the McCullough-WW. MTBE concentrations were detected at 1.1 micrograms per liter and DIPE concentrations were detected at 9.2 micrograms per liter in the sample obtained from the McCullough-WW. These concentrations detected do not exceed the RBSL for MTBE or DIPE and the remainder of petroleum compounds analyzed were detected at levels below detection limits. The results of the analysis for the water supply well and specific parameters are listed on Table 3, Table 3A, and provided in the laboratory reports (Appendix B).

## 5.3 SURFACE WATER SAMPLING AND CHEMICAL ANALYSIS

During the February 25, 2015 sampling event, two samples were collected from the nearby surface water (SW-1 & SW-2). Analytical results from the sample collected at SW-1 indicate MTBE concentrations above the method detection limit, but below the established RBSL. MTBE concentrations were detected at 0.28J micrograms per liter in SW-1. All petroleum compounds analyzed from SW-2 were below detection limits. The results of the analysis for the surface water and specific parameters are listed on Table 3, Table 3A, and provided in the laboratory reports (Appendix B).

## 6.0 ASSESSMENT SUMMARY & RECOMMENDATIONS

Based on the results of our assessment activities, it appears that impact to the surficial aquifer has occurred due to a release of petroleum hydrocarbons. Free phase petroleum product was not detected in any of the monitoring wells during the February 25, 2015 sampling event. The analytical results indicate petroleum impact to the "shallow" surficial aquifer, with the highest dissolved concentrations being detected in the area of the former UST basin (OMW-1, MW-1R and MW-3). Additionally, the

highest concentrations of dissolved phase petroleum constituents to the "deep" zone were detected in the area of DMW-40. Groundwater appears to be moving to the south-southeast toward unnamed intermittent creek associated with the Spur Creek.

The analytical results indicate petroleum impact to the surficial aquifer ("Shallow" Zone), with the highest dissolved concentrations being detected in the area of OMW-1, MW-1R and MW-3. Of the forty monitoring wells sampled, twelve monitoring wells (OMW-1, MW-1R, MW-2, MW-4, MW-10, MW-11, MW-13R, MW-20, MW-25, MW-31, MW-35 and DMW-40) detected petroleum constituents above Risked Based Screening Levels (RBSL's). Petroleum constituents detected above the established RBSL include:

| ***Compound*** | ***RBSL (ug/l)*** | ***Wells Above RBSL*** |
|---|---|---|
| Benzene | 5 | OMW-1, MW-1R, MW-2, MW-4, MW-10, MW-11, MW-35, & DMW-40 |
| Toluene | 1,000 | OMW-1, MW-1R, MW-2, & MW-10 |
| Ethylbenzene | 700 | OMW-1, MW-1R, MW-2, MW-3 & MW-10 |
| Total Xylenes | 10,000 | OMW-1, MW-1R, MW-3 & MW-10 |
| Naphthalene | 25 | OMW-1, MW-1R, MW-2, MW-4, MW-10 & MW-35 |
| MTBE | 40 | OMW-1, MW-1R, MW-2, MW-4, MW-10, MW-11, MW-13R, MW-20, MW-31, MW-35 & DMW-40 |
| EDB | 0.05 | OMW-1, MW-1R, MW-3, MW-4, & MW-10 |

In addition, the analytical results also detected petroleum constituents above the laboratory method detection limit in monitoring wells MW-9, MW-19, MW-21, MW-22, MW-23 and MW-25; however the concentrations detected did not exceed the RBSL. The results of the analyses for each monitoring well and specific parameters are listed on Table 3, Table 3A, and provided in Appendix B.

Figures 4 (Benzene Isopleth), 4A (Naphthalene Isopleth), 4B (MTBE Isopleth) and 4C (EDB Isopleth) depict graphically the concentrations and approximate extent of each listed petroleum compound in the surficial aquifer at the site. Figure 4D presents the 8 oxygenates analytical data from all monitoring wells installed in conjunction with the subject UST release.

Based on current analytical results, the contaminant plume emanating from the subject site appears to be defined downgradient, both horizontally and vertically. The plume is not defined (sidegradient) to the west of MW-31; however this is due to property access issues with a very large tract of agricultural land. MECI recommends continued monitoring of the monitoring well network and nearby receptors. It may be advantageous to install an Granular Activated Carbon (GAC) unit on the McCullough-WW in order to filter the trace amounts of MTBE and DIPE detected in the water supply well. Furthermore, MECI recommends installing several recovery wells in the source area of the contaminant plume, followed by a series of extended AFVR events to reduce elevated concentrations of dissolved phase petroleum constituents.

## 7.0 QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assessment are consistent with those normally employed in hydrogeological assessment and waste management projects of this type. Our evaluation of site conditions has been based on our understanding of the site, project information provided to us, and data obtained in our exploration. The general subsurface conditions utilized in our evaluation have been based on interpretation of subsurface data between borings. Contents of this report are

intended for the sole use of Mr. Frank Crawford, SCDHEC, and MECI under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

-oOo-

# TABLES

# TABLE 2
# PAGE 1 OF 3
# POTENTIOMETRIC DATA
# FEBRUARY 25, 2015 SAMPLING EVENT
# CRAWFORD'S COUNTRY STORE
# ABBEVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 15-5105
# SCDHEC SITE ID NUMBER 12335

| Well Number | Sample Date | Screened Interval (ft BGS) | Depth to Product (ft) | Depth to Water (ft) | Product Thickness | Well-head Elevation | Groundwater Elevation |
|---|---|---|---|---|---|---|---|
| OMW-1 | 05/16/11 | 7-22 | *** | 18.13 | *** | 97.50 | 79.37 |
| | 02/18/14 | - | *** | 16.16 | *** | 97.50 | 81.34 |
| | 02/25/15 | - | *** | 14.41 | *** | 97.50 | 83.09 |
| MW-1R | 5/16/2011*** | 13-25 | 18.06 | 18.17 | 0.11 | 97.51 | 79.35 |
| | 02/18/14 | - | *** | 15.92 | *** | 97.51 | 81.59 |
| | 02/25/15 | - | *** | 13.86 | *** | 97.51 | 83.65 |
| MW-2 | 05/16/11 | 10-25 | *** | 18.47 | *** | 97.57 | 79.10 |
| | 02/18/14 | - | *** | 16.49 | *** | 97.57 | 81.08 |
| | 02/25/15 | - | *** | 15.49 | *** | 97.57 | 82.08 |
| MW-3 | 05/16/11 | 10-25 | *** | 18.18 | *** | 97.72 | 79.54 |
| | 2/18/2014*** | - | 17.04 | 17.05 | 0.01 | 97.72 | 80.67 |
| | 02/25/15 | - | *** | 16.93 | *** | 97.72 | 80.79 |
| MW-4 | 05/16/11 | 10-25 | *** | 18.73 | *** | 97.37 | 78.64 |
| | 02/18/14 | - | *** | 17.02 | *** | 97.37 | 80.35 |
| | 02/25/15 | - | *** | 15.80 | *** | 97.37 | 81.57 |
| MW-5 | 05/16/11 | 10-25 | *** | 17.58 | *** | 97.09 | 79.51 |
| | 02/18/14 | - | *** | 13.63 | *** | 97.09 | 83.46 |
| | 02/25/15 | - | *** | 11.59 | *** | 97.09 | 85.50 |
| MW-6 | 05/16/11 | 10-25 | *** | NL | *** | NL | NL |
| | 02/18/14 | - | *** | NL | *** | NL | NL |
| | 02/25/15 | - | *** | NL | *** | NL | NL |
| MW-7 | 05/16/11 | 10-25 | *** | 16.04 | *** | 97.20 | 81.16 |
| | 02/18/14 | - | *** | 12.36 | *** | 97.20 | 84.84 |
| | 02/25/15 | - | *** | 10.93 | *** | 97.20 | 86.27 |
| MW-8 | 05/16/11 | 10-25 | *** | 15.27 | *** | 100.09 | 84.82 |
| | 02/18/14 | - | *** | 9.54 | *** | 100.09 | 90.55 |
| | 02/25/15 | - | *** | 8.90 | *** | 100.09 | 91.19 |
| MW-9 | 05/16/11 | 10-25 | *** | 17.37 | *** | 98.30 | 80.93 |
| | 02/18/14 | - | *** | 14.59 | *** | 98.30 | 83.71 |
| | 02/25/15 | - | *** | 12.90 | *** | 98.30 | 85.40 |
| MW-10 | 05/16/11 | 10-25 | *** | 18.45 | *** | 97.40 | 78.95 |
| | 02/18/14 | - | *** | 16.61 | *** | 97.40 | 80.79 |
| | 02/25/15 | - | *** | 15.25 | *** | 97.40 | 82.15 |
| MW-11 | 05/16/11 | 10-25 | *** | 16.65 | *** | 94.17 | 77.52 |
| | 02/18/14 | - | *** | 15.14 | *** | 94.17 | 79.03 |
| | 02/25/15 | - | *** | 12.76 | *** | 94.17 | 81.41 |
| MW-12 | 05/16/11 | 10-25 | *** | 18.13 | *** | 96.32 | 78.19 |

Notes:

1. Groundwater depths were measured from the top of the PVC riser pipe.
2. NL = Not Located
3. *** = Groundwater elevation corrected for the presence of free phase petroleum product, using a specific gravity of 0.85 for fuel.
4. Elevations based on assumed site datum.

# TABLE 2
# PAGE 2 OF 3
# POTENTIOMETRIC DATA
# FEBRUARY 25, 2015 SAMPLING EVENT
# CRAWFORD'S COUNTRY STORE
# ABBEVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 15-5105
# SCDHEC SITE ID NUMBER 12335

| Well Number | Sample Date | Screened Interval (ft BGS) | Depth to Product (ft) | Depth to Water (ft) | Product Thickness | Well-head Elevation | Groundwater Elevation |
|---|---|---|---|---|---|---|---|
| MW-12R | 02/18/14 | 15-25 | *** | 17.17 | *** | 97.17 | 80.00 |
| | 02/25/15 | - | *** | 15.76 | *** | 97.17 | 81.41 |
| MW-13 | 05/16/11 | 10-25 | *** | 22.06 | *** | 98.74 | 76.68 |
| MW-13R | 05/16/11 | 18-30 | *** | 22.25 | *** | 98.95 | 76.70 |
| | 02/18/14 | - | *** | 20.47 | *** | 98.95 | 78.48 |
| | 02/25/15 | - | *** | 19.26 | *** | 98.95 | 79.69 |
| MW-14 | 05/16/11 | 10-25 | *** | 8.77 | *** | 87.15 | 78.38 |
| | 02/18/14 | - | *** | 7.88 | *** | 87.15 | 79.27 |
| | 02/25/15 | - | *** | 8.06 | *** | 87.15 | 79.09 |
| MW-15 | 05/16/11 | 10-25 | *** | NS | *** | 84.95 | NS |
| | 02/18/14 | - | *** | 3.81 | *** | 84.95 | 81.14 |
| | 02/25/15 | - | *** | 4.06 | *** | 84.95 | 80.89 |
| MW-16 | 05/16/11 | 10-25 | *** | 11.74 | *** | 91.51 | 79.77 |
| | 02/18/14 | - | *** | 8.23 | *** | 91.51 | 83.28 |
| | 02/25/15 | - | *** | 8.39 | *** | 91.51 | 83.12 |
| DMW-17 | 05/16/11 | 70-75 | *** | 17.81 | *** | 97.83 | 80.02 |
| | 02/18/14 | - | *** | 15.45 | *** | 97.83 | 82.38 |
| | 12/25/15 | - | *** | 14.66 | *** | 97.83 | 83.17 |
| MW-18 | 05/16/11 | 8-18 | *** | 9.12 | *** | 88.25 | 79.13 |
| | 02/18/14 | - | *** | 6.90 | *** | 88.25 | 81.35 |
| | 12/25/15 | - | *** | 7.15 | *** | 88.25 | 81.10 |
| MW-19 | 05/16/11 | 15-25 | *** | 19.14 | *** | 97.30 | 78.16 |
| | 02/18/14 | - | *** | 19.15 | *** | 97.30 | 78.15 |
| | 12/25/15 | - | *** | 16.33 | *** | 97.30 | 80.97 |
| MW-20 | 05/16/11 | 17-27 | *** | 22.19 | *** | 99.24 | 77.05 |
| | 02/18/14 | - | *** | 20.52 | *** | 99.24 | 78.72 |
| | 12/25/15 | - | *** | 18.94 | *** | 99.24 | 80.30 |
| MW-21 | 05/16/11 | 15-25 | *** | 21.05 | *** | 96.79 | 75.74 |
| | 02/18/14 | - | *** | 19.57 | *** | 96.79 | 77.22 |
| | 12/25/15 | - | *** | 18.75 | *** | 96.79 | 78.04 |
| MW-22 | 05/16/11 | 19-29 | *** | 21.93 | *** | 97.63 | 75.70 |
| | 02/18/14 | - | *** | 19.93 | *** | 97.63 | 77.70 |
| | 12/25/15 | - | *** | 19.97 | *** | 97.63 | 77.66 |
| MW-23 | 05/16/11 | 13-23 | *** | 15.02 | *** | 92.38 | 77.36 |
| | 02/18/14 | - | *** | 12.82 | *** | 92.38 | 79.56 |
| | 12/25/15 | - | *** | 11.64 | *** | 92.38 | 80.74 |

Notes:

1. Groundwater depths were measured from the top of the PVC riser pipe.
2. NL = Not Located
3. *** = Groundwater elevation corrected for the presence of free phase petroleum product, using a specific gravity of 0.85 for fuel.
4. Elevations based on assumed site datum.

# TABLE 2
# PAGE 3 OF 3
# POTENTIOMETRIC DATA
# FEBRUARY 25, 2015 SAMPLING EVENT
# CRAWFORD'S COUNTRY STORE
# ABBEVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 15-5105
# SCDHEC SITE ID NUMBER 12335

| Well Number | Sample Date | Screened Interval (ft BGS) | Depth to Product (ft) | Depth to Water (ft) | Product Thickness | Well-head Elevation | Groundwater Elevation |
|---|---|---|---|---|---|---|---|
| MW-24 | 02/18/14 | 2-12 | *** | 0.52 | *** | 71.04 | 70.52 |
| | 12/25/15 | - | *** | 1.16 | *** | 71.04 | 69.88 |
| MW-25 | 02/18/14 | 2-12 | *** | 0.00 | *** | 68.73 | 68.73 |
| | 12/25/15 | - | *** | 0.00 | *** | 68.73 | 68.73 |
| MW-26 | 02/18/14 | 2-12 | *** | 0.00 | *** | 71.50 | 71.50 |
| | 12/25/15 | - | *** | 0.00 | *** | 71.50 | 71.50 |
| MW-27 | 02/18/14 | 2-12 | *** | 3.24 | *** | 79.32 | 76.08 |
| | 12/25/15 | - | *** | 3.71 | *** | 79.32 | 75.61 |
| MW-28 | 02/18/14 | 14-24 | *** | 17.48 | *** | 88.09 | 70.61 |
| | 12/25/15 | - | *** | 16.58 | *** | 88.09 | 71.51 |
| MW-29 | 02/18/14 | 15-25 | *** | 16.99 | *** | 88.25 | 71.26 |
| | 12/25/15 | - | *** | 17.40 | *** | 88.25 | 70.85 |
| MW-30 | 02/18/14 | 14-24 | *** | 15.62 | *** | 88.29 | 72.67 |
| | 12/25/15 | - | *** | 16.04 | *** | 88.29 | 72.25 |
| MW-31 | 02/18/14 | 14-24 | *** | 16.42 | *** | 92.70 | 76.28 |
| | 12/25/15 | - | *** | 16.83 | *** | 92.70 | 75.87 |
| MW-32 | 02/18/14 | 14-24 | *** | 16.25 | *** | 94.46 | 78.21 |
| | 12/25/15 | - | *** | 16.84 | *** | 94.46 | 77.62 |
| MW-33 | 02/18/14 | 17-27 | *** | 18.94 | *** | 99.16 | 80.22 |
| | 12/25/15 | - | *** | 18.87 | *** | 99.16 | 80.29 |
| MW-34 | 02/18/14 | 5-15 | *** | 5.85 | *** | 85.10 | 79.25 |
| | 12/25/15 | - | *** | 5.56 | *** | 85.10 | 79.54 |
| MW-35 | 02/18/14 | 18-28 | *** | 18.88 | *** | 95.08 | 76.20 |
| | 12/25/15 | - | *** | 18.24 | *** | 95.08 | 76.84 |
| DMW-36 | 02/18/14 | 55-60 | *** | 18.09 | *** | 88.50 | 70.41 |
| | 12/25/15 | - | *** | 17.35 | *** | 88.50 | 71.15 |
| DMW-37 | 02/18/14 | 45-50 | *** | 16.18 | *** | 87.65 | 71.47 |
| | 12/25/15 | - | *** | 15.24 | *** | 87.65 | 72.41 |
| DMW-38 | 02/18/14 | 45-50 | *** | 20.10 | *** | 99.25 | 79.15 |
| | 12/25/15 | - | *** | 19.74 | *** | 99.25 | 79.51 |
| DMW-39 | 02/18/14 | 30-35 | *** | 16.33 | *** | 92.77 | 76.44 |
| | 12/25/15 | - | *** | 16.78 | *** | 92.77 | 75.99 |
| DMW-40 | 02/18/14 | 45-50 | *** | 20.79 | *** | 99.25 | 78.46 |
| | 12/25/15 | - | *** | 18.03 | *** | 99.25 | 81.22 |

Notes:

1. Groundwater depths were measured from the top of the PVC riser pipe.
2. NL = Not Located
3. *** = Groundwater elevation corrected for the presence of free phase petroleum product, using a specific gravity of 0.85 for fuel.
4. Elevations based on assumed site datum.

# TABLE 3
# PAGE 1 OF 3
# GROUNDWATER COC CONCENTRATION DATA
# FEBRUARY 25, 2015 SAMPLING EVENT
# CRAWFORD'S COUNTRY STORE
# ABBEVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 15-5105
# SCDHEC ID NUMBER 12335

| Well Number | Sample Date | Benzene (µg/l) | Toluene (µg/l) | Ethylbenzene (µg/l) | Total Xylenes (µg/l) | Total BTEX (µg/l) | Naphthalene (µg/l) | MTBE (µg/l) | 1,2 DCA (µg/l) | EDB (µg/l) | Total Lead (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 05/16/11 | 6,110 | 50,000 | 3,130 | 20,600 | 79,840 | <2,500 | 1,420J | <2,500 | 9.9 | <5.0 |
| | 02/18/14 | 4,300 | 39,000 | 2,900 | 21,000 | 67,200 | 2,700 | 380J | <2,500 | 3.2 | NT |
| | 02/25/15 | 3,490 | 23,600 | 1,540 | 12,300 | 40,930 | <1,250 | <1,250 | <1,250 | 1.4 | NT |
| MW-1R | 05/16/11 | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD |
| | 02/18/14 | 9,300 | 58,000 | 4,500J | 27,000 | 98,800J | 6,000 | 2,500J | <5,000 | 0.22P | NT |
| | 02/25/15 | 9,830 | 41,800 | 3,050 | 17,000 | 71,680 | 412 | 2,350J | <25.0 | 0.098 | NT |
| MW-2 | 05/16/11 | 5,210 | 778 | 1,870 | 1,080 | 8,938 | 387 | 3,530 | <5.0 | <0.021 | <5.0 |
| | 02/18/14 | 3,100 | 1,000 | 2,100 | 3,700 | 9,900 | 330 | 280 | <250 | 0.041P | NT |
| | 02/25/15 | 3,960 | 963 | 1,640 | 3,200 | 9,763 | 404 | 408 | <250 | <0.020 | NT |
| MW-3 | 05/16/11 | 4,000 | 22,700 | 2,730 | 13,900 | 43,330 | 388 | 5,830 | <125 | 1.6 | <5.0 |
| | 02/18/14 | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD |
| | 02/25/15 | 7,930 | 61,100 | 2,920 | 16,900 | 88,850 | 422J | 6,010 | <1,000 | 1.6 | NT |
| MW-4 | 05/16/11 | 904 | 544 | 1,430 | 263 | 3,141 | 549 | 436 | <50.0 | 0.46 | 6.3 |
| | 02/18/14 | 160 | 14J | 24J | 20J | 218J | 190 | 180 | <25 | 0.16 | NT |
| | 02/25/15 | 327 | 99.8 | 585 | 111 | 1,122.8 | 722 | 83.9 | <50.0 | 0.23 | NT |
| MW-5 | 05/16/11 | 17.2 | 111 | 222 | 167 | 517.2 | 26.0 | 7.0J | <12.5 | <0.020 | 5.6 |
| | 02/18/14 | 3.9J | 19 | 34 | 82 | 138.9J | 9.3 | <5.0 | <5.0 | <0.020 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| MW-6 | 05/16/11 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL |
| | 02/18/14 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL |
| | 02/25/15 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | <5.0 |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | 4.7J | <5.0 | <5.0 | <0.020 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| MW-8 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | 0.041 | <5.0 |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| MW-9 | 05/16/11 | 2.6J | 8.8 | 4.1J | 101 | 116.5J | 2.1J | 5.2 | <5.0 | <0.020 | <5.0 |
| | 02/18/14 | 1.3J | 3.2J | <5.0 | 17 | 21.5J | 2.7J | 4.1J | <5.0 | <0.020 | NT |
| | 02/25/15 | 3.0J | 2.8J | <5.0 | 44.3 | 50.1J | <5.0 | 6.2 | <5.0 | <0.019 | NT |
| MW-10 | 05/16/11 | 12,300 | 28,200 | 3,830 | 20,600 | 64,930 | 610J | 13,100 | <1,000 | 2.9 | <5.0 |
| | 02/18/14 | 4,700 | 5,000 | 1,800 | 8,100 | 19,600 | <250 | 4,200 | <250 | 1.2 | NT |
| | 02/25/15 | 8,750 | 15,500 | 3,300 | 17,300 | 44,850 | 527J | 5,540 | <1,250 | 1.2 | NT |
| MW-11 | 05/16/11 | 32.9 | <5.0 | <5.0 | <10.0 | 32.9 | 5.3 | 855 | <5.0 | <0.020 | <5.0 |
| | 02/18/14 | 150 | <100 | <100 | <100 | 150 | <100 | 1,800 | <100 | <0.020 | NT |
| | 02/25/15 | 124 | <10.0 | <10.0 | <20.0 | 124 | 28.5 | 1,560 | <10.0 | <0.020 | NT |
| MW-12 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 53.0 | <5.0 | 0.051 | <5.0 |
| MW-12R | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| MW-13 | 05/16/11 | 4.7J | <5.0 | <5.0 | <10.0 | 4.7J | <5.0 | 4,220 | <5.0 | <0.020 | 4.0J |
| MW-13R | 05/16/11 | 530 | <5.0 | <5.0 | 27.5 | 557.5 | 32.9 | 15,600 | 15.3 | <0.019 | <5.0 |
| | 02/18/14 | 86J | <100 | <100 | <100 | 86J | <100 | 3,700 | <100 | <0.019 | NT |
| | 02/25/15 | <25.0 | <25.0 | <25.0 | <50.0 | BDL | <25.0 | 1,060 | <25.0 | <0.020 | NT |
| MW-14 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 1.9J | <5.0 | <0.019 | <5.0 |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| MW-15 | 05/16/11 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| MW-16 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | <5.0 |
| | 02/18/14 | <5.0 | 32 | 2.9J | <5.0 | 34.9J | <5.0 | <5.0 | <5.0 | <0.019 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 | NT |

Notes:

1. BDL = Below Practical Quantitative Limits
2. µg/l = micrograms per liter
3. NS = Not Sampled
4. MTBE = Methyl-Tertiary-Butyl Ether
5. "P" Values = The RPF between two GC columns exceeds 40%
6. 1,2 DCA = 1,2-Dichloroethane
7. NL = Not Located
8. EDB = Ethylene Dibromide
9. "J" Values used in Total BTEX Calculations
10. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
11. PROD = Free phase petroleum product encountered

# TABLE 3
# PAGE 2 OF 3
# GROUNDWATER COC CONCENTRATION DATA
# FEBRUARY 25, 2015 SAMPLING EVENT
# CRAWFORD'S COUNTRY STORE
# ABBEVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 15-5105
# SCDHEC ID NUMBER 12335

| Well Number | Sample Date | Benzene (µg/l) | Toluene (µg/l) | Ethylbenzene (µg/l) | Total Xylenes (µg/l) | Total BTEX (µg/l) | Naphthalene (µg/l) | MTBE (µg/l) | 1,2 DCA (µg/l) | EDB (µg/l) | Total Lead (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DMW-17 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | **20.4** |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| MW-18 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 | **4.0J** |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| MW-19 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | **405** | <5.0 | **0.15** | **22.9** |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **100** | <5.0 | <0.019 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | **28.6** | <5.0 | <0.020 | NT |
| MW-20 | 05/16/11 | **4.4J** | <5.0 | <5.0 | <10.0 | **4.4J** | <5.0 | **324** | <5.0 | **0.039** | **14.8** |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **280** | <5.0 | <0.020 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | **119** | <5.0 | <0.020 | NT |
| MW-21 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | **153** | <5.0 | **0.051** | **108** |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **27** | <5.0 | <0.019 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | **2.6J** | <5.0 | <0.020 | NT |
| MW-22 | 05/16/11 | **269** | <5.0 | <5.0 | **21.6** | **290.6** | **8.7** | **4,010** | **4.4J** | **0.22** | **11.2** |
| | 02/18/14 | **110** | <100 | <100 | <100 | **110** | <100 | **1,700** | <100 | <0.020 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | **2.0J** | <5.0 | <0.020 | NT |
| MW-23 | 05/16/11 | **2.2J** | <5.0 | <5.0 | <10.0 | **2.2J** | <5.0 | **33.1** | <5.0 | <0.019 | <5.0 |
| | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **11** | <5.0 | <0.019 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | **2.5J** | <5.0 | <0.020 | NT |
| MW-24 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.024 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| MW-25 | 02/18/14 | **0.30J** | <5.0 | <5.0 | <5.0 | **0.30J** | <5.0 | **96** | <5.0 | <0.020 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | **3.3J** | <5.0 | <0.021 | NT |
| MW-26 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **0.81J** | <5.0 | <0.021 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.021 | NT |
| MW-27 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **11** | <5.0 | <0.021 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| MW-28 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| MW-29 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **1.4J** | <5.0 | <0.020 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 | NT |
| MW-30 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| MW-31 | 02/18/14 | **7.7** | <5.0 | <5.0 | <5.0 | **7.7** | <5.0 | **220** | <5.0 | <0.020 | NT |
| | 02/25/15 | <25.0 | <25.0 | <25.0 | <50.0 | BDL | <25.0 | **1,150** | <25.0 | <0.020 | NT |
| MW-32 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| MW-33 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **0.99J** | <5.0 | <0.020 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 | NT |
| MW-34 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **0.73J** | <5.0 | <0.021 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| MW-35 | 02/18/14 | **320** | <250 | <250 | <250 | **320** | <250 | **8,000** | <250 | **0.031P** | NT |
| | 02/25/15 | **147** | <50.0 | <50.0 | <100 | **147** | **28.7J** | **2,960** | <50.0 | <0.021 | NT |
| DMW-36 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **0.63J** | <5.0 | <0.020 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| DMW-37 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | **1.1J** | <5.0 | <0.020 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |

Notes:

1. BDL = Below Practical Quantitative Limits
2. µg/l = micrograms per liter
3. NS = Not Sampled
4. MTBE = Methyl-Tertiary-Butyl Ether
5. "P" Values = The RPF between two GC columns exceeds 40%
6. 1,2 DCA = 1,2-Dichloroethane
7. NL = Not Located
8. EDB = Ethylene Dibromide
9. "J" Values used in Total BTEX Calculations
10. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
11. PROD = Free phase petroleum product encountered

# TABLE 3
# PAGE 3 OF 3
# GROUNDWATER COC CONCENTRATION DATA
# FEBRUARY 25, 2015 SAMPLING EVENT
# CRAWFORD'S COUNTRY STORE
# ABBEVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 15-5105
# SCDHEC ID NUMBER 12335

| Well Number | Sample Date | Benzene (µg/l) | Toluene (µg/l) | Ethylbenzene (µg/l) | Total Xylenes (µg/l) | Total BTEX (µg/l) | Naphthalene (µg/l) | MTBE (µg/l) | 1,2 DCA (µg/l) | EDB (µg/l) | Total Lead (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DMW-38 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| DMW-39 | 02/18/14 | **1.6J** | <5.0 | <5.0 | <5.0 | **1.6J** | <5.0 | **150** | <5.0 | <0.020 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| DMW-40 | 02/18/14 | **98** | <25 | <25 | <25 | **98** | <25 | **490** | <25 | <0.020 | NT |
| | 02/25/15 | **29.2** | <5.0 | <5.0 | <10.0 | **29.2** | <5.0 | **145** | <5.0 | <0.020 | NT |
| CLS-WW | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 | NT |
| | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 | NT |
| | 02/25/15 | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 | NT |
| CP-WW2 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | NT | NT |
| | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 | NT |
| | 02/25/15 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| EMS-WW | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 | NT |
| | 02/25/15 | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 | NT |
| McCollough-WW | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | **1.8** | <1.0 | <0.020 | NT |
| | 02/25/15 | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | **1.1** | <1.0 | <0.020 | NT |
| Café-WW | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 | NT |
| | 02/25/15 | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 | NT |
| Old Service Station-WW | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 | NT |
| | 02/25/15 | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 | NT |
| Scott-WW | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 | NT |
| | 02/25/15 | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 | NT |
| Farm-WW | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 | NT |
| | 02/25/15 | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 | NT |
| Major-WW | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 | NT |
| | 02/25/15 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| Driver-WW | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 | NT |
| | 02/25/15 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| Gin House-WW | 02/18/14 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| | 02/25/15 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| SW-1 | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | **1.5** | <1.0 | <0.020 | NT |
| | 02/25/15 | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | **0.28J** | <1.0 | <0.019 | NT |
| SW-2 | 02/18/14 | <1.0 | <1.0 | <1.0 | <1.0 | BDL | <1.0 | **1.4** | <1.0 | <0.019 | NT |
| | 02/25/15 | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 | NT |
| OMW-1 Duplicate | 02/25/15 | **3,490** | **24,300** | **1,510** | **12,300** | **41,600** | <1,250 | <1,250 | <1,250 | **1.5** | NT |
| MW-2 Duplicate | 02/18/14 | **3,200** | **1,000** | **2,000** | **3,600** | **9,800** | **350** | **290** | <250 | <0.020 | NT |
| | 02/25/15 | **3,960** | **948** | **1,610** | **3,150** | **9,668** | **394** | **402** | <250 | <0.019 | NT |
| MW-9 Duplicate | 02/18/14 | **2.2J** | **4.7J** | <5.0 | **46** | **52.9J** | **2.5J** | **3.9J** | <5.0 | <0.020 | NT |
| MW-10 Duplicate | 02/18/14 | **4,700** | **4,400** | **1,700** | **7,300** | **18,100** | **260** | **3,700** | <250 | **0.97** | NT |
| | 02/25/15 | **8,540** | **14,700** | **3,130** | **16,900** | **43,270** | **655** | **4,760** | <625 | **1.4** | NT |
| Field Blank | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 | NT |
| Trip Blank #1 | 02/18/14 | <5.0 | <5.0 | <5.0 | <5.0 | BDL | <5.0 | <5.0 | <5.0 | NT | NT |
| | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | NT | NT |
| Trip Blank #2 | 02/25/15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | NT | NT |

Notes:

1. BDL = Below Practical Quantitative Limits
2. µg/l = micrograms per liter
3. NS = Not Sampled
4. MTBE = Methyl-Tertiary-Butyl Ether
5. "P" Values = The RPF between two GC columns exceeds 40%
6. 1,2 DCA = 1,2-Dichloroethane
7. NL = Not Located
8. EDB = Ethylene Dibromide
9. "J" Values used in Total BTEX Calculations
10. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
11. PROD = Free phase petroleum product encountered

# TABLE 3A
# PAGE 1 OF 3
# GROUNDWATER COC CONCENTRATION DATA (OXYGENATES)
# FEBRUARY 25, 2015 SAMPLING EVENT
# CRAWFORD'S COUNTRY STORE
# ABBEVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 15-5105
# SCDHEC SITE ID NUMBER 12335

| Well Number | Sample Date | TAA (µg/l) | TAME (µg/l) | 3,3-Dimethyl-1-butanol (µg/l) | TBA (µg/l) | TBF (µg/l) | DIPE (µg/l) | Ethanol (µg/l) | ETBE (µg/l) |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 5/16/2011 | <50,000 | <5,000 | <50,000 | <50,000 | <25,000 | **7,500** | <100,000 | <5,000 |
| | 2/18/2014 | **53,000** | **740J** | <50,000 | <50,000 | <50,000 | **2,900J** | <500,000 | <50,000 |
| | 2/25/2015 | <25,000 | <2,500 | <25,000 | <25,000 | <12,500 | **1,270** | <50,000 | <2,500 |
| MW-1R | 5/16/2011 | **PROD** | **PROD** | **PROD** | **PROD** | **PROD** | **PROD** | **PROD** | **PROD** |
| | 2/18/2014 | **110,000** | **990J** | <100,000 | <100,000 | <100,000 | **8,100J** | <1,000,000 | <100,000 |
| | 2/25/2015 | **10,000** | **1,100** | <500 | **872** | <250 | **8,480** | <1,000 | <50.0 |
| MW-2 | 5/16/2011 | **5,700** | **532** | <5,000 | <5,000 | <2,500 | **4,990** | <10,000 | <500 |
| | 2/18/2014 | **620J** | **240J** | <5,000 | <5,000 | <5,000 | **1,800** | <50,000 | <5,000 |
| | 2/25/2015 | <5,000 | **307J** | <5,000 | <5,000 | <2,500 | **2,510** | <10,000 | <500 |
| MW-3 | 5/16/2011 | **15,200** | **1,250** | <2,500 | <2,500 | <1,250 | **6,070** | <5,000 | <250 |
| | 2/18/2014 | **PROD** | **PROD** | **PROD** | **PROD** | **PROD** | **PROD** | **PROD** | **PROD** |
| | 2/25/2015 | <20,000 | **1,820J** | <20,000 | <20,000 | <10,000 | **7,490** | <40,000 | <2,000 |
| MW-4 | 5/16/2011 | **1,920** | <100 | <1,000 | <1,000 | <500 | **582** | <2,000 | <100 |
| | 2/18/2014 | **1,200** | **4.2J** | <500 | **310J** | <500 | **92** | <5,000 | <500 |
| | 2/25/2015 | <1,000 | <100 | <1,000 | <1,000 | <500 | **169** | <2,000 | <100 |
| MW-5 | 5/16/2011 | **195J** | <25.0 | <250 | <250 | <125 | **6.2J** | <500 | <25.0 |
| | 2/18/2014 | **110** | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-6 | 5/16/2011 | NL | NL | NL | NL | NL | NL | NL | NL |
| | 2/18/2014 | NL | NL | NL | NL | NL | NL | NL | NL |
| | 2/25/2015 | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-8 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-9 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | **7.7** | <200 | <10.0 |
| | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | **5.0J** | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | **10.7** | <200 | <10.0 |
| MW-10 | 5/16/2011 | <20,000 | **2,650** | <20,000 | <20,000 | <10,000 | **15,700** | <40,000 | <2,000 |
| | 2/18/2014 | **11,000** | **1,100** | <5,000 | **1,400J** | <5,000 | **7,000** | <50,000 | <5,000 |
| | 2/25/2015 | <25,000 | **1,550J** | <25,000 | <25,000 | <12,500 | **7,700** | <50,000 | <2,500 |
| MW-11 | 5/16/2011 | **469** | **46.0** | <100 | **160** | <50.0 | **454** | <200 | <10.0 |
| | 2/18/2014 | **2,200** | **120J** | <2,000 | **1,000J** | <2,000 | **1,300** | <20,000 | <2,000 |
| | 2/25/2015 | **2,360** | **113** | <200 | **1,180** | <100 | **1,290** | <400 | <20.0 |
| MW-12 | 5/16/2011 | **549** | <10.0 | <100 | **145** | <50.0 | **9.0** | <200 | <10.0 |
| MW-12R | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-13 | 5/16/2011 | **82.8J** | **95.6** | <100 | <100 | <50.0 | **808** | <200 | <10.0 |
| MW-13R | 5/16/2011 | **3,110** | **510** | <100 | **1,090** | <50.0 | **4,860** | <200 | <10.0 |
| | 2/18/2014 | **790J** | **130J** | <2,000 | **220J** | <2,000 | **1,200** | <20,000 | <2,000 |
| | 2/25/2015 | <500 | **35.9J** | <500 | <500 | <250 | **325** | <1,000 | <50.0 |
| MW-14 | 5/16/2011 | **570** | <10.0 | <100 | **137** | <50.0 | <5.0 | <200 | <10.0 |
| | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-15 | 5/16/2011 | NS | NS | NS | NS | NS | NS | NS | NS |
| | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-16 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |

Notes:

1. µg/l = micrograms per liter
2. DIPE = Diisopropyl Ether
3. ETBE = Ethyl tert-butyl Ether
4. TAA = tert-Amyl Alcohol
5. TAME = tert-Amyl Methyl Ether
6. TBA = tert-Butyl Alcohol
7. TBF = tert-Butyl Formate
8. NL = Not Located
9. PROD = Free Phase Petroleum Product
10. NS = Not Sampled
11. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).

# TABLE 3A
# PAGE 2 OF 3
# GROUNDWATER ANALYTICAL RESULTS (OXYGENATES)
# FEBRUARY 25, 2015 SAMPLING EVENT
# CRAWFORD'S COUNTRY STORE
# ABBEVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 15-5105
# SCDHEC SITE ID NUMBER 12335

| Well Number | Sample Date | TAA (µg/l) | TAME (µg/l) | 3,3-Dimethyl-1-butanol (µg/l) | TBA (µg/l) | TBF (µg/l) | DIPE (µg/l) | Ethanol (µg/l) | ETBE (µg/l) |
|---|---|---|---|---|---|---|---|---|---|
| DMW-17 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-18 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-19 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | **40.2** | <200 | <10.0 |
| | 2/18/2014 | <100 | **0.41J** | <100 | <100 | <100 | **15** | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | **11.5** | <200 | <10.0 |
| MW-20 | 5/16/2011 | **118** | **11.1** | <100 | <100 | <50.0 | **110** | <200 | <10.0 |
| | 2/18/2014 | <100 | **5.4J** | <100 | <100 | <100 | **66** | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | **33.5** | <200 | <10.0 |
| MW-21 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | **9.0** | <200 | <10.0 |
| | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | **1.1J** | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-22 | 5/16/2011 | **629** | **107** | <100 | **444** | <50.0 | **1,350** | <200 | <10.0 |
| | 2/18/2014 | **2,300** | **34J** | <2,000 | <2,000 | <2,000 | **620** | <20,000 | <2,000 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-23 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | **25.8** | <200 | <10.0 |
| | 2/18/2014 | **110** | <10 | <100 | <100 | <100 | **8.1J** | **80J** | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-24 | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-25 | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | **13** | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | **1.8J** | <200 | <10.0 |
| MW-26 | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | **1.5J** | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-27 | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | **5.2J** | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-28 | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-29 | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | **0.70J** | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-30 | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-31 | 2/18/2014 | **130** | **4.9J** | <100 | **12J** | <100 | **67** | <1,000 | <100 |
| | 2/25/2015 | <500 | **38.7J** | <500 | <500 | <250 | **378** | <1,000 | <50.0 |
| MW-32 | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-33 | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | **0.82J** | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-34 | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | **1,900** | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-35 | 2/18/2014 | **5,600** | **85J** | <5,000 | <5,000 | <5,000 | **1,600** | <50,000 | <5,000 |
| | 2/25/2015 | <1,000 | **48.7J** | <1,000 | <1,000 | <500 | **830** | <2,000 | <100 |
| DMW-36 | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | **1.4J** | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| DMW-37 | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |

Notes:

1. µg/l = micrograms per liter
2. DIPE = Diisopropyl Ether
3. ETBE = Ethyl tert-butyl Ether
4. TAA = tert-Amyl Alcohol
5. TAME = tert-Amyl Methyl Ether
6. TBA = tert-Butyl Alcohol
7. TBF = tert-Butyl Formate
8. NL = Not Located
9. PROD = Free Phase Petroleum Product
10. NS = Not Sampled
11. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).

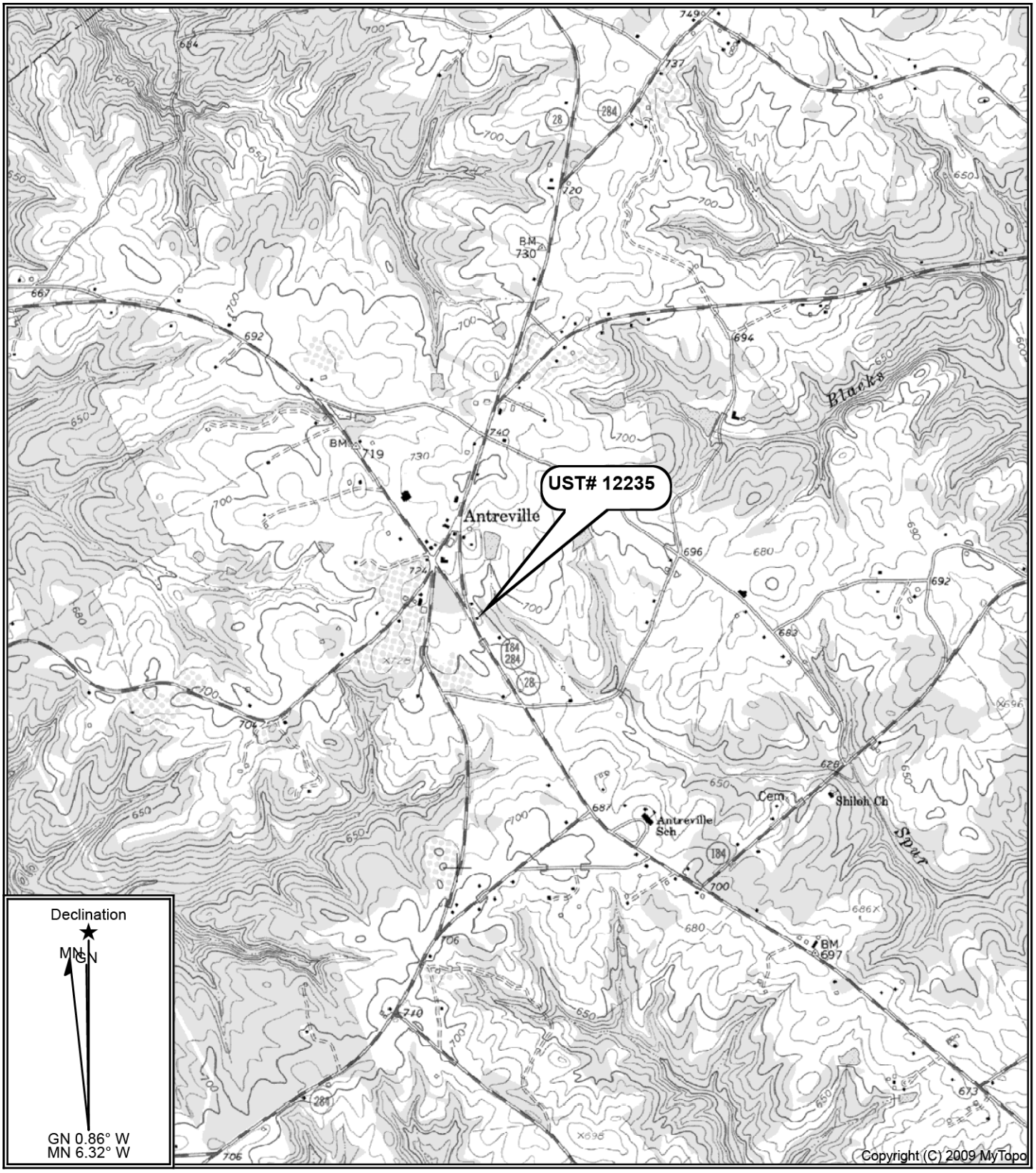
# TABLE 3A
# PAGE 3 OF 3
# GROUNDWATER ANALYTICAL RESULTS (OXYGENATES)
# FEBRUARY 25, 2015 SAMPLING EVENT
# CRAWFORD'S COUNTRY STORE
# ABBEVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 15-5105
# SCDHEC SITE ID NUMBER 12335

| Well 18.75 | Sample Date | TAA (µg/l) | TAME (µg/l) | 3,3-Dimethyl-1-butanol (µg/l) | TBA (µg/l) | TBF (µg/l) | DIPE (µg/l) | Ethanol (µg/l) | ETBE (µg/l) |
|---|---|---|---|---|---|---|---|---|---|
| DMW-38 | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| DMW-39 | 2/18/2014 | **120** | **4.7J** | <100 | **33J** | <100 | **47** | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| DMW-40 | 2/18/2014 | **280J** | **24J** | <500 | **41J** | <500 | **320** | <5,000 | <500 |
| | 2/25/2015 | **111** | **8.4J** | <100 | <100 | <50.0 | **102** | <200 | <10.0 |
| CLS-WW | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| CP-WW2 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | NS | NS | NS | NS | NS | NS | NS | NS |
| EMS-WW | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| McCollough-WW | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | **3.5J** | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | **9.2** | <200 | <10.0 |
| Café-WW | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| Old Service Station-WW | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| Scott-WW | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| Farm-WW | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| Major-WW | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | NS | NS | NS | NS | NS | NS | NS | NS |
| Driver-WW | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | NS | NS | NS | NS | NS | NS | NS | NS |
| Gin House-WW | 2/18/2014 | NS | NS | NS | NS | NS | NS | NS | NS |
| | 2/25/2015 | NS | NS | NS | NS | NS | NS | NS | NS |
| SW-1 | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| SW-2 | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| OMW-1 Duplicate | 2/25/2015 | <25,000 | <2,500 | <25,000 | <25,000 | <12,500 | **1,240J** | <50,000 | <2,500 |
| MW-2 Duplicate | 2/18/2014 | **570J** | **250J** | <5,000 | <5,000 | <5,000 | **1,800** | <50,000 | <5,000 |
| | 2/25/2015 | <5,000 | **297J** | <5,000 | <5,000 | <2,500 | **2,520** | <10,000 | <500 |
| MW-9 Duplicate | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | **5.4J** | <1,000 | <100 |
| MW-10 Duplicate | 2/18/2014 | **8,600** | **1,000** | <5,000 | **1,100J** | <5,000 | **5,800** | <50,000 | <5,000 |
| | 2/25/2015 | <12,500 | **1,290** | <12,500 | <12,500 | <6,250 | **7,700** | <25,000 | <1,250 |
| Field Blank | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| Trip Blank #1 | 2/18/2014 | <100 | <10 | <100 | <100 | <100 | <10 | <1,000 | <100 |
| | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| Trip Blank #2 | 2/25/2015 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |

Notes:

1. µg/l = micrograms per liter
2. DIPE = Diisopropyl Ether
3. ETBE = Ethyl tert-butyl Ether
4. TAA = tert-Amyl Alcohol
5. TAME = tert-Amyl Methyl Ether
6. TBA = tert-Butyl Alcohol
7. TBF = tert-Butyl Formate
8. NL = Not Located
9. PROD = Free Phase Petroleum Product
10. NS = Not Sampled
11. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).

# FIGURES



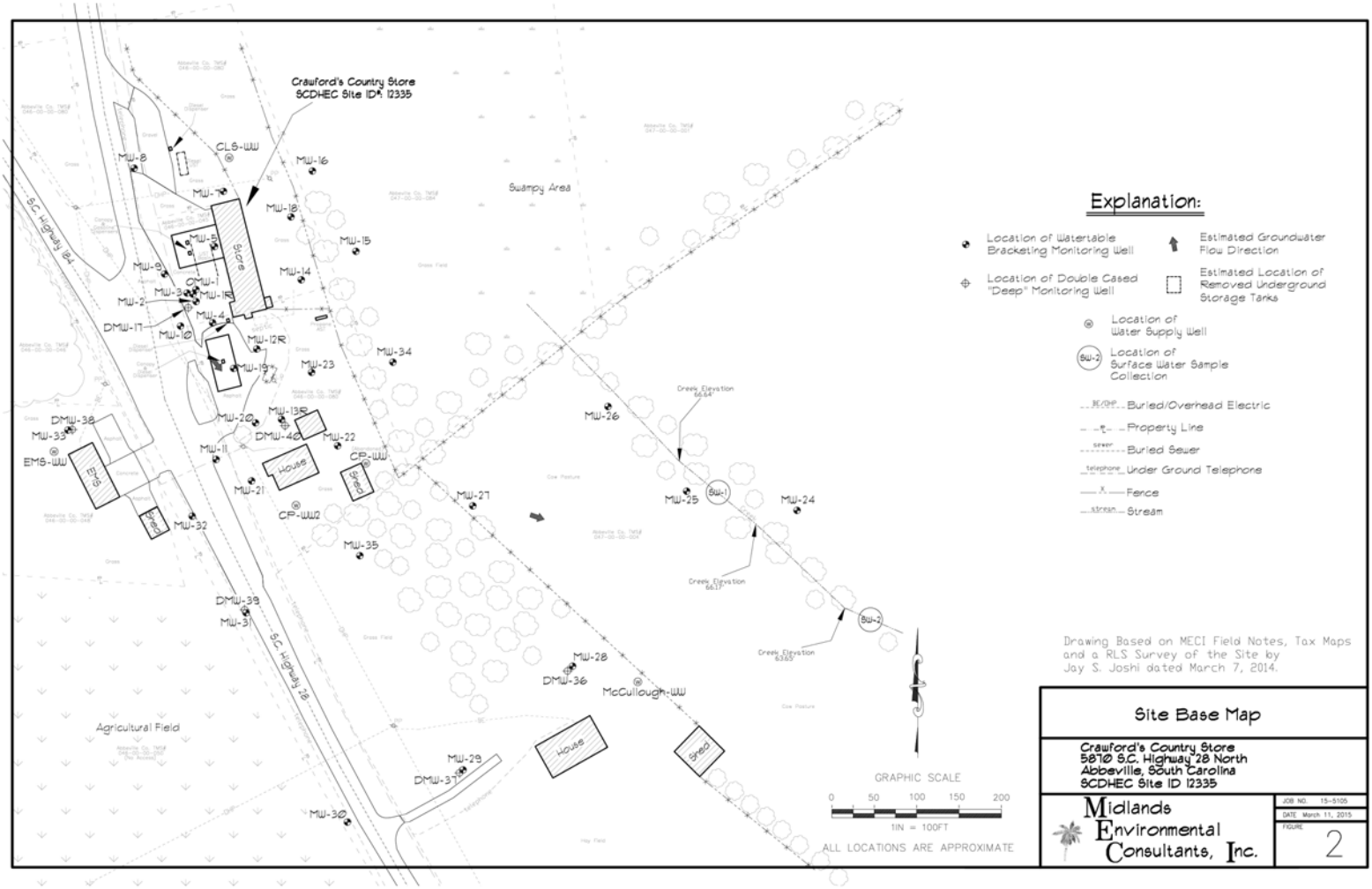

GRAPHIC SCALE

0 1000 2000 4000

1IN = 2000FT

Reference: Antreville, South Carolina
USGS 7.5 Min. Quad
Countour Interval – 10 Feet

| | |
|---|---|
| Midlands Environmental Consultants, Inc. | Site Location |
| Crawford's Country Store<br>5870 Highway 28 North, Antreville, SC<br>SCDHEC Site ID# 12335 | |
| Figure 1 | MECI 15-5105 |



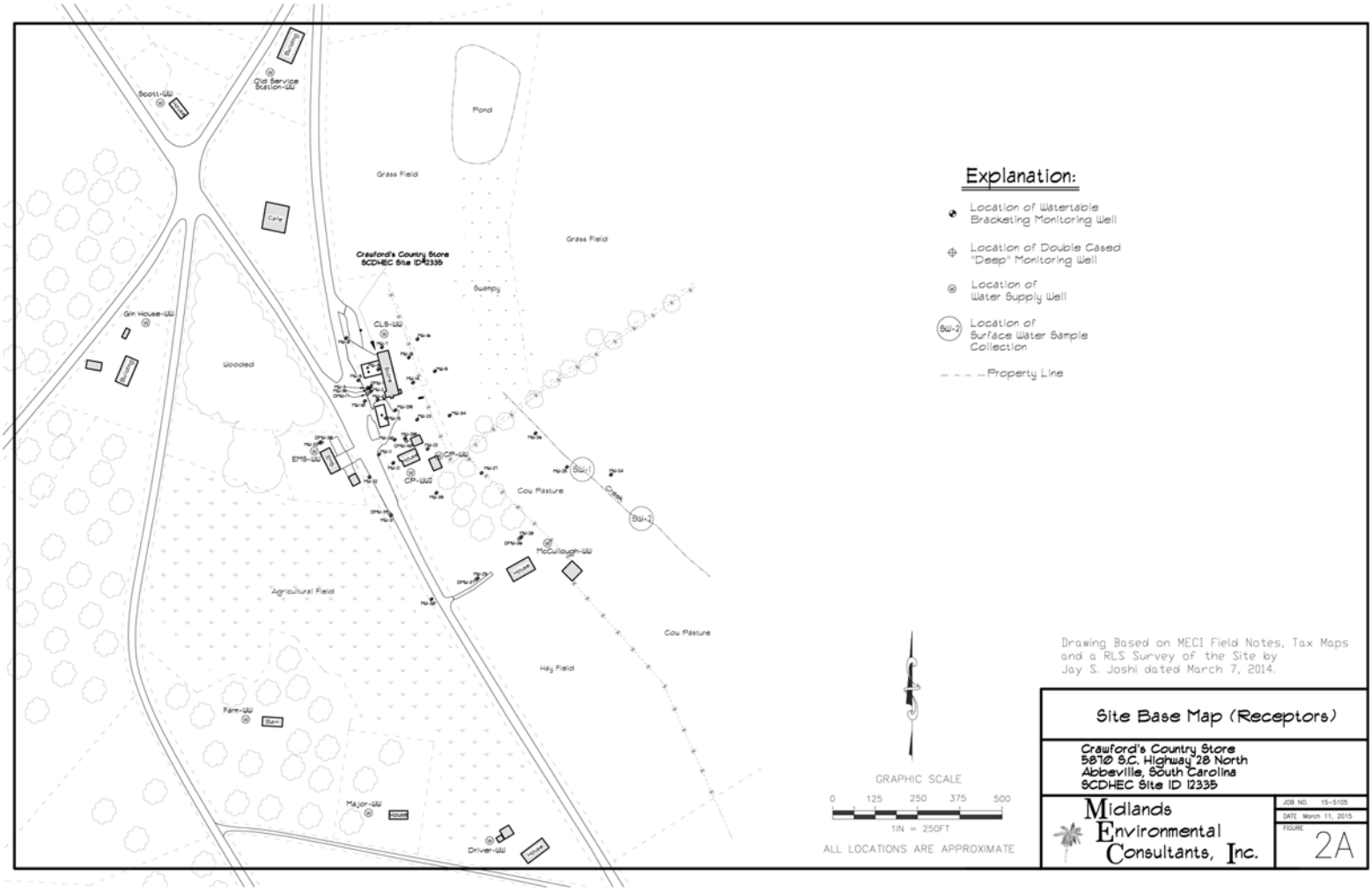

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

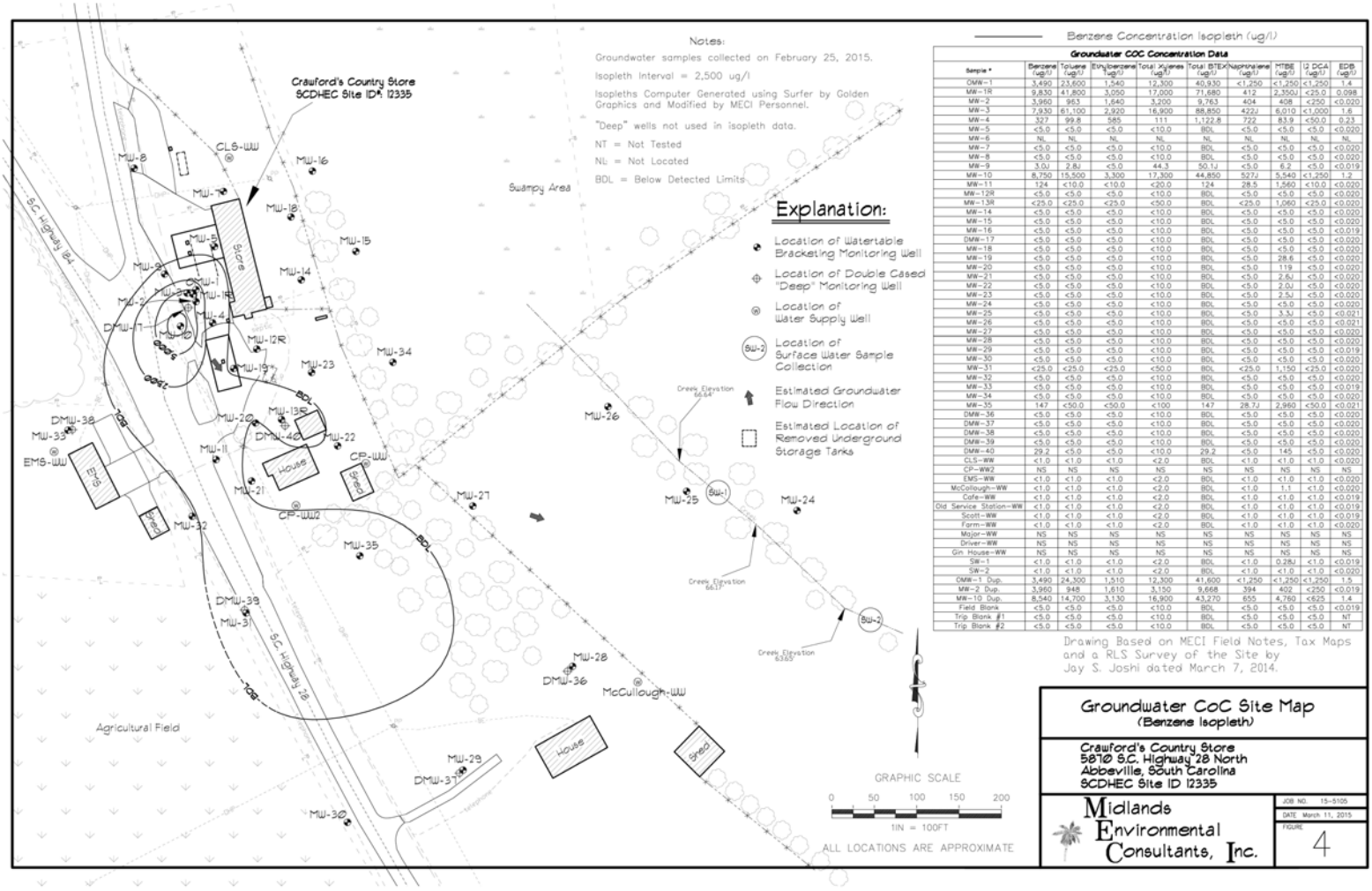
# Site Base Map

**Crawford's Country Store**
**5810 S.C. Highway 28 North**
**Abbeville, South Carolina**
**SCDHEC Site ID 12335**

Midlands Environmental Consultants, Inc.

JOB NO. 15-5105
DATE March 11, 2015
FIGURE 2


Scott-UU
Old Service Station-UU
Pond
Grass Field
Grass Field
Crawford's Country Store
SCDHEC Site ID#2335
Swampy
Gin House-UU
CLS-UU
Wooded
EMS-UU
CP-UU
CP-UU
SW-1
SW-2
Cow Pasture
Creek
McCullough-UU
Agricultural Field
Cow Pasture
Hay Field
Farm-UU
Major-UU
Driver-UU
Explanation:
Location of Watertable Bracketing Monitoring Well
Location of Double Cased "Deep" Monitoring Well
Location of Water Supply Well
SW-2 Location of Surface Water Sample Collection
Property Line
GRAPHIC SCALE
0 125 250 375 500
1IN = 250FT
ALL LOCATIONS ARE APPROXIMATE
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.
Site Base Map (Receptors)
Crawford's Country Store
5810 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335
Midlands Environmental Consultants, Inc.
JOB NO. 15-5105
DATE March 11, 2015
FIGURE 2A




Notes:

Groundwater samples collected on February 25, 2015.

Isopleth Interval = 2,500 ug/l

Isopleths Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

"Deep" wells not used in isopleth data.

NT = Not Tested

NL = Not Located

BDL = Below Detected Limits

## Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Double Cased "Deep" Monitoring Well
- Location of Water Supply Well
- BW-2 Location of Surface Water Sample Collection
- Estimated Groundwater Flow Direction
- Estimated Location of Removed Underground Storage Tanks

Benzene Concentration Isopleth (ug/l)

**Groundwater COC Concentration Data**

| Sample # | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Total Xylenes (ug/l) | Total BTEX (ug/l) | Naphthalene (ug/l) | MTBE (ug/l) | 1,2 DCA (ug/l) | EDB (ug/l) |
|---|---|---|---|---|---|---|---|---|---|
| DMW-1 | 3,490 | 23,600 | 1,540 | 12,300 | 40,930 | <1,250 | <1,250 | <1,250 | 1.4 |
| MW-1R | 9,830 | 41,800 | 3,050 | 17,000 | 71,680 | 412 | 2,350J | <25.0 | 0.098 |
| MW-2 | 3,960 | 963 | 1,640 | 3,200 | 9,763 | 404 | 408 | <250 | <0.020 |
| MW-3 | 7,930 | 61,100 | 2,920 | 16,900 | 88,850 | 422J | 6,010 | <1,000 | 1.6 |
| MW-4 | 327 | 99.8 | 585 | 111 | 1,122.8 | 722 | 83.9 | <50.0 | 0.23 |
| MW-5 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-6 | NL | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-8 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-9 | 3.0J | 2.8J | <5.0 | 44.3 | 50.1J | <5.0 | 6.2 | <5.0 | <0.019 |
| MW-10 | 5,750 | 15,500 | 3,300 | 17,300 | 44,850 | 527J | 5,540 | <1,250 | 1.2 |
| MW-11 | 124 | <10.0 | <10.0 | <20.0 | 124 | 28.5 | 1,560 | <10.0 | <0.020 |
| MW-12R | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-13R | <25.0 | <25.0 | <25.0 | <50.0 | BDL | <25.0 | 1,060 | <25.0 | <0.020 |
| MW-14 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-16 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| DMW-17 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-18 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-19 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 28.6 | <5.0 | <0.020 |
| MW-20 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 119 | <5.0 | <0.020 |
| MW-21 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 2.6J | <5.0 | <0.020 |
| MW-22 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 2.0J | <5.0 | <0.020 |
| MW-23 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 2.5J | <5.0 | <0.020 |
| MW-24 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-25 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 3.3J | <5.0 | <0.021 |
| MW-26 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.021 |
| MW-27 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-28 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-29 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-30 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-31 | <25.0 | <25.0 | <25.0 | <50.0 | BDL | <25.0 | 1,150 | <25.0 | <0.020 |
| MW-32 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-33 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-34 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-35 | 147 | <50.0 | <50.0 | <100 | 147 | 28.7J | 2,960 | <50.0 | <0.021 |
| DMW-36 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-37 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-38 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-39 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-40 | 29.2 | <5.0 | <5.0 | <10.0 | 29.2 | <5.0 | 145 | <5.0 | <0.020 |
| CLS-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| CP-WW2 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| EMS-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| McCullough-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | 1.1 | <1.0 | <0.020 |
| Cafe-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| Old Service Station-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Scott-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Farm-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| Major-WW | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| Driver-WW | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| Gin House-WW | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| SW-1 | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | 0.28J | <1.0 | <0.019 |
| SW-2 | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| DMW-1 Dup. | 3,490 | 24,300 | 1,510 | 12,300 | 41,600 | <1,250 | <1,250 | <1,250 | 1.5 |
| MW-2 Dup. | 3,960 | 948 | 1,610 | 3,150 | 9,668 | 394 | 402 | <250 | <0.019 |
| MW-10 Dup. | 8,540 | 14,700 | 3,130 | 16,900 | 43,270 | 655 | 4,760 | <625 | 1.4 |
| Field Blank | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| Trip Blank #1 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | NT |
| Trip Blank #2 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | NT |

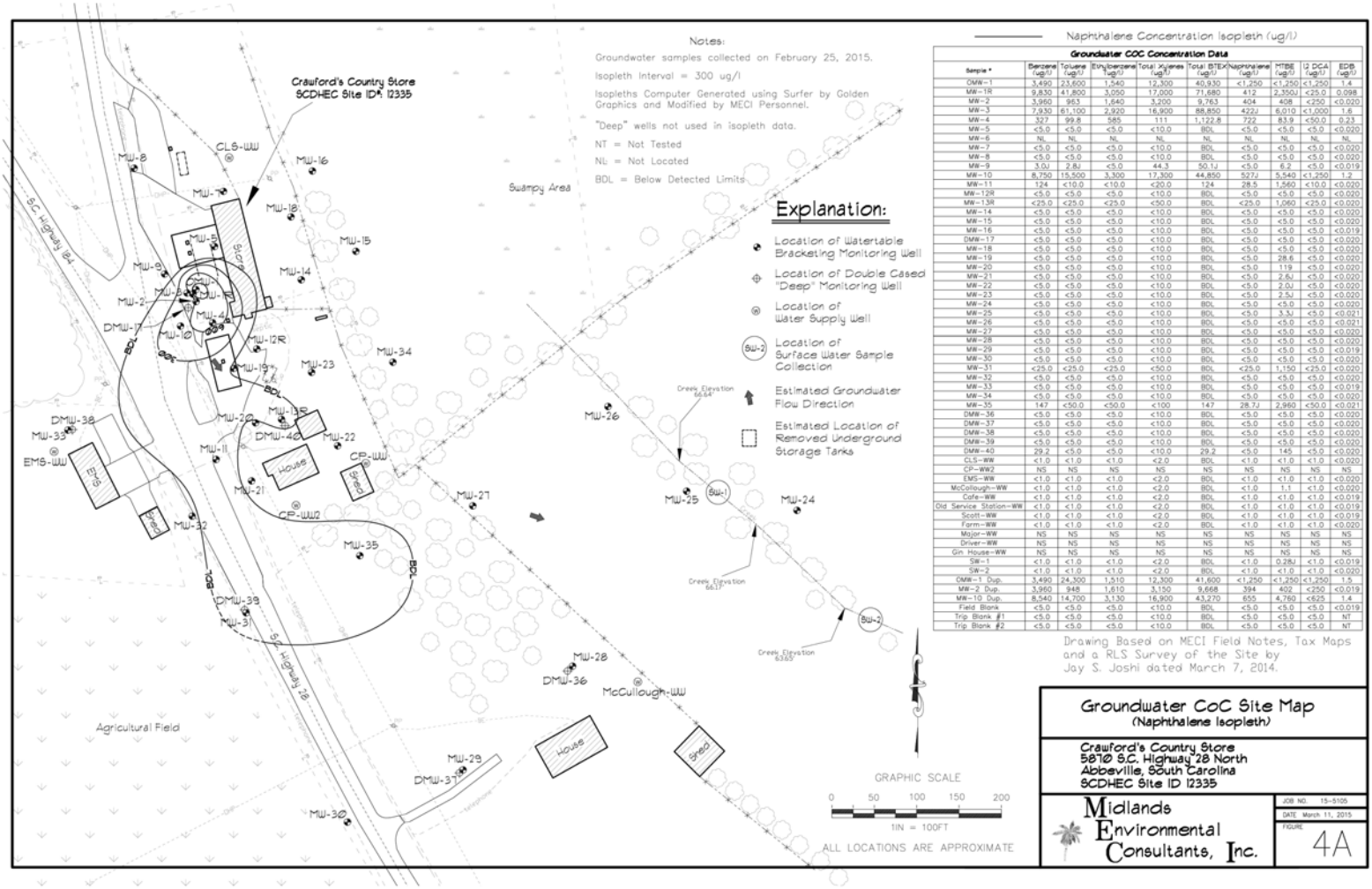
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

# Groundwater CoC Site Map
## (Benzene Isopleth)

Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 15-5105
DATE March 11, 2015
FIGURE 4




**Groundwater COC Concentration Data**

| Sample # | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Total Xylenes (ug/l) | Total BTEX (ug/l) | Naphthalene (ug/l) | MTBE (ug/l) | 12 DCA (ug/l) | EDB (ug/l) |
|---|---|---|---|---|---|---|---|---|---|
| DMW-1 | 3,490 | 23,600 | 1,540 | 12,300 | 40,930 | <1,250 | <1,250 | <1,250 | 1.4 |
| MW-1R | 9,830 | 41,800 | 3,050 | 17,000 | 71,680 | 412 | 2,350J | <25.0 | 0.098 |
| MW-2 | 3,960 | 963 | 1,640 | 3,200 | 9,763 | 404 | 408 | <250 | <0.020 |
| MW-3 | 7,930 | 61,100 | 2,920 | 16,900 | 88,850 | 422J | 6,010 | <1,000 | 1.6 |
| MW-4 | 327 | 99.8 | 585 | 111 | 1,122.8 | 722 | 83.9 | <50.0 | 0.23 |
| MW-5 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-6 | NL | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-8 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-9 | 3.0J | 2.8J | <5.0 | 44.3 | 50.1J | <5.0 | 6.2 | <5.0 | <0.019 |
| MW-10 | 5,750 | 15,500 | 3,300 | 17,300 | 44,850 | 527J | 5,540 | <1,250 | 1.2 |
| MW-11 | 124 | <10.0 | <10.0 | <20.0 | 124 | 28.5 | 1,560 | <10.0 | <0.020 |
| MW-12R | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-13R | <25.0 | <25.0 | <25.0 | <50.0 | BDL | <25.0 | 1,060 | <25.0 | <0.020 |
| MW-14 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-16 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| DMW-17 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-18 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-19 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 28.6 | <5.0 | <0.020 |
| MW-20 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 119 | <5.0 | <0.020 |
| MW-21 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 2.6J | <5.0 | <0.020 |
| MW-22 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 2.0J | <5.0 | <0.020 |
| MW-23 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 2.5J | <5.0 | <0.020 |
| MW-24 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-25 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 3.3J | <5.0 | <0.021 |
| MW-26 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.021 |
| MW-27 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-28 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-29 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-30 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-31 | <25.0 | <25.0 | <25.0 | <50.0 | BDL | <25.0 | 1,150 | <25.0 | <0.020 |
| MW-32 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-33 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-34 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-35 | 147 | <50.0 | <50.0 | <100 | 147 | 28.7J | 2,960 | <50.0 | <0.021 |
| DMW-36 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-37 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-38 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-39 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-40 | 29.2 | <5.0 | <5.0 | <10.0 | 29.2 | <5.0 | 145 | <5.0 | <0.020 |
| CLS-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| CP-WW2 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| EMS-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| McCullough-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | 1.1 | <1.0 | <0.020 |
| Cafe-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| Old Service Station-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Scott-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Farm-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| Major-WW | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| Driver-WW | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| Gin House-WW | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| SW-1 | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | 0.28J | <1.0 | <0.019 |
| SW-2 | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| DMW-1 Dup. | 3,490 | 24,300 | 1,510 | 12,300 | 41,600 | <1,250 | <1,250 | <1,250 | 1.5 |
| MW-2 Dup. | 3,960 | 948 | 1,610 | 3,150 | 9,668 | 394 | 402 | <250 | <0.019 |
| MW-10 Dup. | 8,540 | 14,700 | 3,130 | 16,900 | 43,270 | 655 | 4,760 | <625 | 1.4 |
| Field Blank | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| Trip Blank #1 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | NT |
| Trip Blank #2 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | NT |

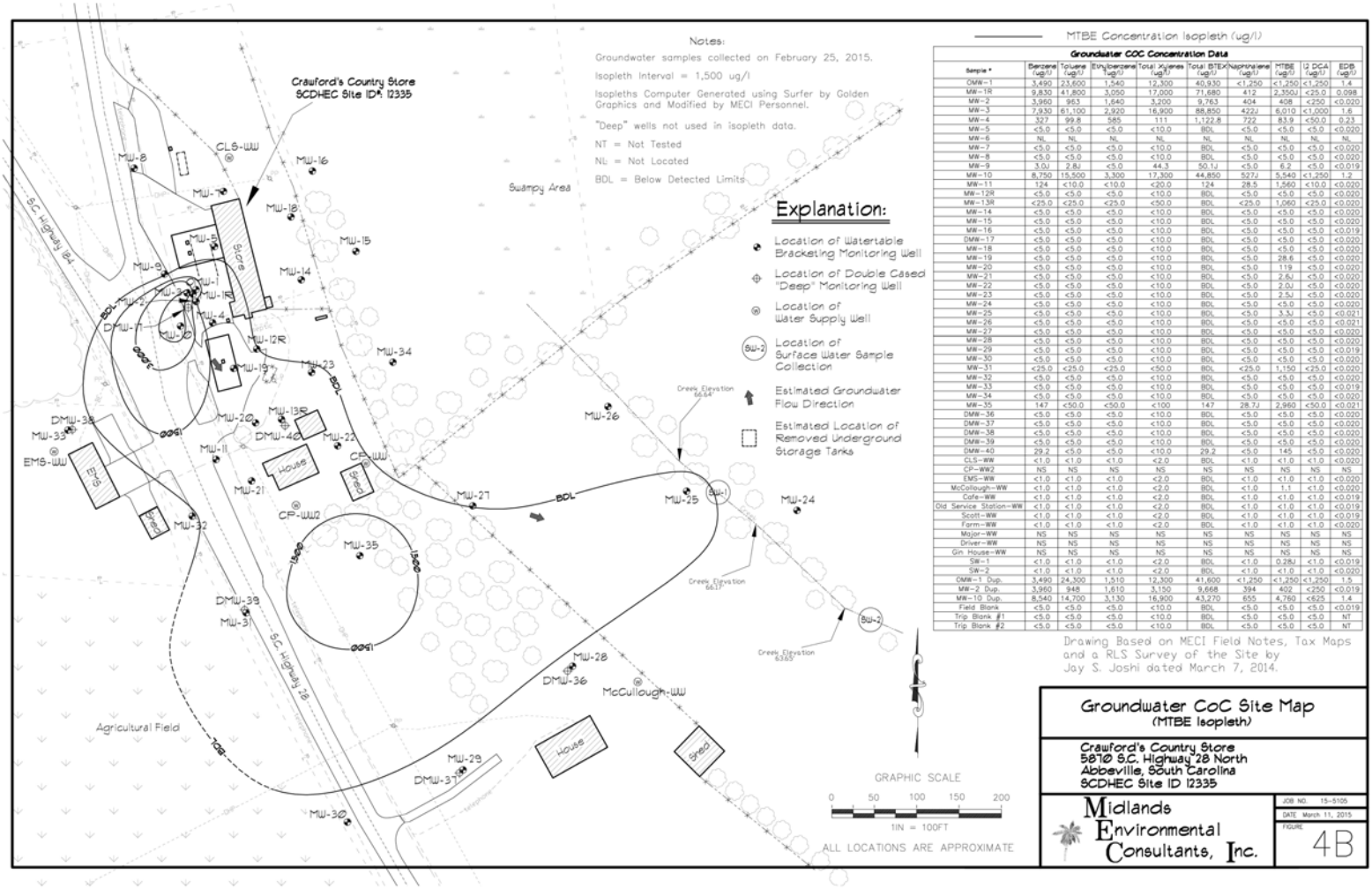
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

# Groundwater CoC Site Map
## (Naphthalene Isopleth)

Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 15-5105
DATE March 11, 2015
FIGURE 4A




**Groundwater COC Concentration Data**

| Sample # | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Total Xylenes (ug/l) | Total BTEX (ug/l) | Naphthalene (ug/l) | MTBE (ug/l) | 1,2 DCA (ug/l) | EDB (ug/l) |
|---|---|---|---|---|---|---|---|---|---|
| DMW-1 | 3,490 | 23,600 | 1,540 | 12,300 | 40,930 | <1,250 | <1,250 | <1,250 | 1.4 |
| MW-1R | 9,830 | 41,800 | 3,050 | 17,000 | 71,680 | 412 | 2,350J | <25.0 | 0.098 |
| MW-2 | 3,960 | 963 | 1,640 | 3,200 | 9,763 | 404 | 408 | <250 | <0.020 |
| MW-3 | 7,930 | 61,100 | 2,920 | 16,900 | 88,850 | 422J | 6,010 | <1,000 | 1.6 |
| MW-4 | 327 | 99.8 | 585 | 111 | 1,122.8 | 722 | 83.9 | <50.0 | 0.23 |
| MW-5 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-6 | NL | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-8 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-9 | 3.0J | 2.8J | <5.0 | 44.3 | 50.1J | <5.0 | 6.2 | <5.0 | <0.019 |
| MW-10 | 5,750 | 15,500 | 3,300 | 17,300 | 44,850 | 527J | 5,540 | <1,250 | 1.2 |
| MW-11 | 124 | <10.0 | <10.0 | <20.0 | 124 | 28.5 | 1,560 | <10.0 | <0.020 |
| MW-12R | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-13R | <25.0 | <25.0 | <25.0 | <50.0 | BDL | <25.0 | 1,060 | <25.0 | <0.020 |
| MW-14 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-16 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| DMW-17 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-18 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-19 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 28.6 | <5.0 | <0.020 |
| MW-20 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 119 | <5.0 | <0.020 |
| MW-21 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 2.6J | <5.0 | <0.020 |
| MW-22 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 2.0J | <5.0 | <0.020 |
| MW-23 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 2.5J | <5.0 | <0.020 |
| MW-24 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-25 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 3.3J | <5.0 | <0.021 |
| MW-26 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.021 |
| MW-27 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-28 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-29 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-30 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-31 | <25.0 | <25.0 | <25.0 | <50.0 | BDL | <25.0 | 1,150 | <25.0 | <0.020 |
| MW-32 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-33 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-34 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-35 | 147 | <50.0 | <50.0 | <100 | 147 | 28.7J | 2,960 | <50.0 | <0.021 |
| DMW-36 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-37 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-38 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-39 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-40 | 29.2 | <5.0 | <5.0 | <10.0 | 29.2 | <5.0 | 145 | <5.0 | <0.020 |
| CLS-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| CP-WW2 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| EMS-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| McCullough-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | 1.1 | <1.0 | <0.020 |
| Cafe-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Old Service Station-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Scott-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Farm-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| Major-WW | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| Driver-WW | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| Gin House-WW | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| SW-1 | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | 0.28J | <1.0 | <0.019 |
| SW-2 | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| DMW-1 Dup. | 3,490 | 24,300 | 1,510 | 12,300 | 41,600 | <1,250 | <1,250 | <1,250 | 1.5 |
| MW-2 Dup. | 3,960 | 948 | 1,610 | 3,150 | 9,668 | 394 | 402 | <250 | <0.019 |
| MW-10 Dup. | 8,540 | 14,700 | 3,130 | 16,900 | 43,270 | 655 | 4,760 | <625 | 1.4 |
| Field Blank | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| Trip Blank #1 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | NT |
| Trip Blank #2 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | NT |

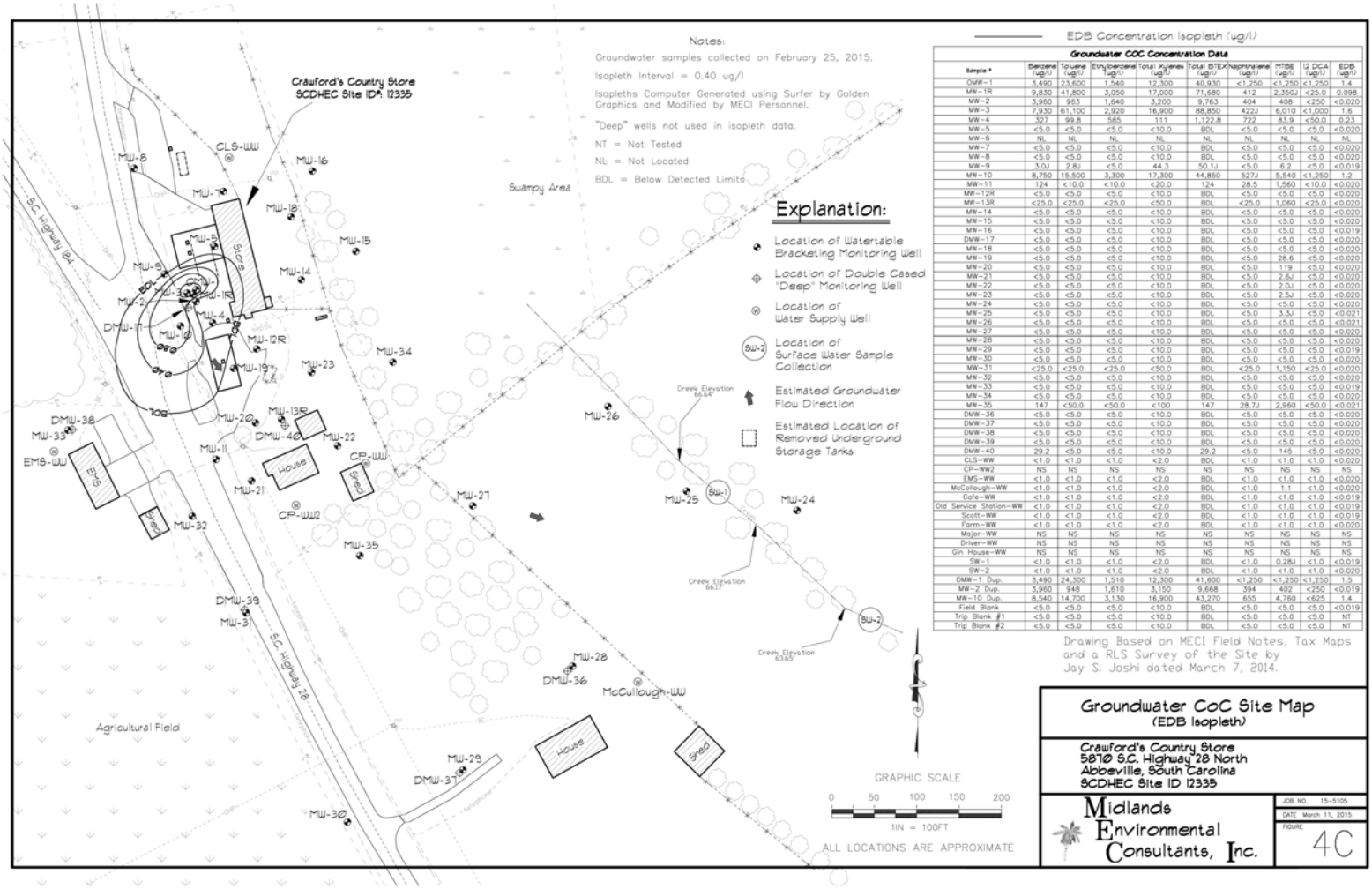
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

# Groundwater CoC Site Map
## (MTBE Isopleth)

Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 15-5105
DATE March 11, 2015
FIGURE 4B




**Groundwater COC Concentration Data**

| Sample # | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Total Xylenes (ug/l) | Total BTEX (ug/l) | Naphthalene (ug/l) | MTBE (ug/l) | 12 DCA (ug/l) | EDB (ug/l) |
|---|---|---|---|---|---|---|---|---|---|
| DMW-1 | 3,490 | 23,600 | 1,540 | 12,300 | 40,930 | <1,250 | <1,250 | <1,250 | 1.4 |
| MW-1R | 9,830 | 41,800 | 3,050 | 17,000 | 71,680 | 412 | 2,350J | <25.0 | 0.098 |
| MW-2 | 3,960 | 963 | 1,640 | 3,200 | 9,763 | 404 | 408 | <250 | <0.020 |
| MW-3 | 7,930 | 61,100 | 2,920 | 16,900 | 88,850 | 422J | 6,010 | <1,000 | 1.6 |
| MW-4 | 327 | 99.8 | 585 | 111 | 1,122.8 | 722 | 83.9 | <50.0 | 0.23 |
| MW-5 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-6 | NL | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-8 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-9 | 3.0J | 2.8J | <5.0 | 44.3 | 50.1J | <5.0 | 6.2 | <5.0 | <0.019 |
| MW-10 | 5,750 | 15,500 | 3,300 | 17,300 | 44,850 | 527J | 5,540 | <1,250 | 1.2 |
| MW-11 | 124 | <10.0 | <10.0 | <20.0 | 124 | 28.5 | 1,560 | <10.0 | <0.020 |
| MW-12R | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-13R | <25.0 | <25.0 | <25.0 | <50.0 | BDL | <25.0 | 1,060 | <25.0 | <0.020 |
| MW-14 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-15 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-16 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| DMW-17 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-18 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-19 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 28.6 | <5.0 | <0.020 |
| MW-20 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 119 | <5.0 | <0.020 |
| MW-21 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 2.6J | <5.0 | <0.020 |
| MW-22 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 2.0J | <5.0 | <0.020 |
| MW-23 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 2.5J | <5.0 | <0.020 |
| MW-24 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-25 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | 3.3J | <5.0 | <0.021 |
| MW-26 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.021 |
| MW-27 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-28 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-29 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-30 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-31 | <25.0 | <25.0 | <25.0 | <50.0 | BDL | <25.0 | 1,150 | <25.0 | <0.020 |
| MW-32 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-33 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-34 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-35 | 147 | <50.0 | <50.0 | <100 | 147 | 28.7J | 2,960 | <50.0 | <0.021 |
| DMW-36 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-37 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-38 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-39 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-40 | 29.2 | <5.0 | <5.0 | <10.0 | 29.2 | <5.0 | 145 | <5.0 | <0.020 |
| CLS-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| CP-WW2 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| EMS-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| McCullough-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | 1.1 | <1.0 | <0.020 |
| Cafe-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| Old Service Station-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Scott-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.019 |
| Farm-WW | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| Major-WW | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| Driver-WW | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| Gin House-WW | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| SW-1 | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | 0.28J | <1.0 | <0.019 |
| SW-2 | <1.0 | <1.0 | <1.0 | <2.0 | BDL | <1.0 | <1.0 | <1.0 | <0.020 |
| DMW-1 Dup. | 3,490 | 24,300 | 1,510 | 12,300 | 41,600 | <1,250 | <1,250 | <1,250 | 1.5 |
| MW-2 Dup. | 3,960 | 948 | 1,610 | 3,150 | 9,668 | 394 | 402 | <250 | <0.019 |
| MW-10 Dup. | 8,540 | 14,700 | 3,130 | 16,900 | 43,270 | 655 | 4,760 | <625 | 1.4 |
| Field Blank | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| Trip Blank #1 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | NT |
| Trip Blank #2 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | NT |

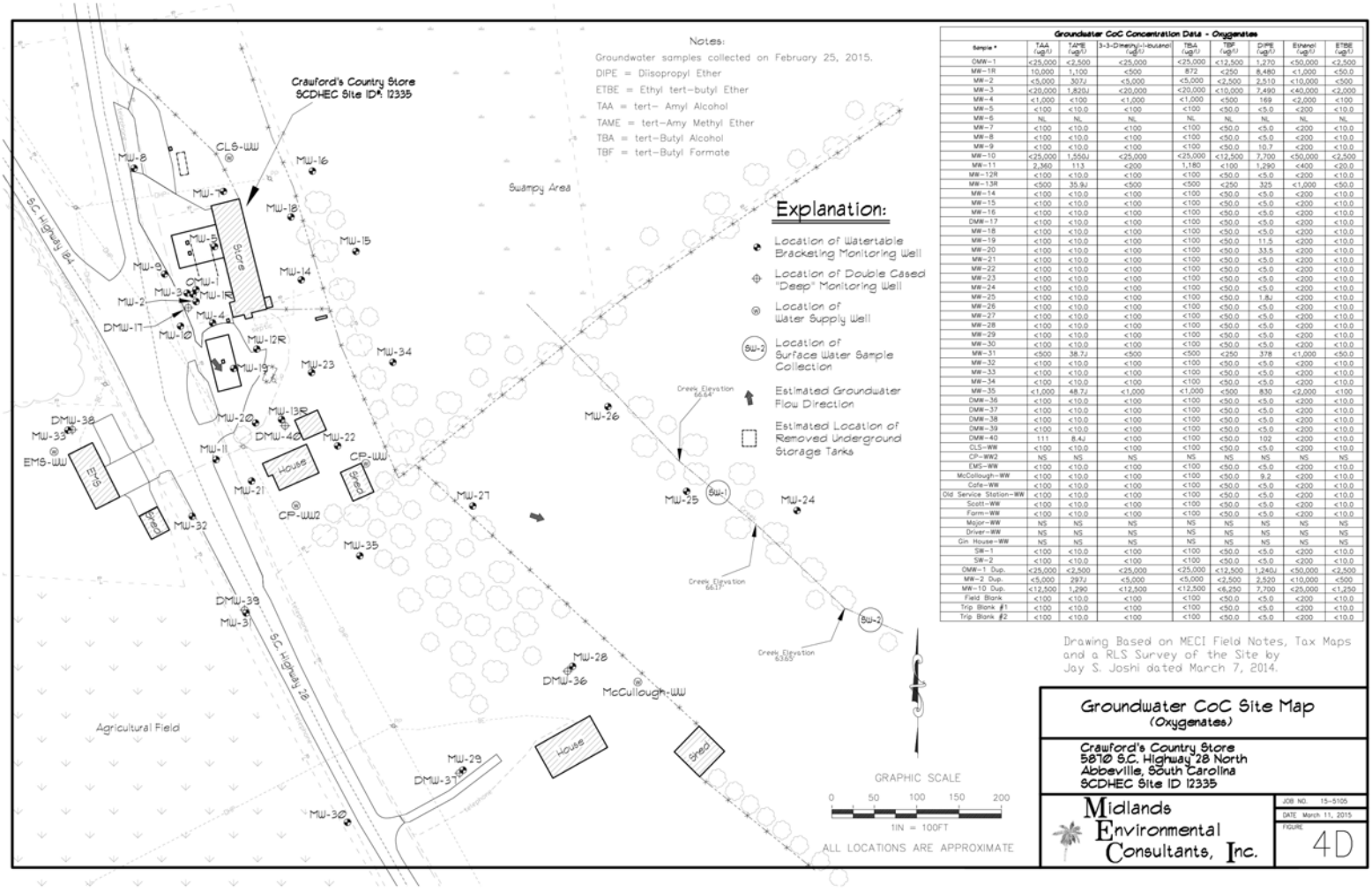
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

# Groundwater CoC Site Map
## (EDB Isopleth)

Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 15-5105
DATE March 11, 2015
FIGURE 4C




**Groundwater CoC Concentration Data - Oxygenates**

| Sample # | TAA (ug/l) | TAME (ug/l) | 3-3-Dimethyl-1-butanol (ug/l) | TBA (ug/l) | TBF (ug/l) | DIPE (ug/l) | Ethanol (ug/l) | ETBE (ug/l) |
|---|---|---|---|---|---|---|---|---|
| DMW-1 | <25,000 | <2,500 | <25,000 | <25,000 | <12,500 | 1,270 | <50,000 | <2,500 |
| MW-1R | 10,000 | 1,100 | <500 | 872 | <250 | 8,480 | <1,000 | <50.0 |
| MW-2 | <5,000 | 307J | <5,000 | <5,000 | <2,500 | 2,510 | <10,000 | <500 |
| MW-3 | <20,000 | 1,820J | <20,000 | <20,000 | <10,000 | 7,490 | <40,000 | <2,000 |
| MW-4 | <1,000 | <100 | <1,000 | <1,000 | <500 | 169 | <2,000 | <100 |
| MW-5 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-6 | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-8 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-9 | <100 | <10.0 | <100 | <100 | <50.0 | 10.7 | <200 | <10.0 |
| MW-10 | <25,000 | 1,550J | <25,000 | <25,000 | <12,500 | 7,700 | <50,000 | <2,500 |
| MW-11 | 2,360 | 113 | <200 | 1,180 | <100 | 1,290 | <400 | <20.0 |
| MW-12R | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-13R | <500 | 35.9J | <500 | <500 | <250 | 325 | <1,000 | <50.0 |
| MW-14 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-15 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-16 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| DMW-17 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-18 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-19 | <100 | <10.0 | <100 | <100 | <50.0 | 11.5 | <200 | <10.0 |
| MW-20 | <100 | <10.0 | <100 | <100 | <50.0 | 33.5 | <200 | <10.0 |
| MW-21 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-22 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-23 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-24 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-25 | <100 | <10.0 | <100 | <100 | <50.0 | 1.8J | <200 | <10.0 |
| MW-26 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-27 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-28 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-29 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-30 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-31 | <500 | 38.7J | <500 | <500 | <250 | 378 | <1,000 | <50.0 |
| MW-32 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-33 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-34 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-35 | <1,000 | 48.7J | <1,000 | <1,000 | <500 | 830 | <2,000 | <100 |
| DMW-36 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| DMW-37 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| DMW-38 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| DMW-39 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| DMW-40 | 111 | 8.4J | <100 | <100 | <50.0 | 102 | <200 | <10.0 |
| CLS-WW | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| CP-WW2 | NS | NS | NS | NS | NS | NS | NS | NS |
| EMS-WW | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| McCullough-WW | <100 | <10.0 | <100 | <100 | <50.0 | 9.2 | <200 | <10.0 |
| Cafe-WW | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| Old Service Station-WW | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| Scott-WW | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| Farm-WW | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| Major-WW | NS | NS | NS | NS | NS | NS | NS | NS |
| Driver-WW | NS | NS | NS | NS | NS | NS | NS | NS |
| Gin House-WW | NS | NS | NS | NS | NS | NS | NS | NS |
| SW-1 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| SW-2 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| DMW-1 Dup. | <25,000 | <2,500 | <25,000 | <25,000 | <12,500 | 1,240J | <50,000 | <2,500 |
| MW-2 Dup. | <5,000 | 297J | <5,000 | <5,000 | <2,500 | 2,520 | <10,000 | <500 |
| MW-10 Dup. | <12,500 | 1,290 | <12,500 | <12,500 | <6,250 | 7,700 | <25,000 | <1,250 |
| Field Blank | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| Trip Blank #1 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| Trip Blank #2 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |

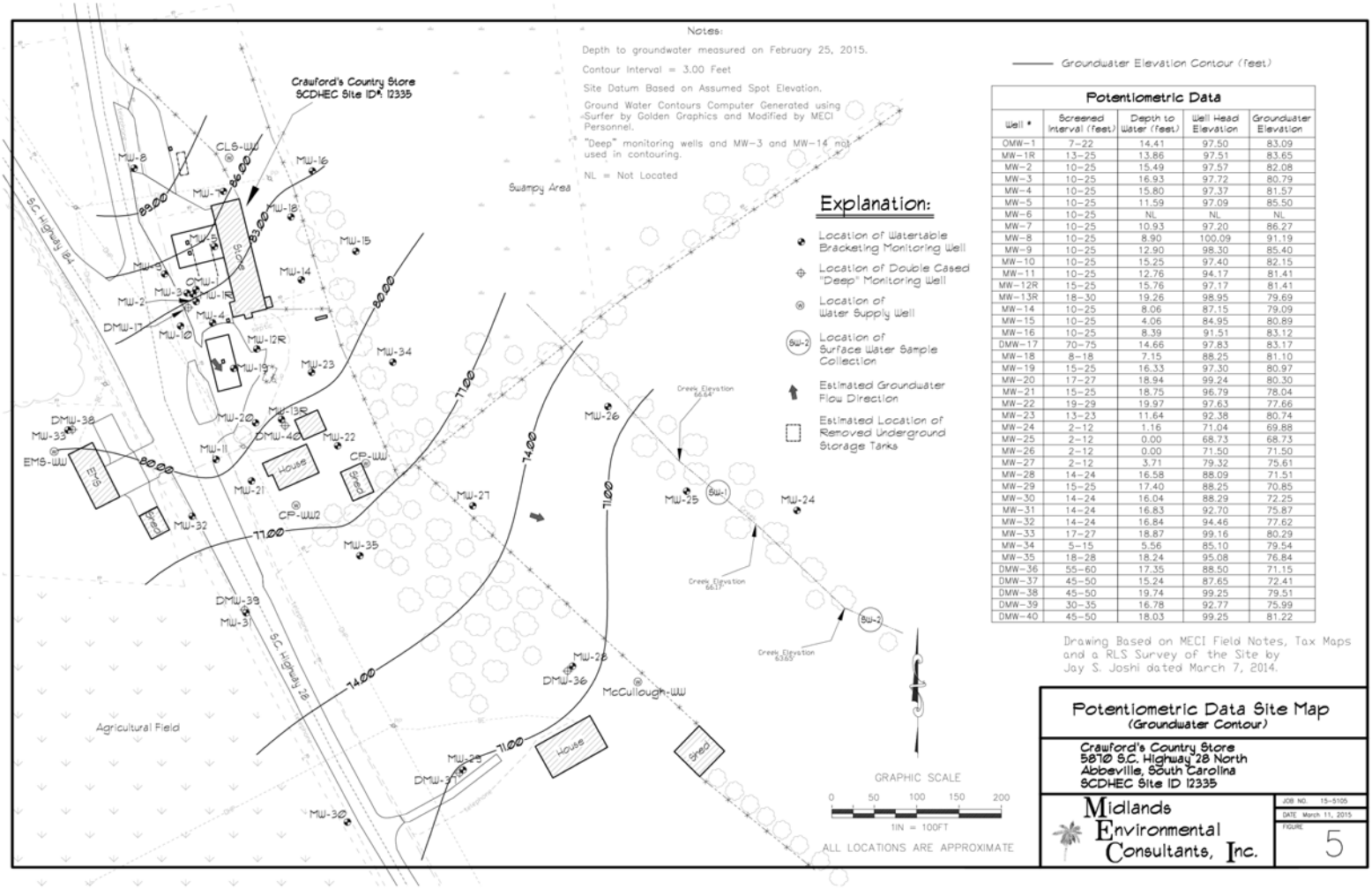
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

# Groundwater CoC Site Map
(Oxygenates)

Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 15-5105
DATE March 11, 2015
FIGURE 4D




**Potentiometric Data**

| Well # | Screened Interval (feet) | Depth to Water (feet) | Well Head Elevation | Groundwater Elevation |
|---|---|---|---|---|
| OMW-1 | 7-22 | 14.41 | 97.50 | 83.09 |
| MW-1R | 13-25 | 13.86 | 97.51 | 83.65 |
| MW-2 | 10-25 | 15.49 | 97.57 | 82.08 |
| MW-3 | 10-25 | 16.93 | 97.72 | 80.79 |
| MW-4 | 10-25 | 15.80 | 97.37 | 81.57 |
| MW-5 | 10-25 | 11.59 | 97.09 | 85.50 |
| MW-6 | 10-25 | NL | NL | NL |
| MW-7 | 10-25 | 10.93 | 97.20 | 86.27 |
| MW-8 | 10-25 | 8.90 | 100.09 | 91.19 |
| MW-9 | 10-25 | 12.90 | 98.30 | 85.40 |
| MW-10 | 10-25 | 15.25 | 97.40 | 82.15 |
| MW-11 | 10-25 | 12.76 | 94.17 | 81.41 |
| MW-12R | 15-25 | 15.76 | 97.17 | 81.41 |
| MW-13R | 18-30 | 19.26 | 98.95 | 79.69 |
| MW-14 | 10-25 | 8.06 | 87.15 | 79.09 |
| MW-15 | 10-25 | 4.06 | 84.95 | 80.89 |
| MW-16 | 10-25 | 8.39 | 91.51 | 83.12 |
| DMW-17 | 70-75 | 14.66 | 97.83 | 83.17 |
| MW-18 | 8-18 | 7.15 | 88.25 | 81.10 |
| MW-19 | 15-25 | 16.33 | 97.30 | 80.97 |
| MW-20 | 17-27 | 18.94 | 99.24 | 80.30 |
| MW-21 | 15-25 | 18.75 | 96.79 | 78.04 |
| MW-22 | 19-29 | 19.97 | 97.63 | 77.66 |
| MW-23 | 13-23 | 11.64 | 92.38 | 80.74 |
| MW-24 | 2-12 | 1.16 | 71.04 | 69.88 |
| MW-25 | 2-12 | 0.00 | 68.73 | 68.73 |
| MW-26 | 2-12 | 0.00 | 71.50 | 71.50 |
| MW-27 | 2-12 | 3.71 | 79.32 | 75.61 |
| MW-28 | 14-24 | 16.58 | 88.09 | 71.51 |
| MW-29 | 15-25 | 17.40 | 88.25 | 70.85 |
| MW-30 | 14-24 | 16.04 | 88.29 | 72.25 |
| MW-31 | 14-24 | 16.83 | 92.70 | 75.87 |
| MW-32 | 14-24 | 16.84 | 94.46 | 77.62 |
| MW-33 | 17-27 | 18.87 | 99.16 | 80.29 |
| MW-34 | 5-15 | 5.56 | 85.10 | 79.54 |
| MW-35 | 18-28 | 18.24 | 95.08 | 76.84 |
| DMW-36 | 55-60 | 17.35 | 88.50 | 71.15 |
| DMW-37 | 45-50 | 15.24 | 87.65 | 72.41 |
| DMW-38 | 45-50 | 19.74 | 99.25 | 79.51 |
| DMW-39 | 30-35 | 16.78 | 92.77 | 75.99 |
| DMW-40 | 45-50 | 18.03 | 99.25 | 81.22 |

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated March 7, 2014.

**Potentiometric Data Site Map**
**(Groundwater Contour)**

Crawford's Country Store
5870 S.C. Highway 28 North
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 15-5105
DATE March 11, 2015
FIGURE 5

**APPENDIX A:**

**SITE SURVEY**
***(Not Applicable)***

**APPENDIX B:**

**SAMPLING LOGS, LABORATORY DATA SHEETS, & CHAIN-OF-CUSTODY FORMS**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** OMW-1

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 14.41 | | | feet |
| Total Well Depth (TWD) | 22 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 7.59 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.24 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 6.19 | gallons |

Total Volume of Water Purged Before Sampling 1 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 12:26 | 12:30 | | | | | | |
| pH (s.u.) | 6.33 | 6.21 | | | | | | |
| Specific Conductivity (µmhos/cm) | 215.8 | 236.4 | | | | | | |
| Water Temperature (℃) | 15.8 | 15.9 | | | | | | |
| Dissolved Oxygen | 0.94 | 1.12 | | | | | | |
| Turbidity (NTU) | 21.69 | 105.40 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 12:30 **Dry @ 1.00 Gallon**

**Duplicate Sample Collected**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-1R

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 13.86 | | | feet |
| Total Well Depth (TWD) | 25 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 11.14 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.82 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 9.08 | gallons |

Total Volume of Water Purged Before Sampling 3 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 12:35 | 12:40 | | | | | | |
| pH (s.u.) | Sheen | Sheen | | | | | | |
| Specific Conductivity (µmhos/cm) | Sheen | Sheen | | | | | | |
| Water Temperature (℃) | Sheen | Sheen | | | | | | |
| Dissolved Oxygen | Sheen | Sheen | | | | | | |
| Turbidity (NTU) | Sheen | Sheen | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 12:40 **Dry @ 3.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-2

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 15.49 | | | feet |
| Total Well Depth (TWD) | 25 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 9.51 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.55 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 7.75 | gallons |

Total Volume of Water Purged Before Sampling 3 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:42 | 11:46 | 11:50 | | | | | |
| pH (s.u.) | 7.16 | 7.07 | 7.04 | | | | | |
| Specific Conductivity (µmhos/cm) | 196.2 | 201.5 | 214.6 | | | | | |
| Water Temperature (℃) | 15.9 | 16.0 | 16.1 | | | | | |
| Dissolved Oxygen | 1.09 | 1.23 | 1.44 | | | | | |
| Turbidity (NTU) | 23.07 | 108.90 | 254.50 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:50 **Dry @ 3.00 Gallons**

**Duplicate Sample Collected**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-3

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 16.93 | | | feet |
| Total Well Depth (TWD) | 25 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 8.07 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.32 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 6.58 | gallons |

Total Volume of Water Purged Before Sampling 2 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 12:45 | 12:50 | | | | | | |
| pH (s.u.) | Sheen | Sheen | | | | | | |
| Specific Conductivity (µmhos/cm) | Sheen | Sheen | | | | | | |
| Water Temperature (℃) | Sheen | Sheen | | | | | | |
| Dissolved Oxygen | Sheen | Sheen | | | | | | |
| Turbidity (NTU) | Sheen | Sheen | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 12:50 **Dry @ 2.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-4

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 15.80 | | | feet |
| Total Well Depth (TWD) | 25 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 9.2 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.50 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 7.50 | gallons |

Total Volume of Water Purged Before Sampling 3 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:32 | 11:36 | 11:40 | | | | | |
| pH (s.u.) | 6.52 | 6.77 | 6.74 | | | | | |
| Specific Conductivity (µmhos/cm) | 149.8 | 162.5 | 165.3 | | | | | |
| Water Temperature (℃) | 16.4 | 16.6 | 16.5 | | | | | |
| Dissolved Oxygen | 1.06 | 1.45 | 1.62 | | | | | |
| Turbidity (NTU) | 24.53 | 76.85 | 125.60 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:40 **Dry @ 3.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-5

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 11.59 | | | feet |
| Total Well Depth (TWD) | 25 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 13.41 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 2.19 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 10.93 | gallons |

Total Volume of Water Purged Before Sampling 5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 12:48 | 12:51 | 12:53 | 12:55 | | | | |
| pH (s.u.) | 7.06 | 7.09 | 7.12 | 7.07 | | | | |
| Specific Conductivity (µmhos/cm) | 99.8 | 105.4 | 106.5 | 101.4 | | | | |
| Water Temperature (℃) | 16.6 | 16.6 | 16.7 | 16.5 | | | | |
| Dissolved Oxygen | 1.59 | 1.48 | 2.01 | 2.13 | | | | |
| Turbidity (NTU) | 18.44 | 35.65 | 104.40 | 156.3 | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 12:55 **Dry @ 5.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-7

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 10.93 | | | feet |
| Total Well Depth (TWD) | 25 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 14.07 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 2.29 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 11.47 | gallons |

Total Volume of Water Purged Before Sampling 5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 13:07 | 13:10 | 13:12 | 13:15 | | | | |
| pH (s.u.) | 7.29 | 7.35 | 7.23 | 7.27 | | | | |
| Specific Conductivity (µmhos/cm) | 84.8 | 74.5 | 78.9 | 80.5 | | | | |
| Water Temperature (℃) | 16.8 | 16.7 | 16.6 | 16.7 | | | | |
| Dissolved Oxygen | 2.55 | 2.10 | 2.33 | 2.24 | | | | |
| Turbidity (NTU) | 17.06 | 57.85 | 94.60 | 125.60 | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 13:15 **Dry @ 5.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-8

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 8.90 | | | feet |
| Total Well Depth (TWD) | 25 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 16.1 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 2.62 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 13.12 | gallons |

Total Volume of Water Purged Before Sampling 3 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 13:20 | 13:23 | | | | | | |
| pH (s.u.) | 6.51 | 6.37 | | | | | | |
| Specific Conductivity (µmhos/cm) | 74.6 | 68.2 | | | | | | |
| Water Temperature (℃) | 17.0 | 17.1 | | | | | | |
| Dissolved Oxygen | 3.51 | 3.93 | | | | | | |
| Turbidity (NTU) | 19.26 | 127.00 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 13:23 **Dry @ 3.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-9

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 12.90 | | | feet |
| Total Well Depth (TWD) | 25 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 12.1 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.97 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 9.86 | gallons |

Total Volume of Water Purged Before Sampling 3 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 13:00 | 13:05 | | | | | | |
| pH (s.u.) | Sheen | Sheen | | | | | | |
| Specific Conductivity (µmhos/cm) | Sheen | Sheen | | | | | | |
| Water Temperature (℃) | Sheen | Sheen | | | | | | |
| Dissolved Oxygen | Sheen | Sheen | | | | | | |
| Turbidity (NTU) | Sheen | Sheen | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 13:05 **Dry @ 3.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-10

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 15.25 | | | feet |
| Total Well Depth (TWD) | 25 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 9.75 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.59 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 7.95 | gallons |

Total Volume of Water Purged Before Sampling 1.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:27 | 11:30 | | | | | | |
| pH (s.u.) | 6.62 | 6.60 | | | | | | |
| Specific Conductivity (µmhos/cm) | 87.7 | 76.9 | | | | | | |
| Water Temperature (℃) | 16.1 | 16.3 | | | | | | |
| Dissolved Oxygen | 2.15 | 2.05 | | | | | | |
| Turbidity (NTU) | 22.76 | 135.40 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:30 **Dry @ 1.50 Gallons**

**Duplicate Sample Collected**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-11

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 12.76 | | | feet |
| Total Well Depth (TWD) | 25 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 12.24 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 2.00 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 9.98 | gallons |

Total Volume of Water Purged Before Sampling 4 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 10:43 | 10:46 | 10:50 | | | | | |
| pH (s.u.) | 6.98 | 7.05 | 7.02 | | | | | |
| Specific Conductivity (µmhos/cm) | 64.4 | 75.4 | 67.8 | | | | | |
| Water Temperature (℃) | 16.2 | 16.3 | 16.2 | | | | | |
| Dissolved Oxygen | 4.79 | 3.85 | 3.74 | | | | | |
| Turbidity (NTU) | 20.01 | 127.80 | 113.50 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 10:50 **Dry @ 4.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-12R

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 15.76 | | | feet |
| Total Well Depth (TWD) | 25 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 9.24 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.51 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 7.53 | gallons |

Total Volume of Water Purged Before Sampling 2 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:06 | 11:10 | | | | | | |
| pH (s.u.) | 7.21 | 7.19 | | | | | | |
| Specific Conductivity (µmhos/cm) | 54.7 | 62.8 | | | | | | |
| Water Temperature (℃) | 16.3 | 16.4 | | | | | | |
| Dissolved Oxygen | 2.94 | 2.56 | | | | | | |
| Turbidity (NTU) | 19.76 | 158.90 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:10 **Dry @ 2.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-13R

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 19.26 | | | feet |
| Total Well Depth (TWD) | 30 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 10.74 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.75 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 8.75 | gallons |

Total Volume of Water Purged Before Sampling 3.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 10:21 | 10:26 | 10:30 | | | | | |
| pH (s.u.) | 7.53 | 7.66 | 7.57 | | | | | |
| Specific Conductivity (µmhos/cm) | 61.8 | 68.9 | 74.2 | | | | | |
| Water Temperature (℃) | 16.2 | 16.4 | 16.3 | | | | | |
| Dissolved Oxygen | 3.26 | 3.12 | 3.23 | | | | | |
| Turbidity (NTU) | 23.41 | 214.50 | 265.30 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 10:30 **Dry @ 3.50 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-14

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 8.06 | | | feet |
| Total Well Depth (TWD) | 25 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 16.94 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 2.76 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 13.81 | gallons |

Total Volume of Water Purged Before Sampling 4 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 13:30 | 13:33 | | | | | | |
| pH (s.u.) | 6.71 | 6.84 | | | | | | |
| Specific Conductivity (µmhos/cm) | 54.6 | 60.2 | | | | | | |
| Water Temperature (℃) | 16.6 | 16.5 | | | | | | |
| Dissolved Oxygen | 3.71 | 3.90 | | | | | | |
| Turbidity (NTU) | 16.06 | 116.20 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 13:33 **Dry @ 4.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-15

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 4.06 | | | feet |
| Total Well Depth (TWD) | 25 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 20.94 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 3.41 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 17.07 | gallons |

Total Volume of Water Purged Before Sampling 4 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 13:38 | 13:43 | | | | | | |
| pH (s.u.) | 6.93 | 6.75 | | | | | | |
| Specific Conductivity (µmhos/cm) | 42.1 | 37.6 | | | | | | |
| Water Temperature (℃) | 16.4 | 16.3 | | | | | | |
| Dissolved Oxygen | 3.04 | 2.86 | | | | | | |
| Turbidity (NTU) | 19.93 | 136.20 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 13:43 **Dry @ 4.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-16

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 8.39 | | | feet |
| Total Well Depth (TWD) | 25 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 16.61 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 2.71 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 13.54 | gallons |

Total Volume of Water Purged Before Sampling 3 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 13:50 | 13:52 | | | | | | |
| pH (s.u.) | 6.24 | 6.17 | | | | | | |
| Specific Conductivity (µmhos/cm) | 36.6 | 30.2 | | | | | | |
| Water Temperature (℃) | 17.9 | 18.0 | | | | | | |
| Dissolved Oxygen | 4.26 | 4.44 | | | | | | |
| Turbidity (NTU) | 20.43 | 122.30 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 13:52 **Dry @ 3.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** DMW-17

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 14.66 | | | feet |
| Total Well Depth (TWD) | 75 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 60.34 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 9.84 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 49.18 | gallons |

Total Volume of Water Purged Before Sampling 20 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 12:00 | 12:10 | 12:20 | | | | | |
| pH (s.u.) | 6.01 | 6.17 | 6.26 | | | | | |
| Specific Conductivity (µmhos/cm) | 86.5 | 71.2 | 70.4 | | | | | |
| Water Temperature (℃) | 17.8 | 18.2 | 18.4 | | | | | |
| Dissolved Oxygen | 4.42 | 4.61 | 4.57 | | | | | |
| Turbidity (NTU) | 27.21 | 90.47 | 115.60 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 12:20 **Dry @ 20.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-18

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 7.15 | | | feet |
| Total Well Depth (TWD) | 18 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 10.85 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.77 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 8.84 | gallons |

Total Volume of Water Purged Before Sampling 3.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 14:00 | 14:02 | 14:04 | | | | | |
| pH (s.u.) | 7.06 | 6.90 | 6.94 | | | | | |
| Specific Conductivity (µmhos/cm) | 71.6 | 62.2 | 61.8 | | | | | |
| Water Temperature (℃) | 18.2 | 18.2 | 18.1 | | | | | |
| Dissolved Oxygen | 3.04 | 3.22 | 3.31 | | | | | |
| Turbidity (NTU) | 23.66 | 124.80 | 176.20 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 14:04 **Dry @ 3.50 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-19

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 16.33 | | | feet |
| Total Well Depth (TWD) | 25 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 8.67 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.41 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 7.07 | gallons |

Total Volume of Water Purged Before Sampling 3 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 10:53 | 10:57 | 11:00 | | | | | |
| pH (s.u.) | 7.71 | 7.25 | 7.29 | | | | | |
| Specific Conductivity (µmhos/cm) | 60.4 | 65.8 | 70.6 | | | | | |
| Water Temperature (℃) | 15.9 | 16.1 | 16.0 | | | | | |
| Dissolved Oxygen | 2.91 | 2.89 | 3.01 | | | | | |
| Turbidity (NTU) | 21.46 | 117.80 | 201.50 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:00 **Dry @ 3.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-20

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 18.94 | | | feet |
| Total Well Depth (TWD) | 27 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 8.06 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.31 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 6.57 | gallons |

Total Volume of Water Purged Before Sampling 3 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 10:35 | 10:37 | 10:40 | | | | | |
| pH (s.u.) | 7.16 | 7.07 | 7.10 | | | | | |
| Specific Conductivity (µmhos/cm) | 79.8 | 84.9 | 86.5 | | | | | |
| Water Temperature (℃) | 16.3 | 16.2 | 16.2 | | | | | |
| Dissolved Oxygen | 4.07 | 3.85 | 3.65 | | | | | |
| Turbidity (NTU) | 28.76 | 128.90 | 287.60 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 10:40 **Dry @ 3.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-21

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 18.75 | | | feet |
| Total Well Depth (TWD) | 25 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 6.25 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.02 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 5.09 | gallons |

Total Volume of Water Purged Before Sampling 2 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:38 | 11:42 | 11:45 | | | | | |
| pH (s.u.) | 7.86 | 7.50 | 7.65 | | | | | |
| Specific Conductivity (µmhos/cm) | 21.6 | 60.5 | 52.3 | | | | | |
| Water Temperature (℃) | 16.3 | 16.5 | 16.4 | | | | | |
| Dissolved Oxygen | 1.05 | 2.11 | 2.03 | | | | | |
| Turbidity (NTU) | 36.14 | 98.70 | 187.40 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:45 **Dry @ 2.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-22

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 19.97 | | | feet |
| Total Well Depth (TWD) | 29 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 9.03 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.47 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 7.36 | gallons |

Total Volume of Water Purged Before Sampling 3.25 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:41 | 11:45 | 11:48 | | | | | |
| pH (s.u.) | 7.34 | 7.40 | 7.35 | | | | | |
| Specific Conductivity (µmhos/cm) | 68.1 | 65.2 | 64.5 | | | | | |
| Water Temperature (℃) | 16.6 | 16.7 | 16.5 | | | | | |
| Dissolved Oxygen | 1.87 | 2.01 | 2.11 | | | | | |
| Turbidity (NTU) | 74.11 | 104.50 | 205.60 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:48 **Dry @ 3.25 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-23

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 11.64 | | | feet |
| Total Well Depth (TWD) | 23 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 11.36 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.85 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 9.26 | gallons |

Total Volume of Water Purged Before Sampling 2 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:20 | 11:22 | | | | | | |
| pH (s.u.) | 7.46 | 7.63 | | | | | | |
| Specific Conductivity (µmhos/cm) | 47.8 | 54.0 | | | | | | |
| Water Temperature (℃) | 16.3 | 16.4 | | | | | | |
| Dissolved Oxygen | 3.64 | 3.87 | | | | | | |
| Turbidity (NTU) | 19.71 | 121.40 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:22 **Dry @ 2.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-24

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 1.16 | | | feet |
| Total Well Depth (TWD) | 12 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 10.84 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.77 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 8.83 | gallons |

Total Volume of Water Purged Before Sampling 9 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 10:50 | 10:51 | 10:52 | 10:53 | 10:54 | 10:55 | | |
| pH (s.u.) | 7.52 | 7.55 | 7.59 | 7.63 | 7.65 | 7.67 | | |
| Specific Conductivity (µmhos/cm) | 138.1 | 143.6 | 149.8 | 157.1 | 163.5 | 165.4 | | |
| Water Temperature (℃) | 16.1 | 16.1 | 16.1 | 16.1 | 16.1 | 16.1 | | |
| Dissolved Oxygen | 2.23 | 2.29 | 2.31 | 2.34 | 2.36 | 2.38 | | |
| Turbidity (NTU) | 155.10 | 167.0. | 179.60 | 192.30 | 214.10 | 218.30 | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 10:55

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-25

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 0.00 | | | feet |
| Total Well Depth (TWD) | 12 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 12 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.96 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 9.78 | gallons |

Total Volume of Water Purged Before Sampling 10 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 10:59 | 11:00 | 11:01 | 11:02 | 11:03 | 11:04 | | |
| pH (s.u.) | 7.06 | 7.13 | 7.15 | 7.19 | 7.16 | 7.17 | | |
| Specific Conductivity (µmhos/cm) | 28.3 | 31.5 | 38.7 | 35.4 | 51.0 | 47.6 | | |
| Water Temperature (℃) | 16.7 | 16.7 | 16.7 | 16.8 | 16.8 | 16.8 | | |
| Dissolved Oxygen | 1.81 | 1.85 | 1.88 | 1.84 | 1.93 | 1.85 | | |
| Turbidity (NTU) | 36.10 | 41.28 | 47.39 | 52.66 | 58.14 | 60.57 | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:04

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-26

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 0.00 | | | feet |
| Total Well Depth (TWD) | 12 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 12 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.96 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 9.78 | gallons |

Total Volume of Water Purged Before Sampling 10 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:06 | 11:07 | 11:08 | 11:09 | 11:10 | 11:11 | | |
| pH (s.u.) | 7.35 | 7.32 | 7.36 | 7.35 | 7.36 | 7.38 | | |
| Specific Conductivity (µmhos/cm) | 67.1 | 70.5 | 65.0 | 68.2 | 70.2 | 68.9 | | |
| Water Temperature (℃) | 16.4 | 16.4 | 16.4 | 16.4 | 16.4 | 16.4 | | |
| Dissolved Oxygen | 2.06 | 2.23 | 2.19 | 2.13 | 2.21 | 2.09 | | |
| Turbidity (NTU) | 76.51 | 83.42 | 92.14 | 95.26 | 93.81 | 101.70 | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:11

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-27

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 3.71 | | | feet |
| Total Well Depth (TWD) | 12 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 8.29 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.35 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 6.76 | gallons |

Total Volume of Water Purged Before Sampling 7 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:10 | 11:11 | 11:12 | 11:13 | 11:14 | 11:15 | | |
| pH (s.u.) | 7.82 | 7.71 | 7.65 | 7.64 | 7.65 | 7.67 | | |
| Specific Conductivity (µmhos/cm) | 43.1 | 44.1 | 44.5 | 43.5 | 46.8 | 42.5 | | |
| Water Temperature (℃) | 16.7 | 16.7 | 16.6 | 16.5 | 16.5 | 16.5 | | |
| Dissolved Oxygen | 1.25 | 2.01 | 2.75 | 2.86 | 2.45 | 2.56 | | |
| Turbidity (NTU) | 25.13 | 52.30 | 54.60 | 68.90 | 54.20 | 62.30 | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:15

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-28

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 16.58 | | | feet |
| Total Well Depth (TWD) | 24 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 7.42 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.21 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 6.05 | gallons |

Total Volume of Water Purged Before Sampling 3 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:13 | 11:16 | 11:18 | | | | | |
| pH (s.u.) | 7.25 | 7.31 | 7.32 | | | | | |
| Specific Conductivity (µmhos/cm) | 31.0 | 37.5 | 45.6 | | | | | |
| Water Temperature (℃) | 16.0 | 16.1 | 16.2 | | | | | |
| Dissolved Oxygen | 2.13 | 2.25 | 2.20 | | | | | |
| Turbidity (NTU) | 35.60 | 45.10 | 107.80 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:18 **Dry @ 3.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-29

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 17.40 | | | feet |
| Total Well Depth (TWD) | 25 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 7.6 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.24 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 6.19 | gallons |

Total Volume of Water Purged Before Sampling 2.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:21 | 11:23 | 11:26 | | | | | |
| pH (s.u.) | 7.43 | 7.37 | 7.41 | | | | | |
| Specific Conductivity (µmhos/cm) | 54.0 | 61.2 | 59.5 | | | | | |
| Water Temperature (℃) | 16.2 | 16.4 | 16.2 | | | | | |
| Dissolved Oxygen | 1.98 | 2.33 | 2.17 | | | | | |
| Turbidity (NTU) | 24.11 | 108.20 | 256.90 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:26 **Dry @ 2.50 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-30

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 16.04 | | | feet |
| Total Well Depth (TWD) | 24 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 7.96 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.30 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 6.49 | gallons |

Total Volume of Water Purged Before Sampling 3.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:29 | 11:31 | 11:33 | | | | | |
| pH (s.u.) | 7.08 | 7.01 | 6.98 | | | | | |
| Specific Conductivity (µmhos/cm) | 57.5 | 65.2 | 69.2 | | | | | |
| Water Temperature (℃) | 16.4 | 16.4 | 16.6 | | | | | |
| Dissolved Oxygen | 2.36 | 2.45 | 2.25 | | | | | |
| Turbidity (NTU) | 10.81 | 39.50 | 201.40 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:33 **Dry @ 3.50 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-31

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 16.83 | | | feet |
| Total Well Depth (TWD) | 24 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 7.17 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.17 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 5.84 | gallons |

Total Volume of Water Purged Before Sampling 2.25 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:34 | 11:37 | 11:38 | | | | | |
| pH (s.u.) | 6.91 | 6.88 | 6.89 | | | | | |
| Specific Conductivity (µmhos/cm) | 64.6 | 66.5 | 64.3 | | | | | |
| Water Temperature (℃) | 16.3 | 16.5 | 16.5 | | | | | |
| Dissolved Oxygen | 2.51 | 3.01 | 3.12 | | | | | |
| Turbidity (NTU) | 81.74 | 256.80 | 299.50 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:38 **Dry @ 2.25 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-32

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 16.84 | | | feet |
| Total Well Depth (TWD) | 24 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 7.16 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.17 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 5.84 | gallons |

Total Volume of Water Purged Before Sampling 2.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:35 | 11:38 | 11:42 | | | | | |
| pH (s.u.) | 7.45 | 7.22 | 7.17 | | | | | |
| Specific Conductivity (µmhos/cm) | 76.1 | 66.9 | 68.2 | | | | | |
| Water Temperature (℃) | 16.4 | 16.5 | 16.4 | | | | | |
| Dissolved Oxygen | 1.76 | 2.22 | 1.85 | | | | | |
| Turbidity (NTU) | 106.30 | 178.40 | 245.60 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:42 **Dry @ 2.50 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-33

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 18.87 | | | feet |
| Total Well Depth (TWD) | 27 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 8.13 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.33 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 6.63 | gallons |

Total Volume of Water Purged Before Sampling 3 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:31 | 11:34 | 11:38 | | | | | |
| pH (s.u.) | 7.02 | 7.23 | 7.19 | | | | | |
| Specific Conductivity (µmhos/cm) | 64.6 | 62.3 | 58.9 | | | | | |
| Water Temperature (℃) | 16.1 | 16.3 | 16.4 | | | | | |
| Dissolved Oxygen | 2.51 | 3.01 | 2.85 | | | | | |
| Turbidity (NTU) | 44.03 | 125.40 | 168.40 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:38 **Dry @ 3.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-34

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 5.56 | | | feet |
| Total Well Depth (TWD) | 15 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 9.44 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.54 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 7.69 | gallons |

Total Volume of Water Purged Before Sampling 4.25 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 14:01 | 14:04 | 14:10 | | | | | |
| pH (s.u.) | 7.39 | 7.44 | 7.40 | | | | | |
| Specific Conductivity (µmhos/cm) | 32.6 | 45.4 | 39.8 | | | | | |
| Water Temperature (℃) | 18.3 | 18.0 | 17.9 | | | | | |
| Dissolved Oxygen | 5.62 | 4.55 | 4.26 | | | | | |
| Turbidity (NTU) | 20.93 | 201.60 | 179.90 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 14:10 **Dry @ 4.25 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-35

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 18.24 | | | feet |
| Total Well Depth (TWD) | 28 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 9.76 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 1.59 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 7.95 | gallons |

Total Volume of Water Purged Before Sampling 5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:31 | 11:33 | 11:36 | 11:40 | | | | |
| pH (s.u.) | 7.28 | 7.32 | 7.25 | 7.30 | | | | |
| Specific Conductivity (µmhos/cm) | 104.5 | 79.5 | 84.5 | 82.3 | | | | |
| Water Temperature (℃) | 16.0 | 16.1 | 16.2 | 16.1 | | | | |
| Dissolved Oxygen | 2.21 | 2.01 | 1.98 | 2.14 | | | | |
| Turbidity (NTU) | 315.20 | 98.40 | 105.40 | 255.10 | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:40 **Dry @ 5.00 Gallons**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** DMW-36

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 17.35 | | | feet |
| Total Well Depth (TWD) | 60 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 42.65 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 6.95 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 34.76 | gallons |

Total Volume of Water Purged Before Sampling 35 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:00 | 11:05 | 11:10 | 11:15 | 11:20 | 11:25 | | |
| pH (s.u.) | 7.76 | 7.81 | 7.83 | 7.81 | 7.82 | 7.84 | | |
| Specific Conductivity (µmhos/cm) | 61.4 | 62.9 | 65.1 | 63.5 | 62.1 | 69.2 | | |
| Water Temperature (℃) | 16.0 | 16.0 | 16.0 | 16.0 | 15.9 | 15.9 | | |
| Dissolved Oxygen | 1.86 | 1.88 | 2.01 | 2.15 | 2.41 | 2.06 | | |
| Turbidity (NTU) | 28.75 | 31.24 | 35.16 | 42.80 | 105.60 | 104.40 | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:25

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** DMW-37

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 15.24 | | | feet |
| Total Well Depth (TWD) | 50 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 34.76 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 5.67 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 28.33 | gallons |

Total Volume of Water Purged Before Sampling 28 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:20 | 11:23 | 11:26 | 11:29 | 11:31 | 11:32 | | |
| pH (s.u.) | 7.11 | 7.14 | 7.19 | 7.17 | 7.15 | 7.12 | | |
| Specific Conductivity (µmhos/cm) | 45.1 | 48.7 | 52.3 | 54.1 | 55.8 | 57.3 | | |
| Water Temperature (℃) | 16.1 | 16.1 | 16.1 | 16.1 | 16.1 | 16.1 | | |
| Dissolved Oxygen | 1.54 | 1.58 | 1.61 | 1.65 | 1.69 | 1.73 | | |
| Turbidity (NTU) | 61.41 | 58.72 | 75.96 | 81.43 | 87.22 | 90.50 | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:32

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** DMW-38

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 19.74 | | | feet |
| Total Well Depth (TWD) | 50 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 30.26 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 4.93 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 24.66 | gallons |

Total Volume of Water Purged Before Sampling 25 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:36 | 11:40 | 11:45 | 11:50 | 11:54 | 11:53 | | |
| pH (s.u.) | 7.48 | 7.55 | 7.57 | 7.61 | 7.59 | 7.54 | | |
| Specific Conductivity (µmhos/cm) | 121.0 | 136.7 | 143.1 | 148.7 | 151.2 | 152.0 | | |
| Water Temperature (℃) | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | 16.0 | | |
| Dissolved Oxygen | 1.01 | 2.03 | 2.14 | 2.10 | 2.07 | 2.12 | | |
| Turbidity (NTU) | 13.01 | 16.27 | 19.88 | 22.41 | 27.80 | 30.63 | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:53

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** DMW-39

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 16.78 | | | feet |
| Total Well Depth (TWD) | 35 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 18.22 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 2.97 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 14.85 | gallons |

Total Volume of Water Purged Before Sampling 15 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:39 | 11:42 | 11:45 | 11:49 | 11:52 | 11:56 | | |
| pH (s.u.) | 7.31 | 7.40 | 7.37 | 7.34 | 7.32 | 7.38 | | |
| Specific Conductivity (µmhos/cm) | 87.6 | 90.5 | 92.8 | 96.1 | 99.4 | 101.3 | | |
| Water Temperature (℃) | 16.8 | 16.8 | 16.8 | 16.8 | 16.9 | 16.9 | | |
| Dissolved Oxygen | 1.20 | 1.26 | 1.22 | 1.29 | 1.21 | 1.24 | | |
| Turbidity (NTU) | 89.50 | 98.16 | 102.40 | 118.90 | 124.70 | 138.90 | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:56

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 2/25/2015

**Field Personnel:** F. Mitlin, A. Looper, P. Wylie, T. Abbott

**General Weather Conditions:** Overcast

**Ambient Air Temperature:** 4.4 °C

Quality Assurance

| **pH/Conductivity Meter** | | **DO Meter** | |
|---|---|---|---|
| **YSI 63** | | **YSI 550A** | |
| 09C 101302 | | 04L 2026AK | |
| 10K 101895 | X | 08B 101895 | X |
| 07M 100905 | | 04A 0912AI | |
| Calibration Buffer: | 4, 7, & 10 | | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** DMW-40

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 18.03 | | | feet |
| Total Well Depth (TWD) | 50 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 31.97 | feet |
| 1 casing volume (CV=LWC X C)= _____ X _ | | 0.163 | 5.21 | gallons |
| 3 casing volume (3 X CV)= | | 5 | 26.06 | gallons |

Total Volume of Water Purged Before Sampling 10.5 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 10:10 | 10:15 | 10:20 | | | | | |
| pH (s.u.) | 7.42 | 7.51 | 7.38 | | | | | |
| Specific Conductivity (µmhos/cm) | 75.5 | 62.8 | 61.7 | | | | | |
| Water Temperature (℃) | 16.0 | 16.1 | 16.1 | | | | | |
| Dissolved Oxygen | 4.07 | 3.91 | 3.76 | | | | | |
| Turbidity (NTU) | 16.47 | 41.62 | 57.81 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 10:20 **Dry @ 10.50 Gallons**

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

March 10, 2015

Mr. Bryan Shane
Midlands Environmental
PO Box 854
Lexington, SC 29071

RE: Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

Dear Mr. Shane:
Enclosed are the analytical results for sample(s) received by the laboratory on February 27, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Angela M. Baioni

Angela Baioni
angela.baioni@pacelabs.com
Project Manager

Enclosures

cc: Mr. Ryan Ariail, Midlands Environmental
Mr. Jeff Coleman, Midlands Environmental
Mr. Kyle Pudney, Midlands Environmental

**REPORT OF LABORATORY ANALYSIS**

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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

## CERTIFICATIONS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Charlotte Certification IDs**
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Certification #: 99006001
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
West Virginia Certification #: 357
Virginia/VELAP Certification #: 460221

## REPORT OF LABORATORY ANALYSIS

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Huntersville, NC 28078
(704)875-9092

## SAMPLE SUMMARY

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| 92239087001 | OHM1 | Water | 02/25/15 12:30 | 02/27/15 12:55 |
| 92239087002 | MW1R | Water | 02/25/15 12:40 | 02/27/15 12:55 |
| 92239087003 | MW2 | Water | 02/25/15 11:50 | 02/27/15 12:55 |
| 92239087004 | MW3 | Water | 02/25/15 12:50 | 02/27/15 12:55 |
| 92239087005 | MW4 | Water | 02/25/15 11:40 | 02/27/15 12:55 |
| 92239087006 | MW5 | Water | 02/25/15 10:55 | 02/27/15 12:55 |
| 92239087007 | MW7 | Water | 02/25/15 13:15 | 02/27/15 12:55 |
| 92239087008 | MW8 | Water | 02/25/15 13:23 | 02/27/15 12:55 |
| 92239087009 | MW9 | Water | 02/25/15 13:05 | 02/27/15 12:55 |
| 92239087010 | MW10 | Water | 02/25/15 11:30 | 02/27/15 12:55 |
| 92239087011 | MW11 | Water | 02/25/15 10:50 | 02/27/15 12:55 |
| 92239087012 | MW12R | Water | 02/25/15 11:10 | 02/27/15 12:55 |
| 92239087013 | MW13R | Water | 02/25/15 10:30 | 02/27/15 12:55 |
| 92239087014 | MW14 | Water | 02/25/15 13:33 | 02/27/15 12:55 |
| 92239087015 | MW15 | Water | 02/25/15 13:43 | 02/27/15 12:55 |
| 92239087016 | MW16 | Water | 02/25/15 13:52 | 02/27/15 12:55 |
| 92239087017 | DMW17 | Water | 02/25/15 12:20 | 02/27/15 12:55 |
| 92239087018 | MW18 | Water | 02/25/15 14:04 | 02/27/15 12:55 |
| 92239087019 | MW19 | Water | 02/25/15 11:00 | 02/27/15 12:55 |
| 92239087020 | MW20 | Water | 02/25/15 10:40 | 02/27/15 12:55 |
| 92239087021 | MW21 | Water | 02/25/15 11:45 | 02/27/15 12:55 |
| 92239087022 | MW22 | Water | 02/25/15 11:48 | 02/27/15 12:55 |
| 92239087023 | MW23 | Water | 02/25/15 11:22 | 02/27/15 12:55 |
| 92239087024 | MW24 | Water | 02/25/15 10:55 | 02/27/15 12:55 |
| 92239087025 | MW25 | Water | 02/25/15 11:04 | 02/27/15 12:55 |
| 92239087026 | MW26 | Water | 02/25/15 11:11 | 02/27/15 12:55 |
| 92239087027 | MW27 | Water | 02/25/15 11:15 | 02/27/15 12:55 |
| 92239087028 | MW28 | Water | 02/25/15 11:18 | 02/27/15 12:55 |
| 92239087029 | MW29 | Water | 02/25/15 11:26 | 02/27/15 12:55 |
| 92239087030 | MW30 | Water | 02/25/15 11:33 | 02/27/15 12:55 |
| 92239087031 | MW31 | Water | 02/25/15 11:38 | 02/27/15 12:55 |
| 92239087032 | MW32 | Water | 02/25/15 11:42 | 02/27/15 12:55 |
| 92239087033 | MW33 | Water | 02/25/15 11:38 | 02/27/15 12:55 |
| 92239087034 | MW34 | Water | 02/25/15 14:10 | 02/27/15 12:55 |
| 92239087035 | MW35 | Water | 02/25/15 11:40 | 02/27/15 12:55 |
| 92239087036 | DMW36 | Water | 02/25/15 11:25 | 02/27/15 12:55 |
| 92239087037 | DMW37 | Water | 02/25/15 11:32 | 02/27/15 12:55 |

## REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

## SAMPLE SUMMARY

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| 92239087038 | DMW38 | Water | 02/25/15 11:36 | 02/27/15 12:55 |
| 92239087039 | DMW39 | Water | 02/25/15 11:39 | 02/27/15 12:55 |
| 92239087040 | DMW40 | Water | 02/25/15 10:20 | 02/27/15 12:55 |
| 92239087041 | SW1 | Water | 02/25/15 13:00 | 02/27/15 12:55 |
| 92239087042 | SW2 | Water | 02/25/15 13:05 | 02/27/15 12:55 |
| 92239087043 | MW10 DUPLICATE | Water | 02/25/15 11:30 | 02/27/15 12:55 |
| 92239087044 | MW2 DUPLICATE | Water | 02/25/15 11:50 | 02/27/15 12:55 |
| 92239087045 | OMW1 DUPLICATE | Water | 02/25/15 12:30 | 02/27/15 12:55 |
| 92239087046 | FIELD BLANK | Water | 02/25/15 14:30 | 02/27/15 12:55 |
| 92239087047 | TRIP BLANK1 | Water | 02/25/15 14:31 | 02/27/15 12:55 |
| 92239087048 | CLS-WW | Water | 02/25/15 14:00 | 02/27/15 12:55 |
| 92239087049 | EMS-WW | Water | 02/25/15 10:45 | 02/27/15 12:55 |
| 92239087050 | MCCULLOUGH - WW | Water | 02/25/15 11:15 | 02/27/15 12:55 |
| 92239087051 | CAFE-WW | Water | 02/25/15 14:15 | 02/27/15 12:55 |
| 92239087052 | OLD SERVICE STATION WW | Water | 02/25/15 14:20 | 02/27/15 12:55 |
| 92239087053 | SCOTT WW | Water | 02/25/15 14:25 | 02/27/15 12:55 |
| 92239087054 | FARM WW | Water | 02/25/15 12:10 | 02/27/15 12:55 |
| 92239087055 | TRIP BLANK 2 | Water | 02/25/15 14:35 | 02/27/15 12:55 |



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## SAMPLE ANALYTE COUNT

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| 92239087001 | OHM1 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | CCL | 20 | PASI-C |
| 92239087002 | MW1R | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087003 | MW2 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | CCL | 20 | PASI-C |
| 92239087004 | MW3 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087005 | MW4 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | CCL | 20 | PASI-C |
| 92239087006 | MW5 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | CCL | 20 | PASI-C |
| 92239087007 | MW7 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087008 | MW8 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087009 | MW9 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087010 | MW10 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087011 | MW11 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087012 | MW12R | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087013 | MW13R | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087014 | MW14 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087015 | MW15 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087016 | MW16 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087017 | DMW17 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087018 | MW18 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087019 | MW19 | EPA 8011 | JMC | 2 | PASI-C |



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## SAMPLE ANALYTE COUNT

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087020 | MW20 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087021 | MW21 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087022 | MW22 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | CCL | 20 | PASI-C |
| 92239087023 | MW23 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087024 | MW24 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | CCL | 20 | PASI-C |
| 92239087025 | MW25 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | CCL | 20 | PASI-C |
| 92239087026 | MW26 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | CCL | 20 | PASI-C |
| 92239087027 | MW27 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087028 | MW28 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087029 | MW29 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | CCL | 20 | PASI-C |
| 92239087030 | MW30 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087031 | MW31 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087032 | MW32 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | CCL | 20 | PASI-C |
| 92239087033 | MW33 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087034 | MW34 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087035 | MW35 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | CCL | 20 | PASI-C |
| 92239087036 | DMW36 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087037 | DMW37 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |



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## SAMPLE ANALYTE COUNT

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| 92239087038 | DMW38 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087039 | DMW39 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087040 | DMW40 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087041 | SW1 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | GAW | 20 | PASI-C |
| 92239087042 | SW2 | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | GAW | 20 | PASI-C |
| 92239087043 | MW10 DUPLICATE | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | CCL | 20 | PASI-C |
| 92239087044 | MW2 DUPLICATE | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | CCL | 20 | PASI-C |
| 92239087045 | OMW1 DUPLICATE | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | CCL | 20 | PASI-C |
| 92239087046 | FIELD BLANK | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | SNP | 20 | PASI-C |
| 92239087047 | TRIP BLANK1 | EPA 8260 | SNP | 20 | PASI-C |
| 92239087048 | CLS-WW | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | GAW | 20 | PASI-C |
| 92239087049 | EMS-WW | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | GAW | 20 | PASI-C |
| 92239087050 | MCCULLOUGH - WW | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | GAW | 20 | PASI-C |
| 92239087051 | CAFE-WW | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | GAW | 20 | PASI-C |
| 92239087052 | OLD SERVICE STATION WW | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | GAW | 20 | PASI-C |
| 92239087053 | SCOTT WW | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | GAW | 20 | PASI-C |
| 92239087054 | FARM WW | EPA 8011 | JMC | 2 | PASI-C |
| | | EPA 8260 | GAW | 20 | PASI-C |
| 92239087055 | TRIP BLANK 2 | EPA 8260 | SNP | 20 | PASI-C |



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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: OHM1** **Lab ID: 92239087001** Collected: 02/25/15 12:30 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | **1.4** | ug/L | 0.040 | 0.040 | 2 | 03/02/15 19:33 | 03/04/15 13:57 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 102 | % | 60-140 | | 2 | 03/02/15 19:33 | 03/04/15 13:57 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 25000 | 19200 | 250 | | 03/06/15 10:56 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 2500 | 850 | 250 | | 03/06/15 10:56 | 994-05-8 | |
| Benzene | **3490** | ug/L | 1250 | 425 | 250 | | 03/06/15 10:56 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 25000 | 8020 | 250 | | 03/06/15 10:56 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 25000 | 14400 | 250 | | 03/06/15 10:56 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 12500 | 1820 | 250 | | 03/06/15 10:56 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 1250 | 450 | 250 | | 03/06/15 10:56 | 107-06-2 | |
| Diisopropyl ether | **1270** | ug/L | 1250 | 425 | 250 | | 03/06/15 10:56 | 108-20-3 | |
| Ethanol | ND | ug/L | 50000 | 34400 | 250 | | 03/06/15 10:56 | 64-17-5 | |
| Ethylbenzene | **1540** | ug/L | 1250 | 400 | 250 | | 03/06/15 10:56 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 2500 | 900 | 250 | | 03/06/15 10:56 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 1250 | 425 | 250 | | 03/06/15 10:56 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 1250 | 500 | 250 | | 03/06/15 10:56 | 91-20-3 | |
| Toluene | **23600** | ug/L | 1250 | 400 | 250 | | 03/06/15 10:56 | 108-88-3 | |
| Xylene (Total) | **12300** | ug/L | 2500 | 675 | 250 | | 03/06/15 10:56 | 1330-20-7 | |
| m&p-Xylene | **7850** | ug/L | 2500 | 775 | 250 | | 03/06/15 10:56 | 179601-23-1 | |
| o-Xylene | **4480** | ug/L | 1250 | 400 | 250 | | 03/06/15 10:56 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 101 | % | 70-130 | | 250 | | 03/06/15 10:56 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 95 | % | 70-130 | | 250 | | 03/06/15 10:56 | 17060-07-0 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 250 | | 03/06/15 10:56 | 2037-26-5 | |

**Sample: MW1R** **Lab ID: 92239087002** Collected: 02/25/15 12:40 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | **0.098** | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:33 | 03/03/15 12:11 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 96 | % | 60-140 | | 1 | 03/02/15 19:33 | 03/03/15 12:11 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | **10000** | ug/L | 500 | 384 | 5 | | 03/01/15 04:22 | 75-85-4 | |
| tert-Amylmethyl ether | **1100** | ug/L | 50.0 | 17.0 | 5 | | 03/01/15 04:22 | 994-05-8 | |
| Benzene | **9830** | ug/L | 2500 | 850 | 500 | | 03/02/15 13:55 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 500 | 160 | 5 | | 03/01/15 04:22 | 624-95-3 | |
| tert-Butyl Alcohol | **872** | ug/L | 500 | 288 | 5 | | 03/01/15 04:22 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 250 | 36.5 | 5 | | 03/01/15 04:22 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 25.0 | 9.0 | 5 | | 03/01/15 04:22 | 107-06-2 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW1R** **Lab ID: 92239087002** Collected: 02/25/15 12:40 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| Diisopropyl ether | **8480** | ug/L | 2500 | 850 | 500 | | 03/02/15 13:55 | 108-20-3 | |
| Ethanol | ND | ug/L | 1000 | 689 | 5 | | 03/01/15 04:22 | 64-17-5 | |
| Ethylbenzene | **3050** | ug/L | 2500 | 800 | 500 | | 03/02/15 13:55 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 50.0 | 18.0 | 5 | | 03/01/15 04:22 | 637-92-3 | |
| Methyl-tert-butyl ether | **2350J** | ug/L | 2500 | 850 | 500 | | 03/02/15 13:55 | 1634-04-4 | |
| Naphthalene | **412** | ug/L | 25.0 | 10.0 | 5 | | 03/01/15 04:22 | 91-20-3 | |
| Toluene | **41800** | ug/L | 2500 | 800 | 500 | | 03/02/15 13:55 | 108-88-3 | |
| Xylene (Total) | **17000** | ug/L | 5000 | 1350 | 500 | | 03/02/15 13:55 | 1330-20-7 | |
| m&p-Xylene | **11700** | ug/L | 5000 | 1550 | 500 | | 03/02/15 13:55 | 179601-23-1 | |
| o-Xylene | **5310** | ug/L | 2500 | 800 | 500 | | 03/02/15 13:55 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 109 | % | 70-130 | | 5 | | 03/01/15 04:22 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 94 | % | 70-130 | | 5 | | 03/01/15 04:22 | 17060-07-0 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 5 | | 03/01/15 04:22 | 2037-26-5 | |

**Sample: MW2** **Lab ID: 92239087003** Collected: 02/25/15 11:50 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:33 | 03/03/15 12:30 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 92 | % | 60-140 | | 1 | 03/02/15 19:33 | 03/03/15 12:30 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 5000 | 3840 | 50 | | 03/06/15 11:13 | 75-85-4 | |
| tert-Amylmethyl ether | **307J** | ug/L | 500 | 170 | 50 | | 03/06/15 11:13 | 994-05-8 | |
| Benzene | **3960** | ug/L | 250 | 85.0 | 50 | | 03/06/15 11:13 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 5000 | 1600 | 50 | | 03/06/15 11:13 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 5000 | 2880 | 50 | | 03/06/15 11:13 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 2500 | 365 | 50 | | 03/06/15 11:13 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 250 | 90.0 | 50 | | 03/06/15 11:13 | 107-06-2 | |
| Diisopropyl ether | **2510** | ug/L | 250 | 85.0 | 50 | | 03/06/15 11:13 | 108-20-3 | |
| Ethanol | ND | ug/L | 10000 | 6890 | 50 | | 03/06/15 11:13 | 64-17-5 | |
| Ethylbenzene | **1640** | ug/L | 250 | 80.0 | 50 | | 03/06/15 11:13 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 500 | 180 | 50 | | 03/06/15 11:13 | 637-92-3 | |
| Methyl-tert-butyl ether | **408** | ug/L | 250 | 85.0 | 50 | | 03/06/15 11:13 | 1634-04-4 | |
| Naphthalene | **404** | ug/L | 250 | 100 | 50 | | 03/06/15 11:13 | 91-20-3 | |
| Toluene | **963** | ug/L | 250 | 80.0 | 50 | | 03/06/15 11:13 | 108-88-3 | |
| Xylene (Total) | **3200** | ug/L | 500 | 135 | 50 | | 03/06/15 11:13 | 1330-20-7 | |
| m&p-Xylene | **2090** | ug/L | 500 | 155 | 50 | | 03/06/15 11:13 | 179601-23-1 | |
| o-Xylene | **1110** | ug/L | 250 | 80.0 | 50 | | 03/06/15 11:13 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 101 | % | 70-130 | | 50 | | 03/06/15 11:13 | 460-00-4 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW2** **Lab ID: 92239087003** Collected: 02/25/15 11:50 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| ***Surrogates*** | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 96 | % | 70-130 | | 50 | | 03/06/15 11:13 | 17060-07-0 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 50 | | 03/06/15 11:13 | 2037-26-5 | |

**Sample: MW3** **Lab ID: 92239087004** Collected: 02/25/15 12:50 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | **1.6** | ug/L | 0.10 | 0.10 | 5 | 03/02/15 19:33 | 03/04/15 14:17 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 0 | % | 60-140 | | 5 | 03/02/15 19:33 | 03/04/15 14:17 | 301-79-56 | S4 |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 20000 | 15400 | 200 | | 03/01/15 04:56 | 75-85-4 | |
| tert-Amylmethyl ether | **1820J** | ug/L | 2000 | 680 | 200 | | 03/01/15 04:56 | 994-05-8 | |
| Benzene | **7930** | ug/L | 1000 | 340 | 200 | | 03/01/15 04:56 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 20000 | 6420 | 200 | | 03/01/15 04:56 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 20000 | 11500 | 200 | | 03/01/15 04:56 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 10000 | 1460 | 200 | | 03/01/15 04:56 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 1000 | 360 | 200 | | 03/01/15 04:56 | 107-06-2 | |
| Diisopropyl ether | **7490** | ug/L | 1000 | 340 | 200 | | 03/01/15 04:56 | 108-20-3 | |
| Ethanol | ND | ug/L | 40000 | 27600 | 200 | | 03/01/15 04:56 | 64-17-5 | |
| Ethylbenzene | **2920** | ug/L | 1000 | 320 | 200 | | 03/01/15 04:56 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 2000 | 720 | 200 | | 03/01/15 04:56 | 637-92-3 | |
| Methyl-tert-butyl ether | **6010** | ug/L | 1000 | 340 | 200 | | 03/01/15 04:56 | 1634-04-4 | |
| Naphthalene | **422J** | ug/L | 1000 | 400 | 200 | | 03/01/15 04:56 | 91-20-3 | |
| Toluene | **61100** | ug/L | 2500 | 800 | 500 | | 03/02/15 14:12 | 108-88-3 | |
| Xylene (Total) | **16900** | ug/L | 2000 | 540 | 200 | | 03/01/15 04:56 | 1330-20-7 | |
| m&p-Xylene | **11300** | ug/L | 2000 | 620 | 200 | | 03/01/15 04:56 | 179601-23-1 | |
| o-Xylene | **5560** | ug/L | 1000 | 320 | 200 | | 03/01/15 04:56 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 107 | % | 70-130 | | 200 | | 03/01/15 04:56 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 97 | % | 70-130 | | 200 | | 03/01/15 04:56 | 17060-07-0 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 200 | | 03/01/15 04:56 | 2037-26-5 | |

**Sample: MW4** **Lab ID: 92239087005** Collected: 02/25/15 11:40 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | **0.23** | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:34 | 03/03/15 14:08 | 106-93-4 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW4** **Lab ID: 92239087005** Collected: 02/25/15 11:40 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 92 | % | 60-140 | | 1 | 03/02/15 19:34 | 03/03/15 14:08 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 1000 | 768 | 10 | | 03/06/15 11:30 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 100 | 34.0 | 10 | | 03/06/15 11:30 | 994-05-8 | |
| Benzene | **327** | ug/L | 50.0 | 17.0 | 10 | | 03/06/15 11:30 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 1000 | 321 | 10 | | 03/06/15 11:30 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 1000 | 577 | 10 | | 03/06/15 11:30 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 500 | 73.0 | 10 | | 03/06/15 11:30 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 50.0 | 18.0 | 10 | | 03/06/15 11:30 | 107-06-2 | |
| Diisopropyl ether | **169** | ug/L | 50.0 | 17.0 | 10 | | 03/06/15 11:30 | 108-20-3 | |
| Ethanol | ND | ug/L | 2000 | 1380 | 10 | | 03/06/15 11:30 | 64-17-5 | |
| Ethylbenzene | **585** | ug/L | 50.0 | 16.0 | 10 | | 03/06/15 11:30 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 100 | 36.0 | 10 | | 03/06/15 11:30 | 637-92-3 | |
| Methyl-tert-butyl ether | **83.9** | ug/L | 50.0 | 17.0 | 10 | | 03/06/15 11:30 | 1634-04-4 | |
| Naphthalene | **722** | ug/L | 50.0 | 20.0 | 10 | | 03/06/15 11:30 | 91-20-3 | |
| Toluene | **99.8** | ug/L | 50.0 | 16.0 | 10 | | 03/06/15 11:30 | 108-88-3 | |
| Xylene (Total) | **111** | ug/L | 100 | 27.0 | 10 | | 03/06/15 11:30 | 1330-20-7 | |
| m&p-Xylene | **111** | ug/L | 100 | 31.0 | 10 | | 03/06/15 11:30 | 179601-23-1 | |
| o-Xylene | **43.0J** | ug/L | 50.0 | 16.0 | 10 | | 03/06/15 11:30 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 99 | % | 70-130 | | 10 | | 03/06/15 11:30 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 96 | % | 70-130 | | 10 | | 03/06/15 11:30 | 17060-07-0 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 10 | | 03/06/15 11:30 | 2037-26-5 | |

**Sample: MW5** **Lab ID: 92239087006** Collected: 02/25/15 10:55 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:34 | 03/03/15 14:28 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 87 | % | 60-140 | | 1 | 03/02/15 19:34 | 03/03/15 14:28 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 03/06/15 09:47 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 03/06/15 09:47 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 09:47 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 03/06/15 09:47 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 03/06/15 09:47 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 03/06/15 09:47 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 03/06/15 09:47 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 09:47 | 108-20-3 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW5** **Lab ID: 92239087006** Collected: 02/25/15 10:55 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 03/06/15 09:47 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 09:47 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 03/06/15 09:47 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 09:47 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 03/06/15 09:47 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 09:47 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 03/06/15 09:47 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 03/06/15 09:47 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 09:47 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 104 | % | 70-130 | | 1 | | 03/06/15 09:47 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 101 | % | 70-130 | | 1 | | 03/06/15 09:47 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 03/06/15 09:47 | 2037-26-5 | |

**Sample: MW7** **Lab ID: 92239087007** Collected: 02/25/15 13:15 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:34 | 03/03/15 14:48 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 89 | % | 60-140 | | 1 | 03/02/15 19:34 | 03/03/15 14:48 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 02/28/15 17:56 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 02/28/15 17:56 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 17:56 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 02/28/15 17:56 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 02/28/15 17:56 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 02/28/15 17:56 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 02/28/15 17:56 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 17:56 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 02/28/15 17:56 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 17:56 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 02/28/15 17:56 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 17:56 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 02/28/15 17:56 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 17:56 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 02/28/15 17:56 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 02/28/15 17:56 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 17:56 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 109 | % | 70-130 | | 1 | | 02/28/15 17:56 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 98 | % | 70-130 | | 1 | | 02/28/15 17:56 | 17060-07-0 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW7** **Lab ID: 92239087007** Collected: 02/25/15 13:15 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| ***Surrogates*** | | | | | | | | | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 02/28/15 17:56 | 2037-26-5 | |

**Sample: MW8** **Lab ID: 92239087008** Collected: 02/25/15 13:23 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:34 | 03/03/15 15:08 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 89 | % | 60-140 | | 1 | 03/02/15 19:34 | 03/03/15 15:08 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 02/28/15 18:13 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 02/28/15 18:13 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 18:13 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 02/28/15 18:13 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 02/28/15 18:13 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 02/28/15 18:13 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 02/28/15 18:13 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 18:13 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 02/28/15 18:13 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 18:13 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 02/28/15 18:13 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 18:13 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 02/28/15 18:13 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 18:13 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 02/28/15 18:13 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 02/28/15 18:13 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 18:13 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 107 | % | 70-130 | | 1 | | 02/28/15 18:13 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 96 | % | 70-130 | | 1 | | 02/28/15 18:13 | 17060-07-0 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 1 | | 02/28/15 18:13 | 2037-26-5 | |

**Sample: MW9** **Lab ID: 92239087009** Collected: 02/25/15 13:05 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.019 | 0.019 | 1 | 03/02/15 19:34 | 03/03/15 15:28 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 88 | % | 60-140 | | 1 | 03/02/15 19:34 | 03/03/15 15:28 | 301-79-56 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW9** **Lab ID: 92239087009** Collected: 02/25/15 13:05 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 03/01/15 08:54 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 03/01/15 08:54 | 994-05-8 | |
| Benzene | **3.0J** | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 08:54 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 03/01/15 08:54 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 03/01/15 08:54 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 03/01/15 08:54 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 03/01/15 08:54 | 107-06-2 | |
| Diisopropyl ether | **10.7** | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 08:54 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 03/01/15 08:54 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 08:54 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 03/01/15 08:54 | 637-92-3 | |
| Methyl-tert-butyl ether | **6.2** | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 08:54 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 03/01/15 08:54 | 91-20-3 | |
| Toluene | **2.8J** | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 08:54 | 108-88-3 | |
| Xylene (Total) | **44.3** | ug/L | 10.0 | 2.7 | 1 | | 03/01/15 08:54 | 1330-20-7 | |
| m&p-Xylene | **31.3** | ug/L | 10.0 | 3.1 | 1 | | 03/01/15 08:54 | 179601-23-1 | |
| o-Xylene | **13.0** | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 08:54 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 106 | % | 70-130 | | 1 | | 03/01/15 08:54 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 103 | % | 70-130 | | 1 | | 03/01/15 08:54 | 17060-07-0 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 03/01/15 08:54 | 2037-26-5 | |

**Sample: MW10** **Lab ID: 92239087010** Collected: 02/25/15 11:30 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | **1.2** | ug/L | 0.040 | 0.040 | 2 | 03/02/15 19:34 | 03/04/15 14:57 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 104 | % | 60-140 | | 2 | 03/02/15 19:34 | 03/04/15 14:57 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 25000 | 19200 | 250 | | 03/01/15 05:47 | 75-85-4 | |
| tert-Amylmethyl ether | **1550J** | ug/L | 2500 | 850 | 250 | | 03/01/15 05:47 | 994-05-8 | |
| Benzene | **8750** | ug/L | 1250 | 425 | 250 | | 03/01/15 05:47 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 25000 | 8020 | 250 | | 03/01/15 05:47 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 25000 | 14400 | 250 | | 03/01/15 05:47 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 12500 | 1820 | 250 | | 03/01/15 05:47 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 1250 | 450 | 250 | | 03/01/15 05:47 | 107-06-2 | |
| Diisopropyl ether | **7700** | ug/L | 1250 | 425 | 250 | | 03/01/15 05:47 | 108-20-3 | |
| Ethanol | ND | ug/L | 50000 | 34400 | 250 | | 03/01/15 05:47 | 64-17-5 | |
| Ethylbenzene | **3300** | ug/L | 1250 | 400 | 250 | | 03/01/15 05:47 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 2500 | 900 | 250 | | 03/01/15 05:47 | 637-92-3 | |
| Methyl-tert-butyl ether | **5540** | ug/L | 1250 | 425 | 250 | | 03/01/15 05:47 | 1634-04-4 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW10** **Lab ID: 92239087010** Collected: 02/25/15 11:30 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| Naphthalene | **527J** | ug/L | 1250 | 500 | 250 | | 03/01/15 05:47 | 91-20-3 | |
| Toluene | **15500** | ug/L | 1250 | 400 | 250 | | 03/01/15 05:47 | 108-88-3 | |
| Xylene (Total) | **17300** | ug/L | 2500 | 675 | 250 | | 03/01/15 05:47 | 1330-20-7 | |
| m&p-Xylene | **11800** | ug/L | 2500 | 775 | 250 | | 03/01/15 05:47 | 179601-23-1 | |
| o-Xylene | **5510** | ug/L | 1250 | 400 | 250 | | 03/01/15 05:47 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 111 | % | 70-130 | | 250 | | 03/01/15 05:47 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 96 | % | 70-130 | | 250 | | 03/01/15 05:47 | 17060-07-0 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 250 | | 03/01/15 05:47 | 2037-26-5 | |

**Sample: MW11** **Lab ID: 92239087011** Collected: 02/25/15 10:50 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:34 | 03/03/15 16:07 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 94 | % | 60-140 | | 1 | 03/02/15 19:34 | 03/03/15 16:07 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | **2360** | ug/L | 200 | 154 | 2 | | 03/01/15 06:04 | 75-85-4 | |
| tert-Amylmethyl ether | **113** | ug/L | 20.0 | 6.8 | 2 | | 03/01/15 06:04 | 994-05-8 | |
| Benzene | **124** | ug/L | 10.0 | 3.4 | 2 | | 03/01/15 06:04 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 200 | 64.2 | 2 | | 03/01/15 06:04 | 624-95-3 | |
| tert-Butyl Alcohol | **1180** | ug/L | 200 | 115 | 2 | | 03/01/15 06:04 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 100 | 14.6 | 2 | | 03/01/15 06:04 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 10.0 | 3.6 | 2 | | 03/01/15 06:04 | 107-06-2 | |
| Diisopropyl ether | **1290** | ug/L | 62.5 | 21.2 | 12.5 | | 03/02/15 14:29 | 108-20-3 | |
| Ethanol | ND | ug/L | 400 | 276 | 2 | | 03/01/15 06:04 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 10.0 | 3.2 | 2 | | 03/01/15 06:04 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 20.0 | 7.2 | 2 | | 03/01/15 06:04 | 637-92-3 | |
| Methyl-tert-butyl ether | **1560** | ug/L | 62.5 | 21.2 | 12.5 | | 03/02/15 14:29 | 1634-04-4 | |
| Naphthalene | **28.5** | ug/L | 10.0 | 4.0 | 2 | | 03/01/15 06:04 | 91-20-3 | |
| Toluene | ND | ug/L | 10.0 | 3.2 | 2 | | 03/01/15 06:04 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 20.0 | 5.4 | 2 | | 03/01/15 06:04 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 20.0 | 6.2 | 2 | | 03/01/15 06:04 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 10.0 | 3.2 | 2 | | 03/01/15 06:04 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 106 | % | 70-130 | | 2 | | 03/01/15 06:04 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 97 | % | 70-130 | | 2 | | 03/01/15 06:04 | 17060-07-0 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 2 | | 03/01/15 06:04 | 2037-26-5 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW12R** **Lab ID: 92239087012** Collected: 02/25/15 11:10 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:34 | 03/03/15 16:27 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 89 | % | 60-140 | | 1 | 03/02/15 19:34 | 03/03/15 16:27 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 03/01/15 09:11 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 03/01/15 09:11 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 09:11 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 03/01/15 09:11 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 03/01/15 09:11 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 03/01/15 09:11 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 03/01/15 09:11 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 09:11 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 03/01/15 09:11 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 09:11 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 03/01/15 09:11 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 09:11 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 03/01/15 09:11 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 09:11 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 03/01/15 09:11 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 03/01/15 09:11 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 09:11 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 107 | % | 70-130 | | 1 | | 03/01/15 09:11 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 104 | % | 70-130 | | 1 | | 03/01/15 09:11 | 17060-07-0 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 1 | | 03/01/15 09:11 | 2037-26-5 | |

**Sample: MW13R** **Lab ID: 92239087013** Collected: 02/25/15 10:30 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:34 | 03/03/15 16:47 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 88 | % | 60-140 | | 1 | 03/02/15 19:34 | 03/03/15 16:47 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 500 | 384 | 5 | | 03/01/15 06:21 | 75-85-4 | |
| tert-Amylmethyl ether | **35.9J** | ug/L | 50.0 | 17.0 | 5 | | 03/01/15 06:21 | 994-05-8 | |
| Benzene | ND | ug/L | 25.0 | 8.5 | 5 | | 03/01/15 06:21 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 500 | 160 | 5 | | 03/01/15 06:21 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 500 | 288 | 5 | | 03/01/15 06:21 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 250 | 36.5 | 5 | | 03/01/15 06:21 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 25.0 | 9.0 | 5 | | 03/01/15 06:21 | 107-06-2 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW13R** **Lab ID: 92239087013** Collected: 02/25/15 10:30 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| Diisopropyl ether | **325** | ug/L | 25.0 | 8.5 | 5 | | 03/01/15 06:21 | 108-20-3 | |
| Ethanol | ND | ug/L | 1000 | 689 | 5 | | 03/01/15 06:21 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 25.0 | 8.0 | 5 | | 03/01/15 06:21 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 50.0 | 18.0 | 5 | | 03/01/15 06:21 | 637-92-3 | |
| Methyl-tert-butyl ether | **1060** | ug/L | 50.0 | 17.0 | 10 | | 03/02/15 14:46 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 25.0 | 10.0 | 5 | | 03/01/15 06:21 | 91-20-3 | |
| Toluene | ND | ug/L | 25.0 | 8.0 | 5 | | 03/01/15 06:21 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 50.0 | 13.5 | 5 | | 03/01/15 06:21 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 50.0 | 15.5 | 5 | | 03/01/15 06:21 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 25.0 | 8.0 | 5 | | 03/01/15 06:21 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 106 | % | 70-130 | | 5 | | 03/01/15 06:21 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 99 | % | 70-130 | | 5 | | 03/01/15 06:21 | 17060-07-0 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 5 | | 03/01/15 06:21 | 2037-26-5 | |

**Sample: MW14** **Lab ID: 92239087014** Collected: 02/25/15 13:33 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:34 | 03/03/15 17:07 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 91 | % | 60-140 | | 1 | 03/02/15 19:34 | 03/03/15 17:07 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 03/01/15 09:28 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 03/01/15 09:28 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 09:28 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 03/01/15 09:28 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 03/01/15 09:28 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 03/01/15 09:28 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 03/01/15 09:28 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 09:28 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 03/01/15 09:28 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 09:28 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 03/01/15 09:28 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 09:28 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 03/01/15 09:28 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 09:28 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 03/01/15 09:28 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 03/01/15 09:28 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 09:28 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 106 | % | 70-130 | | 1 | | 03/01/15 09:28 | 460-00-4 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW14** **Lab ID: 92239087014** Collected: 02/25/15 13:33 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| ***Surrogates*** | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 103 | % | 70-130 | | 1 | | 03/01/15 09:28 | 17060-07-0 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 03/01/15 09:28 | 2037-26-5 | |

**Sample: MW15** **Lab ID: 92239087015** Collected: 02/25/15 13:43 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:34 | 03/03/15 17:27 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 92 | % | 60-140 | | 1 | 03/02/15 19:34 | 03/03/15 17:27 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 02/28/15 18:47 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 02/28/15 18:47 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 18:47 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 02/28/15 18:47 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 02/28/15 18:47 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 02/28/15 18:47 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 02/28/15 18:47 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 18:47 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 02/28/15 18:47 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 18:47 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 02/28/15 18:47 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 18:47 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 02/28/15 18:47 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 18:47 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 02/28/15 18:47 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 02/28/15 18:47 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 18:47 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 108 | % | 70-130 | | 1 | | 02/28/15 18:47 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 99 | % | 70-130 | | 1 | | 02/28/15 18:47 | 17060-07-0 | |
| Toluene-d8 (S) | 97 | % | 70-130 | | 1 | | 02/28/15 18:47 | 2037-26-5 | |

**Sample: MW16** **Lab ID: 92239087016** Collected: 02/25/15 13:52 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.019 | 0.019 | 1 | 03/02/15 19:34 | 03/03/15 17:47 | 106-93-4 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW16** **Lab ID: 92239087016** Collected: 02/25/15 13:52 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 87 | % | 60-140 | | 1 | 03/02/15 19:34 | 03/03/15 17:47 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 02/28/15 19:04 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 02/28/15 19:04 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 19:04 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 02/28/15 19:04 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 02/28/15 19:04 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 02/28/15 19:04 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 02/28/15 19:04 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 19:04 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 02/28/15 19:04 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 19:04 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 02/28/15 19:04 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 19:04 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 02/28/15 19:04 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 19:04 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 02/28/15 19:04 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 02/28/15 19:04 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 19:04 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 107 | % | 70-130 | | 1 | | 02/28/15 19:04 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 100 | % | 70-130 | | 1 | | 02/28/15 19:04 | 17060-07-0 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 1 | | 02/28/15 19:04 | 2037-26-5 | |

**Sample: DMW17** **Lab ID: 92239087017** Collected: 02/25/15 12:20 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:34 | 03/03/15 18:07 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 89 | % | 60-140 | | 1 | 03/02/15 19:34 | 03/03/15 18:07 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 02/28/15 19:21 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 02/28/15 19:21 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 19:21 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 02/28/15 19:21 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 02/28/15 19:21 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 02/28/15 19:21 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 02/28/15 19:21 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 19:21 | 108-20-3 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: DMW17** **Lab ID: 92239087017** Collected: 02/25/15 12:20 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 02/28/15 19:21 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 19:21 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 02/28/15 19:21 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 19:21 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 02/28/15 19:21 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 19:21 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 02/28/15 19:21 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 02/28/15 19:21 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 19:21 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 107 | % | 70-130 | | 1 | | 02/28/15 19:21 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 100 | % | 70-130 | | 1 | | 02/28/15 19:21 | 17060-07-0 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 1 | | 02/28/15 19:21 | 2037-26-5 | |

**Sample: MW18** **Lab ID: 92239087018** Collected: 02/25/15 14:04 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:34 | 03/03/15 18:27 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 88 | % | 60-140 | | 1 | 03/02/15 19:34 | 03/03/15 18:27 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 02/28/15 19:38 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 02/28/15 19:38 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 19:38 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 02/28/15 19:38 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 02/28/15 19:38 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 02/28/15 19:38 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 02/28/15 19:38 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 19:38 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 02/28/15 19:38 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 19:38 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 02/28/15 19:38 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 19:38 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 02/28/15 19:38 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 19:38 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 02/28/15 19:38 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 02/28/15 19:38 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 19:38 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 108 | % | 70-130 | | 1 | | 02/28/15 19:38 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 103 | % | 70-130 | | 1 | | 02/28/15 19:38 | 17060-07-0 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW18** **Lab ID: 92239087018** Collected: 02/25/15 14:04 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| ***Surrogates*** | | | | | | | | | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 02/28/15 19:38 | 2037-26-5 | |

**Sample: MW19** **Lab ID: 92239087019** Collected: 02/25/15 11:00 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:47 | 03/03/15 03:35 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 90 | % | 60-140 | | 1 | 03/02/15 19:47 | 03/03/15 03:35 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 03/01/15 09:45 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 03/01/15 09:45 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 09:45 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 03/01/15 09:45 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 03/01/15 09:45 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 03/01/15 09:45 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 03/01/15 09:45 | 107-06-2 | |
| Diisopropyl ether | **11.5** | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 09:45 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 03/01/15 09:45 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 09:45 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 03/01/15 09:45 | 637-92-3 | |
| Methyl-tert-butyl ether | **28.6** | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 09:45 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 03/01/15 09:45 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 09:45 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 03/01/15 09:45 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 03/01/15 09:45 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 09:45 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 107 | % | 70-130 | | 1 | | 03/01/15 09:45 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 104 | % | 70-130 | | 1 | | 03/01/15 09:45 | 17060-07-0 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 1 | | 03/01/15 09:45 | 2037-26-5 | |

**Sample: MW20** **Lab ID: 92239087020** Collected: 02/25/15 10:40 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:47 | 03/03/15 04:33 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 90 | % | 60-140 | | 1 | 03/02/15 19:47 | 03/03/15 04:33 | 301-79-56 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW20** **Lab ID: 92239087020** Collected: 02/25/15 10:40 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 03/01/15 10:02 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 03/01/15 10:02 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 10:02 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 03/01/15 10:02 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 03/01/15 10:02 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 03/01/15 10:02 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 03/01/15 10:02 | 107-06-2 | |
| Diisopropyl ether | **33.5** | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 10:02 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 03/01/15 10:02 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 10:02 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 03/01/15 10:02 | 637-92-3 | |
| Methyl-tert-butyl ether | **119** | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 10:02 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 03/01/15 10:02 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 10:02 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 03/01/15 10:02 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 03/01/15 10:02 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 10:02 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 108 | % | 70-130 | | 1 | | 03/01/15 10:02 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 105 | % | 70-130 | | 1 | | 03/01/15 10:02 | 17060-07-0 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 03/01/15 10:02 | 2037-26-5 | |

**Sample: MW21** **Lab ID: 92239087021** Collected: 02/25/15 11:45 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:47 | 03/03/15 05:12 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 90 | % | 60-140 | | 1 | 03/02/15 19:47 | 03/03/15 05:12 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 03/01/15 10:19 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 03/01/15 10:19 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 10:19 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 03/01/15 10:19 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 03/01/15 10:19 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 03/01/15 10:19 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 03/01/15 10:19 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 10:19 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 03/01/15 10:19 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 10:19 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 03/01/15 10:19 | 637-92-3 | |
| Methyl-tert-butyl ether | **2.6J** | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 10:19 | 1634-04-4 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW21** **Lab ID: 92239087021** Collected: 02/25/15 11:45 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 03/01/15 10:19 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 10:19 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 03/01/15 10:19 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 03/01/15 10:19 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 10:19 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 105 | % | 70-130 | | 1 | | 03/01/15 10:19 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 106 | % | 70-130 | | 1 | | 03/01/15 10:19 | 17060-07-0 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 03/01/15 10:19 | 2037-26-5 | |

**Sample: MW22** **Lab ID: 92239087022** Collected: 02/25/15 11:48 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:47 | 03/03/15 05:31 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 90 | % | 60-140 | | 1 | 03/02/15 19:47 | 03/03/15 05:31 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 03/06/15 12:38 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 03/06/15 12:38 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 12:38 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 03/06/15 12:38 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 03/06/15 12:38 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 03/06/15 12:38 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 03/06/15 12:38 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 12:38 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 03/06/15 12:38 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 12:38 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 03/06/15 12:38 | 637-92-3 | |
| Methyl-tert-butyl ether | **2.0J** | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 12:38 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 03/06/15 12:38 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 12:38 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 03/06/15 12:38 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 03/06/15 12:38 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 12:38 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 104 | % | 70-130 | | 1 | | 03/06/15 12:38 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 98 | % | 70-130 | | 1 | | 03/06/15 12:38 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 03/06/15 12:38 | 2037-26-5 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW23** **Lab ID: 92239087023** Collected: 02/25/15 11:22 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:47 | 03/03/15 05:50 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 90 | % | 60-140 | | 1 | 03/02/15 19:47 | 03/03/15 05:50 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 03/01/15 10:36 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 03/01/15 10:36 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 10:36 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 03/01/15 10:36 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 03/01/15 10:36 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 03/01/15 10:36 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 03/01/15 10:36 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 10:36 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 03/01/15 10:36 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 10:36 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 03/01/15 10:36 | 637-92-3 | |
| Methyl-tert-butyl ether | **2.5J** | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 10:36 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 03/01/15 10:36 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 10:36 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 03/01/15 10:36 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 03/01/15 10:36 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 10:36 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 107 | % | 70-130 | | 1 | | 03/01/15 10:36 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 105 | % | 70-130 | | 1 | | 03/01/15 10:36 | 17060-07-0 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 1 | | 03/01/15 10:36 | 2037-26-5 | |

**Sample: MW24** **Lab ID: 92239087024** Collected: 02/25/15 10:55 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:47 | 03/03/15 06:09 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 89 | % | 60-140 | | 1 | 03/02/15 19:47 | 03/03/15 06:09 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 03/06/15 12:55 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 03/06/15 12:55 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 12:55 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 03/06/15 12:55 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 03/06/15 12:55 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 03/06/15 12:55 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 03/06/15 12:55 | 107-06-2 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW24** **Lab ID: 92239087024** Collected: 02/25/15 10:55 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 12:55 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 03/06/15 12:55 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 12:55 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 03/06/15 12:55 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 12:55 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 03/06/15 12:55 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 12:55 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 03/06/15 12:55 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 03/06/15 12:55 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 12:55 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 104 | % | 70-130 | | 1 | | 03/06/15 12:55 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 99 | % | 70-130 | | 1 | | 03/06/15 12:55 | 17060-07-0 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 03/06/15 12:55 | 2037-26-5 | |

**Sample: MW25** **Lab ID: 92239087025** Collected: 02/25/15 11:04 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.021 | 0.021 | 1 | 03/02/15 19:47 | 03/03/15 06:29 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 84 | % | 60-140 | | 1 | 03/02/15 19:47 | 03/03/15 06:29 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 03/06/15 13:12 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 03/06/15 13:12 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 13:12 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 03/06/15 13:12 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 03/06/15 13:12 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 03/06/15 13:12 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 03/06/15 13:12 | 107-06-2 | |
| Diisopropyl ether | **1.8J** | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 13:12 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 03/06/15 13:12 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 13:12 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 03/06/15 13:12 | 637-92-3 | |
| Methyl-tert-butyl ether | **3.3J** | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 13:12 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 03/06/15 13:12 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 13:12 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 03/06/15 13:12 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 03/06/15 13:12 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 13:12 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 100 | % | 70-130 | | 1 | | 03/06/15 13:12 | 460-00-4 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW25** **Lab ID: 92239087025** Collected: 02/25/15 11:04 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| ***Surrogates*** | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 100 | % | 70-130 | | 1 | | 03/06/15 13:12 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 03/06/15 13:12 | 2037-26-5 | |

**Sample: MW26** **Lab ID: 92239087026** Collected: 02/25/15 11:11 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.021 | 0.021 | 1 | 03/02/15 19:47 | 03/03/15 06:48 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 91 | % | 60-140 | | 1 | 03/02/15 19:47 | 03/03/15 06:48 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 03/06/15 13:29 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 03/06/15 13:29 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 13:29 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 03/06/15 13:29 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 03/06/15 13:29 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 03/06/15 13:29 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 03/06/15 13:29 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 13:29 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 03/06/15 13:29 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 13:29 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 03/06/15 13:29 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 13:29 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 03/06/15 13:29 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 13:29 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 03/06/15 13:29 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 03/06/15 13:29 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 13:29 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 104 | % | 70-130 | | 1 | | 03/06/15 13:29 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 100 | % | 70-130 | | 1 | | 03/06/15 13:29 | 17060-07-0 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 03/06/15 13:29 | 2037-26-5 | |

**Sample: MW27** **Lab ID: 92239087027** Collected: 02/25/15 11:15 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:47 | 03/03/15 07:08 | 106-93-4 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW27** **Lab ID: 92239087027** Collected: 02/25/15 11:15 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 90 | % | 60-140 | | 1 | 03/02/15 19:47 | 03/03/15 07:08 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 03/01/15 10:53 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 03/01/15 10:53 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 10:53 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 03/01/15 10:53 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 03/01/15 10:53 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 03/01/15 10:53 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 03/01/15 10:53 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 10:53 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 03/01/15 10:53 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 10:53 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 03/01/15 10:53 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 10:53 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 03/01/15 10:53 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 10:53 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 03/01/15 10:53 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 03/01/15 10:53 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 10:53 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 107 | % | 70-130 | | 1 | | 03/01/15 10:53 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 107 | % | 70-130 | | 1 | | 03/01/15 10:53 | 17060-07-0 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 03/01/15 10:53 | 2037-26-5 | |

**Sample: MW28** **Lab ID: 92239087028** Collected: 02/25/15 11:18 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:47 | 03/03/15 07:27 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 92 | % | 60-140 | | 1 | 03/02/15 19:47 | 03/03/15 07:27 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 03/01/15 11:10 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 03/01/15 11:10 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 11:10 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 03/01/15 11:10 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 03/01/15 11:10 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 03/01/15 11:10 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 03/01/15 11:10 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 11:10 | 108-20-3 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW28** **Lab ID: 92239087028** Collected: 02/25/15 11:18 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 03/01/15 11:10 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 11:10 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 03/01/15 11:10 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 11:10 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 03/01/15 11:10 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 11:10 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 03/01/15 11:10 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 03/01/15 11:10 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 11:10 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 106 | % | 70-130 | | 1 | | 03/01/15 11:10 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 107 | % | 70-130 | | 1 | | 03/01/15 11:10 | 17060-07-0 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 1 | | 03/01/15 11:10 | 2037-26-5 | |

**Sample: MW29** **Lab ID: 92239087029** Collected: 02/25/15 11:26 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.019 | 0.019 | 1 | 03/02/15 19:47 | 03/03/15 07:46 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 92 | % | 60-140 | | 1 | 03/02/15 19:47 | 03/03/15 07:46 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 03/06/15 13:47 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 03/06/15 13:47 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 13:47 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 03/06/15 13:47 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 03/06/15 13:47 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 03/06/15 13:47 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 03/06/15 13:47 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 13:47 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 03/06/15 13:47 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 13:47 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 03/06/15 13:47 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 13:47 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 03/06/15 13:47 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 13:47 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 03/06/15 13:47 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 03/06/15 13:47 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 13:47 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 104 | % | 70-130 | | 1 | | 03/06/15 13:47 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 101 | % | 70-130 | | 1 | | 03/06/15 13:47 | 17060-07-0 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW29** **Lab ID: 92239087029** Collected: 02/25/15 11:26 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| ***Surrogates*** | | | | | | | | | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 03/06/15 13:47 | 2037-26-5 | |

**Sample: MW30** **Lab ID: 92239087030** Collected: 02/25/15 11:33 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:47 | 03/03/15 08:05 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 92 | % | 60-140 | | 1 | 03/02/15 19:47 | 03/03/15 08:05 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 02/28/15 19:55 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 02/28/15 19:55 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 19:55 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 02/28/15 19:55 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 02/28/15 19:55 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 02/28/15 19:55 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 02/28/15 19:55 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 19:55 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 02/28/15 19:55 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 19:55 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 02/28/15 19:55 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 19:55 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 02/28/15 19:55 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 19:55 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 02/28/15 19:55 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 02/28/15 19:55 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 19:55 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 107 | % | 70-130 | | 1 | | 02/28/15 19:55 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 103 | % | 70-130 | | 1 | | 02/28/15 19:55 | 17060-07-0 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 1 | | 02/28/15 19:55 | 2037-26-5 | |

**Sample: MW31** **Lab ID: 92239087031** Collected: 02/25/15 11:38 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:47 | 03/03/15 08:25 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 92 | % | 60-140 | | 1 | 03/02/15 19:47 | 03/03/15 08:25 | 301-79-56 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW31** **Lab ID: 92239087031** Collected: 02/25/15 11:38 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 500 | 384 | 5 | | 03/01/15 08:03 | 75-85-4 | |
| tert-Amylmethyl ether | **38.7J** | ug/L | 50.0 | 17.0 | 5 | | 03/01/15 08:03 | 994-05-8 | |
| Benzene | ND | ug/L | 25.0 | 8.5 | 5 | | 03/01/15 08:03 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 500 | 160 | 5 | | 03/01/15 08:03 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 500 | 288 | 5 | | 03/01/15 08:03 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 250 | 36.5 | 5 | | 03/01/15 08:03 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 25.0 | 9.0 | 5 | | 03/01/15 08:03 | 107-06-2 | |
| Diisopropyl ether | **378** | ug/L | 25.0 | 8.5 | 5 | | 03/01/15 08:03 | 108-20-3 | |
| Ethanol | ND | ug/L | 1000 | 689 | 5 | | 03/01/15 08:03 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 25.0 | 8.0 | 5 | | 03/01/15 08:03 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 50.0 | 18.0 | 5 | | 03/01/15 08:03 | 637-92-3 | |
| Methyl-tert-butyl ether | **1150** | ug/L | 50.0 | 17.0 | 10 | | 03/02/15 15:08 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 25.0 | 10.0 | 5 | | 03/01/15 08:03 | 91-20-3 | |
| Toluene | ND | ug/L | 25.0 | 8.0 | 5 | | 03/01/15 08:03 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 50.0 | 13.5 | 5 | | 03/01/15 08:03 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 50.0 | 15.5 | 5 | | 03/01/15 08:03 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 25.0 | 8.0 | 5 | | 03/01/15 08:03 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 106 | % | 70-130 | | 5 | | 03/01/15 08:03 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 102 | % | 70-130 | | 5 | | 03/01/15 08:03 | 17060-07-0 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 5 | | 03/01/15 08:03 | 2037-26-5 | |

**Sample: MW32** **Lab ID: 92239087032** Collected: 02/25/15 11:42 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:47 | 03/03/15 08:44 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 91 | % | 60-140 | | 1 | 03/02/15 19:47 | 03/03/15 08:44 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 03/06/15 14:21 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 03/06/15 14:21 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 14:21 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 03/06/15 14:21 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 03/06/15 14:21 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 03/06/15 14:21 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 03/06/15 14:21 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 14:21 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 03/06/15 14:21 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 14:21 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 03/06/15 14:21 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/06/15 14:21 | 1634-04-4 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW32** **Lab ID: 92239087032** Collected: 02/25/15 11:42 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 03/06/15 14:21 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 14:21 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 03/06/15 14:21 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 03/06/15 14:21 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/06/15 14:21 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 106 | % | 70-130 | | 1 | | 03/06/15 14:21 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 101 | % | 70-130 | | 1 | | 03/06/15 14:21 | 17060-07-0 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 03/06/15 14:21 | 2037-26-5 | |

**Sample: MW33** **Lab ID: 92239087033** Collected: 02/25/15 11:38 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.019 | 0.019 | 1 | 03/02/15 19:47 | 03/03/15 09:03 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 92 | % | 60-140 | | 1 | 03/02/15 19:47 | 03/03/15 09:03 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 03/01/15 11:27 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 03/01/15 11:27 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 11:27 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 03/01/15 11:27 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 03/01/15 11:27 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 03/01/15 11:27 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 03/01/15 11:27 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 11:27 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 03/01/15 11:27 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 11:27 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 03/01/15 11:27 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 11:27 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 03/01/15 11:27 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 11:27 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 03/01/15 11:27 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 03/01/15 11:27 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 11:27 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 106 | % | 70-130 | | 1 | | 03/01/15 11:27 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 109 | % | 70-130 | | 1 | | 03/01/15 11:27 | 17060-07-0 | |
| Toluene-d8 (S) | 97 | % | 70-130 | | 1 | | 03/01/15 11:27 | 2037-26-5 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW34** **Lab ID: 92239087034** Collected: 02/25/15 14:10 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:47 | 03/03/15 09:23 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 93 | % | 60-140 | | 1 | 03/02/15 19:47 | 03/03/15 09:23 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 03/01/15 11:44 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 03/01/15 11:44 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 11:44 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 03/01/15 11:44 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 03/01/15 11:44 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 03/01/15 11:44 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 03/01/15 11:44 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 11:44 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 03/01/15 11:44 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 11:44 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 03/01/15 11:44 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 11:44 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 03/01/15 11:44 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 11:44 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 03/01/15 11:44 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 03/01/15 11:44 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 11:44 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 106 | % | 70-130 | | 1 | | 03/01/15 11:44 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 108 | % | 70-130 | | 1 | | 03/01/15 11:44 | 17060-07-0 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 03/01/15 11:44 | 2037-26-5 | |

**Sample: MW35** **Lab ID: 92239087035** Collected: 02/25/15 11:40 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.021 | 0.021 | 1 | 03/02/15 19:48 | 03/03/15 09:42 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 89 | % | 60-140 | | 1 | 03/02/15 19:48 | 03/03/15 09:42 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 1000 | 768 | 10 | | 03/06/15 14:55 | 75-85-4 | |
| tert-Amylmethyl ether | **48.7J** | ug/L | 100 | 34.0 | 10 | | 03/06/15 14:55 | 994-05-8 | |
| Benzene | **147** | ug/L | 50.0 | 17.0 | 10 | | 03/06/15 14:55 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 1000 | 321 | 10 | | 03/06/15 14:55 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 1000 | 577 | 10 | | 03/06/15 14:55 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 500 | 73.0 | 10 | | 03/06/15 14:55 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 50.0 | 18.0 | 10 | | 03/06/15 14:55 | 107-06-2 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW35** **Lab ID: 92239087035** Collected: 02/25/15 11:40 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| Diisopropyl ether | **830** | ug/L | 50.0 | 17.0 | 10 | | 03/06/15 14:55 | 108-20-3 | |
| Ethanol | ND | ug/L | 2000 | 1380 | 10 | | 03/06/15 14:55 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 50.0 | 16.0 | 10 | | 03/06/15 14:55 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 100 | 36.0 | 10 | | 03/06/15 14:55 | 637-92-3 | |
| Methyl-tert-butyl ether | **2960** | ug/L | 125 | 42.5 | 25 | | 03/06/15 18:53 | 1634-04-4 | |
| Naphthalene | **28.7J** | ug/L | 50.0 | 20.0 | 10 | | 03/06/15 14:55 | 91-20-3 | |
| Toluene | ND | ug/L | 50.0 | 16.0 | 10 | | 03/06/15 14:55 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 100 | 27.0 | 10 | | 03/06/15 14:55 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 100 | 31.0 | 10 | | 03/06/15 14:55 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 50.0 | 16.0 | 10 | | 03/06/15 14:55 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 106 | % | 70-130 | | 10 | | 03/06/15 14:55 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 101 | % | 70-130 | | 10 | | 03/06/15 14:55 | 17060-07-0 | |
| Toluene-d8 (S) | 96 | % | 70-130 | | 10 | | 03/06/15 14:55 | 2037-26-5 | |

**Sample: DMW36** **Lab ID: 92239087036** Collected: 02/25/15 11:25 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:48 | 03/03/15 10:01 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 91 | % | 60-140 | | 1 | 03/02/15 19:48 | 03/03/15 10:01 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 02/28/15 20:12 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 02/28/15 20:12 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 20:12 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 02/28/15 20:12 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 02/28/15 20:12 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 02/28/15 20:12 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 02/28/15 20:12 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 20:12 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 02/28/15 20:12 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 20:12 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 02/28/15 20:12 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 20:12 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 02/28/15 20:12 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 20:12 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 02/28/15 20:12 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 02/28/15 20:12 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 20:12 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 106 | % | 70-130 | | 1 | | 02/28/15 20:12 | 460-00-4 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: DMW36** **Lab ID: 92239087036** Collected: 02/25/15 11:25 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| ***Surrogates*** | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 103 | % | 70-130 | | 1 | | 02/28/15 20:12 | 17060-07-0 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 1 | | 02/28/15 20:12 | 2037-26-5 | |

**Sample: DMW37** **Lab ID: 92239087037** Collected: 02/25/15 11:32 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:48 | 03/03/15 10:20 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 94 | % | 60-140 | | 1 | 03/02/15 19:48 | 03/03/15 10:20 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 02/28/15 20:29 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 02/28/15 20:29 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 20:29 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 02/28/15 20:29 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 02/28/15 20:29 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 02/28/15 20:29 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 02/28/15 20:29 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 20:29 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 02/28/15 20:29 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 20:29 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 02/28/15 20:29 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 20:29 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 02/28/15 20:29 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 20:29 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 02/28/15 20:29 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 02/28/15 20:29 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 20:29 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 105 | % | 70-130 | | 1 | | 02/28/15 20:29 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 104 | % | 70-130 | | 1 | | 02/28/15 20:29 | 17060-07-0 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 1 | | 02/28/15 20:29 | 2037-26-5 | |

**Sample: DMW38** **Lab ID: 92239087038** Collected: 02/25/15 11:36 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/02/15 19:48 | 03/03/15 10:39 | 106-93-4 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: DMW38** **Lab ID: 92239087038** Collected: 02/25/15 11:36 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 91 | % | 60-140 | | 1 | 03/02/15 19:48 | 03/03/15 10:39 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 02/28/15 20:45 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 02/28/15 20:45 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 20:45 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 02/28/15 20:45 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 02/28/15 20:45 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 02/28/15 20:45 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 02/28/15 20:45 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 20:45 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 02/28/15 20:45 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 20:45 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 02/28/15 20:45 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 20:45 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 02/28/15 20:45 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 20:45 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 02/28/15 20:45 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 02/28/15 20:45 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 20:45 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 106 | % | 70-130 | | 1 | | 02/28/15 20:45 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 105 | % | 70-130 | | 1 | | 02/28/15 20:45 | 17060-07-0 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 02/28/15 20:45 | 2037-26-5 | |

**Sample: DMW39** **Lab ID: 92239087039** Collected: 02/25/15 11:39 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/03/15 15:48 | 03/03/15 18:13 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 113 | % | 60-140 | | 1 | 03/03/15 15:48 | 03/03/15 18:13 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 02/28/15 21:02 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 02/28/15 21:02 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 21:02 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 02/28/15 21:02 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 02/28/15 21:02 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 02/28/15 21:02 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 02/28/15 21:02 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 21:02 | 108-20-3 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: DMW39** **Lab ID: 92239087039** Collected: 02/25/15 11:39 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 02/28/15 21:02 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 21:02 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 02/28/15 21:02 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 21:02 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 02/28/15 21:02 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 21:02 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 02/28/15 21:02 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 02/28/15 21:02 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 21:02 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 106 | % | 70-130 | | 1 | | 02/28/15 21:02 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 107 | % | 70-130 | | 1 | | 02/28/15 21:02 | 17060-07-0 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 02/28/15 21:02 | 2037-26-5 | |

**Sample: DMW40** **Lab ID: 92239087040** Collected: 02/25/15 10:20 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/03/15 15:48 | 03/03/15 19:12 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 109 | % | 60-140 | | 1 | 03/03/15 15:48 | 03/03/15 19:12 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | **111** | ug/L | 100 | 76.8 | 1 | | 03/01/15 12:01 | 75-85-4 | |
| tert-Amylmethyl ether | **8.4J** | ug/L | 10.0 | 3.4 | 1 | | 03/01/15 12:01 | 994-05-8 | |
| Benzene | **29.2** | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 12:01 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 03/01/15 12:01 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 03/01/15 12:01 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 03/01/15 12:01 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 03/01/15 12:01 | 107-06-2 | |
| Diisopropyl ether | **102** | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 12:01 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 03/01/15 12:01 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 12:01 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 03/01/15 12:01 | 637-92-3 | |
| Methyl-tert-butyl ether | **145** | ug/L | 5.0 | 1.7 | 1 | | 03/01/15 12:01 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 03/01/15 12:01 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 12:01 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 03/01/15 12:01 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 03/01/15 12:01 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 03/01/15 12:01 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 108 | % | 70-130 | | 1 | | 03/01/15 12:01 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 107 | % | 70-130 | | 1 | | 03/01/15 12:01 | 17060-07-0 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: DMW40** **Lab ID: 92239087040** Collected: 02/25/15 10:20 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| ***Surrogates*** | | | | | | | | | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 03/01/15 12:01 | 2037-26-5 | |

**Sample: SW1** **Lab ID: 92239087041** Collected: 02/25/15 13:00 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.019 | 0.019 | 1 | 03/03/15 15:48 | 03/03/15 19:50 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 98 | % | 60-140 | | 1 | 03/03/15 15:48 | 03/03/15 19:50 | 301-79-56 | |
| **8260 MSV Low Level SC** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 02:56 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 0.10 | 1 | | 03/03/15 02:56 | 994-05-8 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 03/03/15 02:56 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 02:56 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 3.6 | 1 | | 03/03/15 02:56 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 1.9 | 1 | | 03/03/15 02:56 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 02:56 | 107-06-2 | |
| Diisopropyl ether | **0.15J** | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 02:56 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 33.0 | 1 | | 03/03/15 02:56 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 03/03/15 02:56 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 0.070 | 1 | | 03/03/15 02:56 | 637-92-3 | |
| Methyl-tert-butyl ether | **0.28J** | ug/L | 1.0 | 0.21 | 1 | | 03/03/15 02:56 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 1.0 | 0.24 | 1 | | 03/03/15 02:56 | 91-20-3 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 03/03/15 02:56 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 02:56 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 02:56 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 1.0 | 0.23 | 1 | | 03/03/15 02:56 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 99 | % | 70-130 | | 1 | | 03/03/15 02:56 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 100 | % | 70-130 | | 1 | | 03/03/15 02:56 | 17060-07-0 | |
| Toluene-d8 (S) | 93 | % | 70-130 | | 1 | | 03/03/15 02:56 | 2037-26-5 | |

**Sample: SW2** **Lab ID: 92239087042** Collected: 02/25/15 13:05 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/03/15 15:48 | 03/03/15 20:09 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 97 | % | 60-140 | | 1 | 03/03/15 15:48 | 03/03/15 20:09 | 301-79-56 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: SW2** **Lab ID: 92239087042** Collected: 02/25/15 13:05 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Low Level SC** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 03:13 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 0.10 | 1 | | 03/03/15 03:13 | 994-05-8 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 03/03/15 03:13 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 03:13 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 3.6 | 1 | | 03/03/15 03:13 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 1.9 | 1 | | 03/03/15 03:13 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 03:13 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 03:13 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 33.0 | 1 | | 03/03/15 03:13 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 03/03/15 03:13 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 0.070 | 1 | | 03/03/15 03:13 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 1.0 | 0.21 | 1 | | 03/03/15 03:13 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 1.0 | 0.24 | 1 | | 03/03/15 03:13 | 91-20-3 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 03/03/15 03:13 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 03:13 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 03:13 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 1.0 | 0.23 | 1 | | 03/03/15 03:13 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 97 | % | 70-130 | | 1 | | 03/03/15 03:13 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 104 | % | 70-130 | | 1 | | 03/03/15 03:13 | 17060-07-0 | |
| Toluene-d8 (S) | 94 | % | 70-130 | | 1 | | 03/03/15 03:13 | 2037-26-5 | |

**Sample: MW10 DUPLICATE** **Lab ID: 92239087043** Collected: 02/25/15 11:30 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | **1.4** | ug/L | 0.039 | 0.039 | 2 | 03/03/15 15:48 | 03/05/15 03:05 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 76 | % | 60-140 | | 2 | 03/03/15 15:48 | 03/05/15 03:05 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 12500 | 9600 | 125 | | 03/06/15 15:12 | 75-85-4 | |
| tert-Amylmethyl ether | **1290** | ug/L | 1250 | 425 | 125 | | 03/06/15 15:12 | 994-05-8 | |
| Benzene | **8540** | ug/L | 625 | 212 | 125 | | 03/06/15 15:12 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 12500 | 4010 | 125 | | 03/06/15 15:12 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 12500 | 7210 | 125 | | 03/06/15 15:12 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 6250 | 912 | 125 | | 03/06/15 15:12 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 625 | 225 | 125 | | 03/06/15 15:12 | 107-06-2 | |
| Diisopropyl ether | **7700** | ug/L | 625 | 212 | 125 | | 03/06/15 15:12 | 108-20-3 | |
| Ethanol | ND | ug/L | 25000 | 17200 | 125 | | 03/06/15 15:12 | 64-17-5 | |
| Ethylbenzene | **3130** | ug/L | 625 | 200 | 125 | | 03/06/15 15:12 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 1250 | 450 | 125 | | 03/06/15 15:12 | 637-92-3 | |
| Methyl-tert-butyl ether | **4760** | ug/L | 625 | 212 | 125 | | 03/06/15 15:12 | 1634-04-4 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MW10 DUPLICATE** **Lab ID: 92239087043** Collected: 02/25/15 11:30 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| Naphthalene | **655** | ug/L | 625 | 250 | 125 | | 03/06/15 15:12 | 91-20-3 | |
| Toluene | **14700** | ug/L | 625 | 200 | 125 | | 03/06/15 15:12 | 108-88-3 | |
| Xylene (Total) | **16900** | ug/L | 1250 | 338 | 125 | | 03/06/15 15:12 | 1330-20-7 | |
| m&p-Xylene | **11500** | ug/L | 1250 | 388 | 125 | | 03/06/15 15:12 | 179601-23-1 | |
| o-Xylene | **5400** | ug/L | 625 | 200 | 125 | | 03/06/15 15:12 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 102 | % | 70-130 | | 125 | | 03/06/15 15:12 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 96 | % | 70-130 | | 125 | | 03/06/15 15:12 | 17060-07-0 | |
| Toluene-d8 (S) | 97 | % | 70-130 | | 125 | | 03/06/15 15:12 | 2037-26-5 | |

**Sample: MW2 DUPLICATE** **Lab ID: 92239087044** Collected: 02/25/15 11:50 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.019 | 0.019 | 1 | 03/03/15 15:48 | 03/03/15 20:48 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 123 | % | 60-140 | | 1 | 03/03/15 15:48 | 03/03/15 20:48 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 5000 | 3840 | 50 | | 03/06/15 15:29 | 75-85-4 | |
| tert-Amylmethyl ether | **297J** | ug/L | 500 | 170 | 50 | | 03/06/15 15:29 | 994-05-8 | |
| Benzene | **3960** | ug/L | 250 | 85.0 | 50 | | 03/06/15 15:29 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 5000 | 1600 | 50 | | 03/06/15 15:29 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 5000 | 2880 | 50 | | 03/06/15 15:29 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 2500 | 365 | 50 | | 03/06/15 15:29 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 250 | 90.0 | 50 | | 03/06/15 15:29 | 107-06-2 | |
| Diisopropyl ether | **2520** | ug/L | 250 | 85.0 | 50 | | 03/06/15 15:29 | 108-20-3 | |
| Ethanol | ND | ug/L | 10000 | 6890 | 50 | | 03/06/15 15:29 | 64-17-5 | |
| Ethylbenzene | **1610** | ug/L | 250 | 80.0 | 50 | | 03/06/15 15:29 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 500 | 180 | 50 | | 03/06/15 15:29 | 637-92-3 | |
| Methyl-tert-butyl ether | **402** | ug/L | 250 | 85.0 | 50 | | 03/06/15 15:29 | 1634-04-4 | |
| Naphthalene | **394** | ug/L | 250 | 100 | 50 | | 03/06/15 15:29 | 91-20-3 | |
| Toluene | **948** | ug/L | 250 | 80.0 | 50 | | 03/06/15 15:29 | 108-88-3 | |
| Xylene (Total) | **3150** | ug/L | 500 | 135 | 50 | | 03/06/15 15:29 | 1330-20-7 | |
| m&p-Xylene | **2050** | ug/L | 500 | 155 | 50 | | 03/06/15 15:29 | 179601-23-1 | |
| o-Xylene | **1100** | ug/L | 250 | 80.0 | 50 | | 03/06/15 15:29 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 101 | % | 70-130 | | 50 | | 03/06/15 15:29 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 98 | % | 70-130 | | 50 | | 03/06/15 15:29 | 17060-07-0 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 50 | | 03/06/15 15:29 | 2037-26-5 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: OMW1 DUPLICATE** **Lab ID: 92239087045** Collected: 02/25/15 12:30 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | **1.5** | ug/L | 0.039 | 0.039 | 2 | 03/03/15 15:48 | 03/05/15 03:24 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 134 | % | 60-140 | | 2 | 03/03/15 15:48 | 03/05/15 03:24 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 25000 | 19200 | 250 | | 03/06/15 15:46 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 2500 | 850 | 250 | | 03/06/15 15:46 | 994-05-8 | |
| Benzene | **3490** | ug/L | 1250 | 425 | 250 | | 03/06/15 15:46 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 25000 | 8020 | 250 | | 03/06/15 15:46 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 25000 | 14400 | 250 | | 03/06/15 15:46 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 12500 | 1820 | 250 | | 03/06/15 15:46 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 1250 | 450 | 250 | | 03/06/15 15:46 | 107-06-2 | |
| Diisopropyl ether | **1240J** | ug/L | 1250 | 425 | 250 | | 03/06/15 15:46 | 108-20-3 | |
| Ethanol | ND | ug/L | 50000 | 34400 | 250 | | 03/06/15 15:46 | 64-17-5 | |
| Ethylbenzene | **1510** | ug/L | 1250 | 400 | 250 | | 03/06/15 15:46 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 2500 | 900 | 250 | | 03/06/15 15:46 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 1250 | 425 | 250 | | 03/06/15 15:46 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 1250 | 500 | 250 | | 03/06/15 15:46 | 91-20-3 | |
| Toluene | **24300** | ug/L | 1250 | 400 | 250 | | 03/06/15 15:46 | 108-88-3 | |
| Xylene (Total) | **12300** | ug/L | 2500 | 675 | 250 | | 03/06/15 15:46 | 1330-20-7 | |
| m&p-Xylene | **7890** | ug/L | 2500 | 775 | 250 | | 03/06/15 15:46 | 179601-23-1 | |
| o-Xylene | **4400** | ug/L | 1250 | 400 | 250 | | 03/06/15 15:46 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 103 | % | 70-130 | | 250 | | 03/06/15 15:46 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 98 | % | 70-130 | | 250 | | 03/06/15 15:46 | 17060-07-0 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 250 | | 03/06/15 15:46 | 2037-26-5 | |

**Sample: FIELD BLANK** **Lab ID: 92239087046** Collected: 02/25/15 14:30 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.019 | 0.019 | 1 | 03/03/15 15:48 | 03/03/15 21:27 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 108 | % | 60-140 | | 1 | 03/03/15 15:48 | 03/03/15 21:27 | 301-79-56 | |
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 02/28/15 17:06 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 02/28/15 17:06 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 17:06 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 02/28/15 17:06 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 02/28/15 17:06 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 02/28/15 17:06 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 02/28/15 17:06 | 107-06-2 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: FIELD BLANK** **Lab ID: 92239087046** Collected: 02/25/15 14:30 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 17:06 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 02/28/15 17:06 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 17:06 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 02/28/15 17:06 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 17:06 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 02/28/15 17:06 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 17:06 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 02/28/15 17:06 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 02/28/15 17:06 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 17:06 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 107 | % | 70-130 | | 1 | | 02/28/15 17:06 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 94 | % | 70-130 | | 1 | | 02/28/15 17:06 | 17060-07-0 | |
| Toluene-d8 (S) | 97 | % | 70-130 | | 1 | | 02/28/15 17:06 | 2037-26-5 | |

**Sample: TRIP BLANK1** **Lab ID: 92239087047** Collected: 02/25/15 14:31 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 02/28/15 17:23 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 02/28/15 17:23 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 17:23 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 02/28/15 17:23 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 02/28/15 17:23 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 02/28/15 17:23 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 02/28/15 17:23 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 17:23 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 02/28/15 17:23 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 17:23 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 02/28/15 17:23 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 17:23 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 02/28/15 17:23 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 17:23 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 02/28/15 17:23 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 02/28/15 17:23 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 17:23 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 110 | % | 70-130 | | 1 | | 02/28/15 17:23 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 95 | % | 70-130 | | 1 | | 02/28/15 17:23 | 17060-07-0 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 1 | | 02/28/15 17:23 | 2037-26-5 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: CLS-WW** **Lab ID: 92239087048** Collected: 02/25/15 14:00 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/03/15 15:48 | 03/03/15 21:46 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 101 | % | 60-140 | | 1 | 03/03/15 15:48 | 03/03/15 21:46 | 301-79-56 | |
| **8260 MSV Low Level SC** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 03:30 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 0.10 | 1 | | 03/03/15 03:30 | 994-05-8 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 03/03/15 03:30 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 03:30 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 3.6 | 1 | | 03/03/15 03:30 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 1.9 | 1 | | 03/03/15 03:30 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 03:30 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 03:30 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 33.0 | 1 | | 03/03/15 03:30 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 03/03/15 03:30 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 0.070 | 1 | | 03/03/15 03:30 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 1.0 | 0.21 | 1 | | 03/03/15 03:30 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 1.0 | 0.24 | 1 | | 03/03/15 03:30 | 91-20-3 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 03/03/15 03:30 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 03:30 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 03:30 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 1.0 | 0.23 | 1 | | 03/03/15 03:30 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 98 | % | 70-130 | | 1 | | 03/03/15 03:30 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 103 | % | 70-130 | | 1 | | 03/03/15 03:30 | 17060-07-0 | |
| Toluene-d8 (S) | 93 | % | 70-130 | | 1 | | 03/03/15 03:30 | 2037-26-5 | |

**Sample: EMS-WW** **Lab ID: 92239087049** Collected: 02/25/15 10:45 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/03/15 15:48 | 03/03/15 22:05 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 99 | % | 60-140 | | 1 | 03/03/15 15:48 | 03/03/15 22:05 | 301-79-56 | |
| **8260 MSV Low Level SC** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 03:47 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 0.10 | 1 | | 03/03/15 03:47 | 994-05-8 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 03/03/15 03:47 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 03:47 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 3.6 | 1 | | 03/03/15 03:47 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 1.9 | 1 | | 03/03/15 03:47 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 03:47 | 107-06-2 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: EMS-WW** **Lab ID: 92239087049** Collected: 02/25/15 10:45 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Low Level SC** | Analytical Method: EPA 8260 | | | | | | | | |
| Diisopropyl ether | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 03:47 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 33.0 | 1 | | 03/03/15 03:47 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 03/03/15 03:47 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 0.070 | 1 | | 03/03/15 03:47 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 1.0 | 0.21 | 1 | | 03/03/15 03:47 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 1.0 | 0.24 | 1 | | 03/03/15 03:47 | 91-20-3 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 03/03/15 03:47 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 03:47 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 03:47 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 1.0 | 0.23 | 1 | | 03/03/15 03:47 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 99 | % | 70-130 | | 1 | | 03/03/15 03:47 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 103 | % | 70-130 | | 1 | | 03/03/15 03:47 | 17060-07-0 | |
| Toluene-d8 (S) | 94 | % | 70-130 | | 1 | | 03/03/15 03:47 | 2037-26-5 | |

**Sample: MCCULLOUGH - WW** **Lab ID: 92239087050** Collected: 02/25/15 11:15 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/03/15 15:48 | 03/03/15 22:24 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 98 | % | 60-140 | | 1 | 03/03/15 15:48 | 03/03/15 22:24 | 301-79-56 | |
| **8260 MSV Low Level SC** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 04:04 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 0.10 | 1 | | 03/03/15 04:04 | 994-05-8 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 03/03/15 04:04 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 04:04 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 3.6 | 1 | | 03/03/15 04:04 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 1.9 | 1 | | 03/03/15 04:04 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 04:04 | 107-06-2 | |
| Diisopropyl ether | **9.2** | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 04:04 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 33.0 | 1 | | 03/03/15 04:04 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 03/03/15 04:04 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 0.070 | 1 | | 03/03/15 04:04 | 637-92-3 | |
| Methyl-tert-butyl ether | **1.1** | ug/L | 1.0 | 0.21 | 1 | | 03/03/15 04:04 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 1.0 | 0.24 | 1 | | 03/03/15 04:04 | 91-20-3 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 03/03/15 04:04 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 04:04 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 04:04 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 1.0 | 0.23 | 1 | | 03/03/15 04:04 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 98 | % | 70-130 | | 1 | | 03/03/15 04:04 | 460-00-4 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MCCULLOUGH - WW** **Lab ID: 92239087050** Collected: 02/25/15 11:15 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Low Level SC** | Analytical Method: EPA 8260 | | | | | | | | |
| ***Surrogates*** | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 102 | % | 70-130 | | 1 | | 03/03/15 04:04 | 17060-07-0 | |
| Toluene-d8 (S) | 94 | % | 70-130 | | 1 | | 03/03/15 04:04 | 2037-26-5 | |

**Sample: CAFE-WW** **Lab ID: 92239087051** Collected: 02/25/15 14:15 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.019 | 0.019 | 1 | 03/03/15 15:48 | 03/03/15 22:43 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 101 | % | 60-140 | | 1 | 03/03/15 15:48 | 03/03/15 22:43 | 301-79-56 | |
| **8260 MSV Low Level SC** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 04:21 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 0.10 | 1 | | 03/03/15 04:21 | 994-05-8 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 03/03/15 04:21 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 04:21 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 3.6 | 1 | | 03/03/15 04:21 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 1.9 | 1 | | 03/03/15 04:21 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 04:21 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 04:21 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 33.0 | 1 | | 03/03/15 04:21 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 03/03/15 04:21 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 0.070 | 1 | | 03/03/15 04:21 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 1.0 | 0.21 | 1 | | 03/03/15 04:21 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 1.0 | 0.24 | 1 | | 03/03/15 04:21 | 91-20-3 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 03/03/15 04:21 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 04:21 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 04:21 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 1.0 | 0.23 | 1 | | 03/03/15 04:21 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 101 | % | 70-130 | | 1 | | 03/03/15 04:21 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 105 | % | 70-130 | | 1 | | 03/03/15 04:21 | 17060-07-0 | |
| Toluene-d8 (S) | 93 | % | 70-130 | | 1 | | 03/03/15 04:21 | 2037-26-5 | |

**Sample: OLD SERVICE STATION WW** **Lab ID: 92239087052** Collected: 02/25/15 14:20 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.019 | 0.019 | 1 | 03/03/15 15:48 | 03/03/15 23:03 | 106-93-4 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: OLD SERVICE STATION WW** **Lab ID: 92239087052** Collected: 02/25/15 14:20 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 104 | % | 60-140 | | 1 | 03/03/15 15:48 | 03/03/15 23:03 | 301-79-56 | |
| **8260 MSV Low Level SC** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 04:38 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 0.10 | 1 | | 03/03/15 04:38 | 994-05-8 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 03/03/15 04:38 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 04:38 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 3.6 | 1 | | 03/03/15 04:38 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 1.9 | 1 | | 03/03/15 04:38 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 04:38 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 04:38 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 33.0 | 1 | | 03/03/15 04:38 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 03/03/15 04:38 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 0.070 | 1 | | 03/03/15 04:38 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 1.0 | 0.21 | 1 | | 03/03/15 04:38 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 1.0 | 0.24 | 1 | | 03/03/15 04:38 | 91-20-3 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 03/03/15 04:38 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 04:38 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 04:38 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 1.0 | 0.23 | 1 | | 03/03/15 04:38 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 99 | % | 70-130 | | 1 | | 03/03/15 04:38 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 100 | % | 70-130 | | 1 | | 03/03/15 04:38 | 17060-07-0 | |
| Toluene-d8 (S) | 94 | % | 70-130 | | 1 | | 03/03/15 04:38 | 2037-26-5 | |

**Sample: SCOTT WW** **Lab ID: 92239087053** Collected: 02/25/15 14:25 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.019 | 0.019 | 1 | 03/03/15 15:48 | 03/03/15 23:22 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 107 | % | 60-140 | | 1 | 03/03/15 15:48 | 03/03/15 23:22 | 301-79-56 | |
| **8260 MSV Low Level SC** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 04:55 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 0.10 | 1 | | 03/03/15 04:55 | 994-05-8 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 03/03/15 04:55 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 04:55 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 3.6 | 1 | | 03/03/15 04:55 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 1.9 | 1 | | 03/03/15 04:55 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 04:55 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 04:55 | 108-20-3 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: SCOTT WW** **Lab ID: 92239087053** Collected: 02/25/15 14:25 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Low Level SC** | Analytical Method: EPA 8260 | | | | | | | | |
| Ethanol | ND | ug/L | 200 | 33.0 | 1 | | 03/03/15 04:55 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 03/03/15 04:55 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 0.070 | 1 | | 03/03/15 04:55 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 1.0 | 0.21 | 1 | | 03/03/15 04:55 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 1.0 | 0.24 | 1 | | 03/03/15 04:55 | 91-20-3 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 03/03/15 04:55 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 04:55 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 04:55 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 1.0 | 0.23 | 1 | | 03/03/15 04:55 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 100 | % | 70-130 | | 1 | | 03/03/15 04:55 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 102 | % | 70-130 | | 1 | | 03/03/15 04:55 | 17060-07-0 | |
| Toluene-d8 (S) | 93 | % | 70-130 | | 1 | | 03/03/15 04:55 | 2037-26-5 | |

**Sample: FARM WW** **Lab ID: 92239087054** Collected: 02/25/15 12:10 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/03/15 15:48 | 03/03/15 23:42 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 97 | % | 60-140 | | 1 | 03/03/15 15:48 | 03/03/15 23:42 | 301-79-56 | |
| **8260 MSV Low Level SC** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 05:12 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 0.10 | 1 | | 03/03/15 05:12 | 994-05-8 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 03/03/15 05:12 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 05:12 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 3.6 | 1 | | 03/03/15 05:12 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 1.9 | 1 | | 03/03/15 05:12 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 05:12 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 05:12 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 33.0 | 1 | | 03/03/15 05:12 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 03/03/15 05:12 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 0.070 | 1 | | 03/03/15 05:12 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 1.0 | 0.21 | 1 | | 03/03/15 05:12 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 1.0 | 0.24 | 1 | | 03/03/15 05:12 | 91-20-3 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 03/03/15 05:12 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 05:12 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 05:12 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 1.0 | 0.23 | 1 | | 03/03/15 05:12 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 98 | % | 70-130 | | 1 | | 03/03/15 05:12 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 101 | % | 70-130 | | 1 | | 03/03/15 05:12 | 17060-07-0 | |

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: FARM WW** **Lab ID: 92239087054** Collected: 02/25/15 12:10 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Low Level SC** | Analytical Method: EPA 8260 | | | | | | | | |
| ***Surrogates*** | | | | | | | | | |
| Toluene-d8 (S) | 93 | % | 70-130 | | 1 | | 03/03/15 05:12 | 2037-26-5 | |

**Sample: TRIP BLANK 2** **Lab ID: 92239087055** Collected: 02/25/15 14:35 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 02/28/15 17:40 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 02/28/15 17:40 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 17:40 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 02/28/15 17:40 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 02/28/15 17:40 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 02/28/15 17:40 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 02/28/15 17:40 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 17:40 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 02/28/15 17:40 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 17:40 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 02/28/15 17:40 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 02/28/15 17:40 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 02/28/15 17:40 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 17:40 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 02/28/15 17:40 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 02/28/15 17:40 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 02/28/15 17:40 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 109 | % | 70-130 | | 1 | | 02/28/15 17:40 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 95 | % | 70-130 | | 1 | | 02/28/15 17:40 | 17060-07-0 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 1 | | 02/28/15 17:40 | 2037-26-5 | |

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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

QC Batch: MSV/30554 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Low Level SC
Associated Lab Samples: 92239087041, 92239087042, 92239087048, 92239087049, 92239087050, 92239087051, 92239087052, 92239087053, 92239087054

METHOD BLANK: 1400621 Matrix: Water
Associated Lab Samples: 92239087041, 92239087042, 92239087048, 92239087049, 92239087050, 92239087051, 92239087052, 92239087053, 92239087054

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | 1.0 | 03/03/15 00:07 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | 100 | 03/03/15 00:07 | |
| Benzene | ug/L | ND | 1.0 | 03/03/15 00:07 | |
| Diisopropyl ether | ug/L | ND | 1.0 | 03/03/15 00:07 | |
| Ethanol | ug/L | 97.2J | 200 | 03/03/15 00:07 | |
| Ethyl-tert-butyl ether | ug/L | ND | 10.0 | 03/03/15 00:07 | |
| Ethylbenzene | ug/L | ND | 1.0 | 03/03/15 00:07 | |
| m&p-Xylene | ug/L | ND | 2.0 | 03/03/15 00:07 | |
| Methyl-tert-butyl ether | ug/L | ND | 1.0 | 03/03/15 00:07 | |
| Naphthalene | ug/L | ND | 1.0 | 03/03/15 00:07 | |
| o-Xylene | ug/L | ND | 1.0 | 03/03/15 00:07 | |
| tert-Amyl Alcohol | ug/L | ND | 100 | 03/03/15 00:07 | |
| tert-Amylmethyl ether | ug/L | ND | 10.0 | 03/03/15 00:07 | |
| tert-Butyl Alcohol | ug/L | ND | 100 | 03/03/15 00:07 | |
| tert-Butyl Formate | ug/L | ND | 50.0 | 03/03/15 00:07 | |
| Toluene | ug/L | ND | 1.0 | 03/03/15 00:07 | |
| Xylene (Total) | ug/L | ND | 2.0 | 03/03/15 00:07 | |
| 1,2-Dichloroethane-d4 (S) | % | 100 | 70-130 | 03/03/15 00:07 | |
| 4-Bromofluorobenzene (S) | % | 100 | 70-130 | 03/03/15 00:07 | |
| Toluene-d8 (S) | % | 92 | 70-130 | 03/03/15 00:07 | |

LABORATORY CONTROL SAMPLE: 1400622

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | 50 | 50.5 | 101 | 70-130 | |
| 3,3-Dimethyl-1-Butanol | ug/L | 1000 | 771 | 77 | 70-130 | |
| Benzene | ug/L | 50 | 47.5 | 95 | 70-130 | |
| Diisopropyl ether | ug/L | 50 | 50.7 | 101 | 70-130 | |
| Ethanol | ug/L | 2000 | 2030 | 101 | 70-130 | |
| Ethyl-tert-butyl ether | ug/L | 100 | 99.3 | 99 | 70-130 | |
| Ethylbenzene | ug/L | 50 | 46.5 | 93 | 70-130 | |
| m&p-Xylene | ug/L | 100 | 93.0 | 93 | 70-130 | |
| Methyl-tert-butyl ether | ug/L | 50 | 44.0 | 88 | 70-130 | |
| Naphthalene | ug/L | 50 | 41.6 | 83 | 70-130 | |
| o-Xylene | ug/L | 50 | 45.6 | 91 | 70-130 | |
| tert-Amyl Alcohol | ug/L | 1000 | 846 | 85 | 70-130 | |
| tert-Amylmethyl ether | ug/L | 100 | 88.8 | 89 | 70-130 | |
| tert-Butyl Alcohol | ug/L | 500 | 456 | 91 | 70-130 | |

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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

LABORATORY CONTROL SAMPLE: 1400622

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| tert-Butyl Formate | ug/L | 400 | 300 | 75 | 70-130 | |
| Toluene | ug/L | 50 | 46.3 | 93 | 70-130 | |
| Xylene (Total) | ug/L | 150 | 139 | 92 | 70-130 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 94 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 99 | 70-130 | |
| Toluene-d8 (S) | % | | | 98 | 70-130 | |

MATRIX SPIKE SAMPLE: 1400624

| Parameter | Units | 92239097018 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | 20 | 22.4 | 112 | 70-130 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | 400 | 303 | 76 | 70-130 | |
| Benzene | ug/L | 1.0 | 20 | 23.1 | 110 | 70-130 | |
| Diisopropyl ether | ug/L | ND | 20 | 19.6 | 98 | 70-130 | |
| Ethanol | ug/L | ND | 800 | 647 | 81 | 70-130 | |
| Ethyl-tert-butyl ether | ug/L | ND | 40 | 40.2 | 100 | 70-130 | |
| Ethylbenzene | ug/L | ND | 20 | 21.1 | 106 | 70-130 | |
| m&p-Xylene | ug/L | 2.8 | 40 | 46.1 | 108 | 70-130 | |
| Methyl-tert-butyl ether | ug/L | ND | 20 | 17.4 | 87 | 70-130 | |
| Naphthalene | ug/L | ND | 20 | 16.1 | 81 | 70-130 | |
| o-Xylene | ug/L | 5.6 | 20 | 27.1 | 107 | 70-130 | |
| tert-Amyl Alcohol | ug/L | ND | 400 | 327 | 82 | 70-130 | |
| tert-Amylmethyl ether | ug/L | ND | 40 | 36.7 | 92 | 70-130 | |
| tert-Butyl Alcohol | ug/L | ND | 200 | 176 | 88 | 70-130 | |
| tert-Butyl Formate | ug/L | ND | 160 | 109 | 68 | 70-130 | P5 |
| Toluene | ug/L | ND | 20 | 20.8 | 104 | 70-130 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | 96 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | | 94 | 70-130 | |
| Toluene-d8 (S) | % | | | | 96 | 70-130 | |

SAMPLE DUPLICATE: 1400623

| Parameter | Units | 92239097017 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | ND | | 30 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | ND | | 30 | |
| Benzene | ug/L | ND | ND | | 30 | |
| Diisopropyl ether | ug/L | ND | ND | | 30 | |
| Ethanol | ug/L | ND | ND | | 30 | |
| Ethyl-tert-butyl ether | ug/L | ND | ND | | 30 | |
| Ethylbenzene | ug/L | ND | ND | | 30 | |
| m&p-Xylene | ug/L | ND | ND | | 30 | |
| Methyl-tert-butyl ether | ug/L | ND | ND | | 30 | |
| Naphthalene | ug/L | ND | ND | | 30 | |
| o-Xylene | ug/L | ND | ND | | 30 | |

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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

SAMPLE DUPLICATE: 1400623

| Parameter | Units | 92239097017 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| tert-Amyl Alcohol | ug/L | ND | ND | | 30 | |
| tert-Amylmethyl ether | ug/L | ND | ND | | 30 | |
| tert-Butyl Alcohol | ug/L | ND | ND | | 30 | |
| tert-Butyl Formate | ug/L | ND | ND | | 30 | |
| Toluene | ug/L | ND | ND | | 30 | |
| Xylene (Total) | ug/L | ND | ND | | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | 107 | 106 | 1 | | |
| 4-Bromofluorobenzene (S) | % | 98 | 100 | 2 | | |
| Toluene-d8 (S) | % | 94 | 94 | 1 | | |

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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

QC Batch: MSV/30529 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92239087007, 92239087008, 92239087015, 92239087016, 92239087017, 92239087018, 92239087030, 92239087036, 92239087037, 92239087038, 92239087039, 92239087046, 92239087047, 92239087055

METHOD BLANK: 1400184 Matrix: Water
Associated Lab Samples: 92239087007, 92239087008, 92239087015, 92239087016, 92239087017, 92239087018, 92239087030, 92239087036, 92239087037, 92239087038, 92239087039, 92239087046, 92239087047, 92239087055

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | 5.0 | 02/28/15 14:00 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | 100 | 02/28/15 14:00 | |
| Benzene | ug/L | ND | 5.0 | 02/28/15 14:00 | |
| Diisopropyl ether | ug/L | ND | 5.0 | 02/28/15 14:00 | |
| Ethanol | ug/L | ND | 200 | 02/28/15 14:00 | |
| Ethyl-tert-butyl ether | ug/L | ND | 10.0 | 02/28/15 14:00 | |
| Ethylbenzene | ug/L | ND | 5.0 | 02/28/15 14:00 | |
| m&p-Xylene | ug/L | ND | 10.0 | 02/28/15 14:00 | |
| Methyl-tert-butyl ether | ug/L | ND | 5.0 | 02/28/15 14:00 | |
| Naphthalene | ug/L | ND | 5.0 | 02/28/15 14:00 | |
| o-Xylene | ug/L | ND | 5.0 | 02/28/15 14:00 | |
| tert-Amyl Alcohol | ug/L | ND | 100 | 02/28/15 14:00 | |
| tert-Amylmethyl ether | ug/L | ND | 10.0 | 02/28/15 14:00 | |
| tert-Butyl Alcohol | ug/L | ND | 100 | 02/28/15 14:00 | |
| tert-Butyl Formate | ug/L | ND | 50.0 | 02/28/15 14:00 | |
| Toluene | ug/L | ND | 5.0 | 02/28/15 14:00 | |
| Xylene (Total) | ug/L | ND | 10.0 | 02/28/15 14:00 | |
| 1,2-Dichloroethane-d4 (S) | % | 94 | 70-130 | 02/28/15 14:00 | |
| 4-Bromofluorobenzene (S) | % | 106 | 70-130 | 02/28/15 14:00 | |
| Toluene-d8 (S) | % | 99 | 70-130 | 02/28/15 14:00 | |

LABORATORY CONTROL SAMPLE: 1400185

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | 50 | 46.7 | 93 | 70-130 | |
| 3,3-Dimethyl-1-Butanol | ug/L | 1000 | 1150 | 115 | 70-130 | |
| Benzene | ug/L | 50 | 55.2 | 110 | 70-130 | |
| Diisopropyl ether | ug/L | 50 | 45.2 | 90 | 70-130 | |
| Ethanol | ug/L | 2000 | 3060 | 153 | 70-130 | L3 |
| Ethyl-tert-butyl ether | ug/L | 100 | 106 | 106 | 70-130 | |
| Ethylbenzene | ug/L | 50 | 55.0 | 110 | 70-130 | |
| m&p-Xylene | ug/L | 100 | 111 | 111 | 70-130 | |
| Methyl-tert-butyl ether | ug/L | 50 | 45.2 | 90 | 70-130 | |
| Naphthalene | ug/L | 50 | 51.4 | 103 | 70-130 | |
| o-Xylene | ug/L | 50 | 53.4 | 107 | 70-130 | |
| tert-Amyl Alcohol | ug/L | 1000 | 1140 | 114 | 70-130 | |
| tert-Amylmethyl ether | ug/L | 100 | 107 | 107 | 70-130 | |
| tert-Butyl Alcohol | ug/L | 500 | 537 | 107 | 70-130 | |

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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

LABORATORY CONTROL SAMPLE: 1400185

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| tert-Butyl Formate | ug/L | 400 | 466 | 117 | 70-130 | |
| Toluene | ug/L | 50 | 54.8 | 110 | 70-130 | |
| Xylene (Total) | ug/L | 150 | 164 | 109 | 70-130 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 89 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 108 | 70-130 | |
| Toluene-d8 (S) | % | | | 100 | 70-130 | |

MATRIX SPIKE SAMPLE: 1400186

| Parameter | Units | 92239087007 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | 20 | 16.9 | 84 | 70-130 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | 400 | 459 | 115 | 70-130 | |
| Benzene | ug/L | ND | 20 | 20.7 | 104 | 70-130 | |
| Diisopropyl ether | ug/L | ND | 20 | 16.3 | 82 | 70-130 | |
| Ethanol | ug/L | ND | 800 | 1310 | 163 | 70-130 | M0 |
| Ethyl-tert-butyl ether | ug/L | ND | 40 | 37.7 | 94 | 70-130 | |
| Ethylbenzene | ug/L | ND | 20 | 20.9 | 104 | 70-130 | |
| m&p-Xylene | ug/L | ND | 40 | 42.2 | 105 | 70-130 | |
| Methyl-tert-butyl ether | ug/L | ND | 20 | 16.0 | 80 | 70-130 | |
| Naphthalene | ug/L | ND | 20 | 20.1 | 100 | 70-130 | |
| o-Xylene | ug/L | ND | 20 | 20.5 | 103 | 70-130 | |
| tert-Amyl Alcohol | ug/L | ND | 400 | 468 | 117 | 70-130 | |
| tert-Amylmethyl ether | ug/L | ND | 40 | 39.0 | 97 | 70-130 | |
| tert-Butyl Alcohol | ug/L | ND | 200 | 236 | 118 | 70-130 | |
| tert-Butyl Formate | ug/L | ND | 160 | 120 | 75 | 70-130 | |
| Toluene | ug/L | ND | 20 | 20.8 | 103 | 70-130 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | 87 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | | 110 | 70-130 | |
| Toluene-d8 (S) | % | | | | 100 | 70-130 | |

SAMPLE DUPLICATE: 1400187

| Parameter | Units | 92239087008 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | ND | | 30 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | ND | | 30 | |
| Benzene | ug/L | ND | ND | | 30 | |
| Diisopropyl ether | ug/L | ND | ND | | 30 | |
| Ethanol | ug/L | ND | ND | | 30 | |
| Ethyl-tert-butyl ether | ug/L | ND | ND | | 30 | |
| Ethylbenzene | ug/L | ND | ND | | 30 | |
| m&p-Xylene | ug/L | ND | ND | | 30 | |
| Methyl-tert-butyl ether | ug/L | ND | ND | | 30 | |
| Naphthalene | ug/L | ND | ND | | 30 | |
| o-Xylene | ug/L | ND | ND | | 30 | |

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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

SAMPLE DUPLICATE: 1400187

| Parameter | Units | 92239087008 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| tert-Amyl Alcohol | ug/L | ND | ND | | 30 | |
| tert-Amylmethyl ether | ug/L | ND | ND | | 30 | |
| tert-Butyl Alcohol | ug/L | ND | ND | | 30 | |
| tert-Butyl Formate | ug/L | ND | ND | | 30 | |
| Toluene | ug/L | ND | ND | | 30 | |
| Xylene (Total) | ug/L | ND | ND | | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | 96 | 99 | 3 | | |
| 4-Bromofluorobenzene (S) | % | 107 | 107 | 0 | | |
| Toluene-d8 (S) | % | 98 | 98 | 0 | | |

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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

QC Batch: MSV/30531 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92239087002, 92239087004, 92239087010, 92239087011, 92239087013, 92239087031

METHOD BLANK: 1400194 Matrix: Water
Associated Lab Samples: 92239087002, 92239087004, 92239087010, 92239087011, 92239087013, 92239087031

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | 5.0 | 03/01/15 02:07 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | 100 | 03/01/15 02:07 | |
| Benzene | ug/L | ND | 5.0 | 03/01/15 02:07 | |
| Diisopropyl ether | ug/L | ND | 5.0 | 03/01/15 02:07 | |
| Ethanol | ug/L | ND | 200 | 03/01/15 02:07 | |
| Ethyl-tert-butyl ether | ug/L | ND | 10.0 | 03/01/15 02:07 | |
| Ethylbenzene | ug/L | ND | 5.0 | 03/01/15 02:07 | |
| m&p-Xylene | ug/L | ND | 10.0 | 03/01/15 02:07 | |
| Methyl-tert-butyl ether | ug/L | ND | 5.0 | 03/01/15 02:07 | |
| Naphthalene | ug/L | ND | 5.0 | 03/01/15 02:07 | |
| o-Xylene | ug/L | ND | 5.0 | 03/01/15 02:07 | |
| tert-Amyl Alcohol | ug/L | ND | 100 | 03/01/15 02:07 | |
| tert-Amylmethyl ether | ug/L | ND | 10.0 | 03/01/15 02:07 | |
| tert-Butyl Alcohol | ug/L | ND | 100 | 03/01/15 02:07 | |
| tert-Butyl Formate | ug/L | ND | 50.0 | 03/01/15 02:07 | |
| Toluene | ug/L | ND | 5.0 | 03/01/15 02:07 | |
| Xylene (Total) | ug/L | ND | 10.0 | 03/01/15 02:07 | |
| 1,2-Dichloroethane-d4 (S) | % | 97 | 70-130 | 03/01/15 02:07 | |
| 4-Bromofluorobenzene (S) | % | 105 | 70-130 | 03/01/15 02:07 | |
| Toluene-d8 (S) | % | 98 | 70-130 | 03/01/15 02:07 | |

LABORATORY CONTROL SAMPLE: 1400195

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | 50 | 43.4 | 87 | 70-130 | |
| 3,3-Dimethyl-1-Butanol | ug/L | 1000 | 1050 | 105 | 70-130 | |
| Benzene | ug/L | 50 | 47.9 | 96 | 70-130 | |
| Diisopropyl ether | ug/L | 50 | 41.3 | 83 | 70-130 | |
| Ethanol | ug/L | 2000 | 2870 | 143 | 70-130 | L3 |
| Ethyl-tert-butyl ether | ug/L | 100 | 95.2 | 95 | 70-130 | |
| Ethylbenzene | ug/L | 50 | 49.2 | 98 | 70-130 | |
| m&p-Xylene | ug/L | 100 | 98.5 | 98 | 70-130 | |
| Methyl-tert-butyl ether | ug/L | 50 | 40.6 | 81 | 70-130 | |
| Naphthalene | ug/L | 50 | 46.9 | 94 | 70-130 | |
| o-Xylene | ug/L | 50 | 48.0 | 96 | 70-130 | |
| tert-Amyl Alcohol | ug/L | 1000 | 1090 | 109 | 70-130 | |
| tert-Amylmethyl ether | ug/L | 100 | 94.1 | 94 | 70-130 | |
| tert-Butyl Alcohol | ug/L | 500 | 518 | 104 | 70-130 | |
| tert-Butyl Formate | ug/L | 400 | 413 | 103 | 70-130 | |
| Toluene | ug/L | 50 | 47.6 | 95 | 70-130 | |

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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

LABORATORY CONTROL SAMPLE: 1400195

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Xylene (Total) | ug/L | 150 | 146 | 98 | 70-130 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 93 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 107 | 70-130 | |
| Toluene-d8 (S) | % | | | 100 | 70-130 | |

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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

QC Batch: MSV/30532 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92239087009, 92239087012, 92239087014, 92239087019, 92239087020, 92239087021, 92239087023, 92239087027, 92239087028, 92239087033, 92239087034, 92239087040

METHOD BLANK: 1400198 Matrix: Water
Associated Lab Samples: 92239087009, 92239087012, 92239087014, 92239087019, 92239087020, 92239087021, 92239087023, 92239087027, 92239087028, 92239087033, 92239087034, 92239087040

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | 5.0 | 03/01/15 02:24 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | 100 | 03/01/15 02:24 | |
| Benzene | ug/L | ND | 5.0 | 03/01/15 02:24 | |
| Diisopropyl ether | ug/L | ND | 5.0 | 03/01/15 02:24 | |
| Ethanol | ug/L | ND | 200 | 03/01/15 02:24 | |
| Ethyl-tert-butyl ether | ug/L | ND | 10.0 | 03/01/15 02:24 | |
| Ethylbenzene | ug/L | ND | 5.0 | 03/01/15 02:24 | |
| m&p-Xylene | ug/L | ND | 10.0 | 03/01/15 02:24 | |
| Methyl-tert-butyl ether | ug/L | ND | 5.0 | 03/01/15 02:24 | |
| Naphthalene | ug/L | ND | 5.0 | 03/01/15 02:24 | |
| o-Xylene | ug/L | ND | 5.0 | 03/01/15 02:24 | |
| tert-Amyl Alcohol | ug/L | ND | 100 | 03/01/15 02:24 | |
| tert-Amylmethyl ether | ug/L | ND | 10.0 | 03/01/15 02:24 | |
| tert-Butyl Alcohol | ug/L | ND | 100 | 03/01/15 02:24 | |
| tert-Butyl Formate | ug/L | ND | 50.0 | 03/01/15 02:24 | |
| Toluene | ug/L | ND | 5.0 | 03/01/15 02:24 | |
| Xylene (Total) | ug/L | ND | 10.0 | 03/01/15 02:24 | |
| 1,2-Dichloroethane-d4 (S) | % | 99 | 70-130 | 03/01/15 02:24 | |
| 4-Bromofluorobenzene (S) | % | 105 | 70-130 | 03/01/15 02:24 | |
| Toluene-d8 (S) | % | 99 | 70-130 | 03/01/15 02:24 | |

LABORATORY CONTROL SAMPLE: 1400199

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | 50 | 44.0 | 88 | 70-130 | |
| 3,3-Dimethyl-1-Butanol | ug/L | 1000 | 1160 | 116 | 70-130 | |
| Benzene | ug/L | 50 | 48.6 | 97 | 70-130 | |
| Diisopropyl ether | ug/L | 50 | 42.0 | 84 | 70-130 | |
| Ethanol | ug/L | 2000 | 2990 | 150 | 70-130 | L3 |
| Ethyl-tert-butyl ether | ug/L | 100 | 97.3 | 97 | 70-130 | |
| Ethylbenzene | ug/L | 50 | 48.8 | 98 | 70-130 | |
| m&p-Xylene | ug/L | 100 | 98.5 | 99 | 70-130 | |
| Methyl-tert-butyl ether | ug/L | 50 | 42.0 | 84 | 70-130 | |
| Naphthalene | ug/L | 50 | 49.2 | 98 | 70-130 | |
| o-Xylene | ug/L | 50 | 48.0 | 96 | 70-130 | |
| tert-Amyl Alcohol | ug/L | 1000 | 1160 | 116 | 70-130 | |
| tert-Amylmethyl ether | ug/L | 100 | 96.6 | 97 | 70-130 | |
| tert-Butyl Alcohol | ug/L | 500 | 544 | 109 | 70-130 | |

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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

LABORATORY CONTROL SAMPLE: 1400199

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| tert-Butyl Formate | ug/L | 400 | 431 | 108 | 70-130 | |
| Toluene | ug/L | 50 | 48.0 | 96 | 70-130 | |
| Xylene (Total) | ug/L | 150 | 146 | 98 | 70-130 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 92 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 107 | 70-130 | |
| Toluene-d8 (S) | % | | | 101 | 70-130 | |

MATRIX SPIKE SAMPLE: 1400388

| Parameter | Units | 92239087012 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | 20 | 19.3 | 96 | 70-130 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | 400 | 428 | 107 | 70-130 | |
| Benzene | ug/L | ND | 20 | 21.5 | 107 | 70-130 | |
| Diisopropyl ether | ug/L | ND | 20 | 19.2 | 96 | 70-130 | |
| Ethanol | ug/L | ND | 800 | 1410 | 176 | 70-130 | M0 |
| Ethyl-tert-butyl ether | ug/L | ND | 40 | 42.4 | 106 | 70-130 | |
| Ethylbenzene | ug/L | ND | 20 | 21.9 | 110 | 70-130 | |
| m&p-Xylene | ug/L | ND | 40 | 43.0 | 107 | 70-130 | |
| Methyl-tert-butyl ether | ug/L | ND | 20 | 19.1 | 96 | 70-130 | |
| Naphthalene | ug/L | ND | 20 | 19.6 | 98 | 70-130 | |
| o-Xylene | ug/L | ND | 20 | 20.7 | 103 | 70-130 | |
| tert-Amyl Alcohol | ug/L | ND | 400 | 440 | 110 | 70-130 | |
| tert-Amylmethyl ether | ug/L | ND | 40 | 42.7 | 107 | 70-130 | |
| tert-Butyl Alcohol | ug/L | ND | 200 | 230 | 115 | 70-130 | |
| tert-Butyl Formate | ug/L | ND | 160 | 134 | 84 | 70-130 | |
| Toluene | ug/L | ND | 20 | 21.0 | 105 | 70-130 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | 98 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | | 110 | 70-130 | |
| Toluene-d8 (S) | % | | | | 100 | 70-130 | |

SAMPLE DUPLICATE: 1400389

| Parameter | Units | 92239087014 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | ND | | 30 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | ND | | 30 | |
| Benzene | ug/L | ND | ND | | 30 | |
| Diisopropyl ether | ug/L | ND | ND | | 30 | |
| Ethanol | ug/L | ND | ND | | 30 | |
| Ethyl-tert-butyl ether | ug/L | ND | ND | | 30 | |
| Ethylbenzene | ug/L | ND | ND | | 30 | |
| m&p-Xylene | ug/L | ND | ND | | 30 | |
| Methyl-tert-butyl ether | ug/L | ND | ND | | 30 | |
| Naphthalene | ug/L | ND | ND | | 30 | |
| o-Xylene | ug/L | ND | ND | | 30 | |

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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

SAMPLE DUPLICATE: 1400389

| Parameter | Units | 92239087014 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| tert-Amyl Alcohol | ug/L | ND | ND | | 30 | |
| tert-Amylmethyl ether | ug/L | ND | ND | | 30 | |
| tert-Butyl Alcohol | ug/L | ND | ND | | 30 | |
| tert-Butyl Formate | ug/L | ND | ND | | 30 | |
| Toluene | ug/L | ND | ND | | 30 | |
| Xylene (Total) | ug/L | ND | ND | | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | 103 | 107 | 3 | | |
| 4-Bromofluorobenzene (S) | % | 106 | 108 | 2 | | |
| Toluene-d8 (S) | % | 99 | 99 | 1 | | |

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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

QC Batch: MSV/30579 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92239087001, 92239087003, 92239087005, 92239087006

METHOD BLANK: 1402259 Matrix: Water
Associated Lab Samples: 92239087001, 92239087003, 92239087005, 92239087006

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | 5.0 | 03/06/15 06:05 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | 100 | 03/06/15 06:05 | |
| Benzene | ug/L | ND | 5.0 | 03/06/15 06:05 | |
| Diisopropyl ether | ug/L | ND | 5.0 | 03/06/15 06:05 | |
| Ethanol | ug/L | ND | 200 | 03/06/15 06:05 | |
| Ethyl-tert-butyl ether | ug/L | ND | 10.0 | 03/06/15 06:05 | |
| Ethylbenzene | ug/L | ND | 5.0 | 03/06/15 06:05 | |
| m&p-Xylene | ug/L | ND | 10.0 | 03/06/15 06:05 | |
| Methyl-tert-butyl ether | ug/L | ND | 5.0 | 03/06/15 06:05 | |
| Naphthalene | ug/L | ND | 5.0 | 03/06/15 06:05 | |
| o-Xylene | ug/L | ND | 5.0 | 03/06/15 06:05 | |
| tert-Amyl Alcohol | ug/L | ND | 100 | 03/06/15 06:05 | |
| tert-Amylmethyl ether | ug/L | ND | 10.0 | 03/06/15 06:05 | |
| tert-Butyl Alcohol | ug/L | ND | 100 | 03/06/15 06:05 | |
| tert-Butyl Formate | ug/L | ND | 50.0 | 03/06/15 06:05 | |
| Toluene | ug/L | ND | 5.0 | 03/06/15 06:05 | |
| Xylene (Total) | ug/L | ND | 10.0 | 03/06/15 06:05 | |
| 1,2-Dichloroethane-d4 (S) | % | 100 | 70-130 | 03/06/15 06:05 | |
| 4-Bromofluorobenzene (S) | % | 99 | 70-130 | 03/06/15 06:05 | |
| Toluene-d8 (S) | % | 100 | 70-130 | 03/06/15 06:05 | |

LABORATORY CONTROL SAMPLE: 1402260

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | 50 | 43.3 | 87 | 70-130 | |
| 3,3-Dimethyl-1-Butanol | ug/L | 1000 | 1050 | 105 | 70-130 | |
| Benzene | ug/L | 50 | 50.2 | 100 | 70-130 | |
| Diisopropyl ether | ug/L | 50 | 48.2 | 96 | 70-130 | |
| Ethanol | ug/L | 2000 | 2430 | 121 | 70-130 | |
| Ethyl-tert-butyl ether | ug/L | 100 | 102 | 102 | 70-130 | |
| Ethylbenzene | ug/L | 50 | 49.5 | 99 | 70-130 | |
| m&p-Xylene | ug/L | 100 | 99.2 | 99 | 70-130 | |
| Methyl-tert-butyl ether | ug/L | 50 | 43.2 | 86 | 70-130 | |
| Naphthalene | ug/L | 50 | 47.9 | 96 | 70-130 | |
| o-Xylene | ug/L | 50 | 49.8 | 100 | 70-130 | |
| tert-Amyl Alcohol | ug/L | 1000 | 1170 | 117 | 70-130 | |
| tert-Amylmethyl ether | ug/L | 100 | 105 | 105 | 70-130 | |
| tert-Butyl Alcohol | ug/L | 500 | 560 | 112 | 70-130 | |
| tert-Butyl Formate | ug/L | 400 | 422 | 105 | 70-130 | |
| Toluene | ug/L | 50 | 48.4 | 97 | 70-130 | |

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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

LABORATORY CONTROL SAMPLE: 1402260

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Xylene (Total) | ug/L | 150 | 149 | 99 | 70-130 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 92 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 98 | 70-130 | |
| Toluene-d8 (S) | % | | | 100 | 70-130 | |

MATRIX SPIKE SAMPLE: 1402261

| Parameter | Units | 92239085008 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | 20 | 18.3 | 92 | 70-130 | |
| 3,3-Dimethyl-1-Butanol | ug/L | 88.2J | 400 | 400 | 78 | 70-130 | |
| Benzene | ug/L | ND | 20 | 21.4 | 106 | 70-130 | |
| Diisopropyl ether | ug/L | ND | 20 | 19.1 | 96 | 70-130 | |
| Ethanol | ug/L | ND | 800 | 920 | 115 | 70-130 | |
| Ethyl-tert-butyl ether | ug/L | ND | 40 | 40.4 | 101 | 70-130 | |
| Ethylbenzene | ug/L | ND | 20 | 21.4 | 99 | 70-130 | |
| m&p-Xylene | ug/L | ND | 40 | 41.3 | 102 | 70-130 | |
| Methyl-tert-butyl ether | ug/L | ND | 20 | 17.3 | 87 | 70-130 | |
| Naphthalene | ug/L | ND | 20 | 20.4 | 102 | 70-130 | |
| o-Xylene | ug/L | ND | 20 | 20.2 | 101 | 70-130 | |
| tert-Amyl Alcohol | ug/L | ND | 400 | 370 | 92 | 70-130 | |
| tert-Amylmethyl ether | ug/L | ND | 40 | 37.9 | 95 | 70-130 | |
| tert-Butyl Alcohol | ug/L | ND | 200 | 288 | 144 | 70-130 | M0 |
| tert-Butyl Formate | ug/L | ND | 160 | ND | 0 | 70-130 | P5 |
| Toluene | ug/L | ND | 20 | 19.9 | 99 | 70-130 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | 97 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | | 100 | 70-130 | |
| Toluene-d8 (S) | % | | | | 98 | 70-130 | |

SAMPLE DUPLICATE: 1402262

| Parameter | Units | 92239085009 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | ND | | 30 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | ND | | 30 | |
| Benzene | ug/L | 4.9J | 4.8J | | 30 | |
| Diisopropyl ether | ug/L | ND | ND | | 30 | |
| Ethanol | ug/L | ND | ND | | 30 | |
| Ethyl-tert-butyl ether | ug/L | ND | ND | | 30 | |
| Ethylbenzene | ug/L | 57.2 | 56.9 | 1 | 30 | |
| m&p-Xylene | ug/L | 42.6 | 42.5 | 0 | 30 | |
| Methyl-tert-butyl ether | ug/L | ND | ND | | 30 | |
| Naphthalene | ug/L | 82.3 | 80.9 | 2 | 30 | |
| o-Xylene | ug/L | ND | ND | | 30 | |
| tert-Amyl Alcohol | ug/L | ND | ND | | 30 | |
| tert-Amylmethyl ether | ug/L | ND | ND | | 30 | |

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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

SAMPLE DUPLICATE: 1402262

| Parameter | Units | 92239085009 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| tert-Butyl Alcohol | ug/L | ND | ND | | 30 | |
| tert-Butyl Formate | ug/L | ND | ND | | 30 | |
| Toluene | ug/L | 2.4J | 2.5J | | 30 | |
| Xylene (Total) | ug/L | 42.6 | 42.5 | 0 | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | 96 | 95 | 2 | | |
| 4-Bromofluorobenzene (S) | % | 97 | 96 | 1 | | |
| Toluene-d8 (S) | % | 97 | 97 | 0 | | |

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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

QC Batch: MSV/30580 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV SC
Associated Lab Samples: 92239087022, 92239087024, 92239087025, 92239087026, 92239087029, 92239087032, 92239087035, 92239087043, 92239087044, 92239087045

METHOD BLANK: 1402266 Matrix: Water
Associated Lab Samples: 92239087022, 92239087024, 92239087025, 92239087026, 92239087029, 92239087032, 92239087035, 92239087043, 92239087044, 92239087045

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | 5.0 | 03/06/15 06:22 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | 100 | 03/06/15 06:22 | |
| Benzene | ug/L | ND | 5.0 | 03/06/15 06:22 | |
| Diisopropyl ether | ug/L | ND | 5.0 | 03/06/15 06:22 | |
| Ethanol | ug/L | ND | 200 | 03/06/15 06:22 | |
| Ethyl-tert-butyl ether | ug/L | ND | 10.0 | 03/06/15 06:22 | |
| Ethylbenzene | ug/L | ND | 5.0 | 03/06/15 06:22 | |
| m&p-Xylene | ug/L | ND | 10.0 | 03/06/15 06:22 | |
| Methyl-tert-butyl ether | ug/L | ND | 5.0 | 03/06/15 06:22 | |
| Naphthalene | ug/L | ND | 5.0 | 03/06/15 06:22 | |
| o-Xylene | ug/L | ND | 5.0 | 03/06/15 06:22 | |
| tert-Amyl Alcohol | ug/L | ND | 100 | 03/06/15 06:22 | |
| tert-Amylmethyl ether | ug/L | ND | 10.0 | 03/06/15 06:22 | |
| tert-Butyl Alcohol | ug/L | ND | 100 | 03/06/15 06:22 | |
| tert-Butyl Formate | ug/L | ND | 50.0 | 03/06/15 06:22 | |
| Toluene | ug/L | ND | 5.0 | 03/06/15 06:22 | |
| Xylene (Total) | ug/L | ND | 10.0 | 03/06/15 06:22 | |
| 1,2-Dichloroethane-d4 (S) | % | 102 | 70-130 | 03/06/15 06:22 | |
| 4-Bromofluorobenzene (S) | % | 100 | 70-130 | 03/06/15 06:22 | |
| Toluene-d8 (S) | % | 100 | 70-130 | 03/06/15 06:22 | |

LABORATORY CONTROL SAMPLE: 1402267

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | 50 | 43.6 | 87 | 70-130 | |
| 3,3-Dimethyl-1-Butanol | ug/L | 1000 | 1020 | 102 | 70-130 | |
| Benzene | ug/L | 50 | 49.8 | 100 | 70-130 | |
| Diisopropyl ether | ug/L | 50 | 48.1 | 96 | 70-130 | |
| Ethanol | ug/L | 2000 | 2370 | 119 | 70-130 | |
| Ethyl-tert-butyl ether | ug/L | 100 | 102 | 102 | 70-130 | |
| Ethylbenzene | ug/L | 50 | 47.8 | 96 | 70-130 | |
| m&p-Xylene | ug/L | 100 | 96.6 | 97 | 70-130 | |
| Methyl-tert-butyl ether | ug/L | 50 | 44.0 | 88 | 70-130 | |
| Naphthalene | ug/L | 50 | 48.0 | 96 | 70-130 | |
| o-Xylene | ug/L | 50 | 48.7 | 97 | 70-130 | |
| tert-Amyl Alcohol | ug/L | 1000 | 1150 | 115 | 70-130 | |
| tert-Amylmethyl ether | ug/L | 100 | 105 | 105 | 70-130 | |
| tert-Butyl Alcohol | ug/L | 500 | 553 | 111 | 70-130 | |

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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

LABORATORY CONTROL SAMPLE: 1402267

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| tert-Butyl Formate | ug/L | 400 | 429 | 107 | 70-130 | |
| Toluene | ug/L | 50 | 47.8 | 96 | 70-130 | |
| Xylene (Total) | ug/L | 150 | 145 | 97 | 70-130 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 93 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 98 | 70-130 | |
| Toluene-d8 (S) | % | | | 100 | 70-130 | |

MATRIX SPIKE SAMPLE: 1402268

| Parameter | Units | 92239087026 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | 20 | 19.5 | 97 | 70-130 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | 400 | 418 | 105 | 70-130 | |
| Benzene | ug/L | ND | 20 | 22.9 | 114 | 70-130 | |
| Diisopropyl ether | ug/L | ND | 20 | 20.6 | 103 | 70-130 | |
| Ethanol | ug/L | ND | 800 | 1010 | 127 | 70-130 | |
| Ethyl-tert-butyl ether | ug/L | ND | 40 | 42.8 | 107 | 70-130 | |
| Ethylbenzene | ug/L | ND | 20 | 22.2 | 111 | 70-130 | |
| m&p-Xylene | ug/L | ND | 40 | 44.7 | 112 | 70-130 | |
| Methyl-tert-butyl ether | ug/L | ND | 20 | 18.7 | 93 | 70-130 | |
| Naphthalene | ug/L | ND | 20 | 20.3 | 101 | 70-130 | |
| o-Xylene | ug/L | ND | 20 | 21.9 | 109 | 70-130 | |
| tert-Amyl Alcohol | ug/L | ND | 400 | 405 | 101 | 70-130 | |
| tert-Amylmethyl ether | ug/L | ND | 40 | 41.1 | 103 | 70-130 | |
| tert-Butyl Alcohol | ug/L | ND | 200 | 312 | 156 | 70-130 | M0 |
| tert-Butyl Formate | ug/L | ND | 160 | ND | 0 | 70-130 | P5 |
| Toluene | ug/L | ND | 20 | 21.6 | 108 | 70-130 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | 96 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | | 99 | 70-130 | |
| Toluene-d8 (S) | % | | | | 98 | 70-130 | |

SAMPLE DUPLICATE: 1402269

| Parameter | Units | 92239087029 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | ND | | 30 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | ND | | 30 | |
| Benzene | ug/L | ND | ND | | 30 | |
| Diisopropyl ether | ug/L | ND | ND | | 30 | |
| Ethanol | ug/L | ND | ND | | 30 | |
| Ethyl-tert-butyl ether | ug/L | ND | ND | | 30 | |
| Ethylbenzene | ug/L | ND | ND | | 30 | |
| m&p-Xylene | ug/L | ND | ND | | 30 | |
| Methyl-tert-butyl ether | ug/L | ND | ND | | 30 | |
| Naphthalene | ug/L | ND | ND | | 30 | |
| o-Xylene | ug/L | ND | ND | | 30 | |

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(704)875-9092

## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

SAMPLE DUPLICATE: 1402269

| Parameter | Units | 92239087029 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| tert-Amyl Alcohol | ug/L | ND | ND | | 30 | |
| tert-Amylmethyl ether | ug/L | ND | ND | | 30 | |
| tert-Butyl Alcohol | ug/L | ND | ND | | 30 | |
| tert-Butyl Formate | ug/L | ND | ND | | 30 | |
| Toluene | ug/L | ND | ND | | 30 | |
| Xylene (Total) | ug/L | ND | ND | | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | 101 | 101 | 0 | | |
| 4-Bromofluorobenzene (S) | % | 104 | 106 | 2 | | |
| Toluene-d8 (S) | % | 100 | 100 | 1 | | |

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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

QC Batch: OEXT/33277 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 92239087001, 92239087002, 92239087003, 92239087004, 92239087005, 92239087006, 92239087007, 92239087008, 92239087009, 92239087010, 92239087011, 92239087012, 92239087013, 92239087014, 92239087015, 92239087016, 92239087017, 92239087018

METHOD BLANK: 1400754 Matrix: Water
Associated Lab Samples: 92239087001, 92239087002, 92239087003, 92239087004, 92239087005, 92239087006, 92239087007, 92239087008, 92239087009, 92239087010, 92239087011, 92239087012, 92239087013, 92239087014, 92239087015, 92239087016, 92239087017, 92239087018

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | ND | 0.020 | 03/03/15 10:12 | |
| 1-Chloro-2-bromopropane (S) | % | 91 | 60-140 | 03/03/15 10:12 | |

LABORATORY CONTROL SAMPLE & LCSD: 1400755 1400756

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | .28 | 0.24 | 0.25 | 86 | 88 | 60-140 | 4 | 20 | |
| 1-Chloro-2-bromopropane (S) | % | | | | 92 | 91 | 60-140 | | | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1400757 1400758

| Parameter | Units | 92239087003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | ND | .29 | .29 | 0.27 | 0.27 | 94 | 96 | 60-140 | 2 | 20 | |
| 1-Chloro-2-bromopropane (S) | % | | | | | | 94 | 94 | 60-140 | | | |

SAMPLE DUPLICATE: 1400759

| Parameter | Units | 92239087004 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | 1.6 | 1.4 | 13 | 20 | |
| 1-Chloro-2-bromopropane (S) | % | 0 | 0 | | | S4 |

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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

QC Batch: OEXT/33278 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 92239087019, 92239087020, 92239087021, 92239087022, 92239087023, 92239087024, 92239087025, 92239087026, 92239087027, 92239087028, 92239087029, 92239087030, 92239087031, 92239087032, 92239087033, 92239087034, 92239087035, 92239087036, 92239087037, 92239087038

METHOD BLANK: 1400761 Matrix: Water
Associated Lab Samples: 92239087019, 92239087020, 92239087021, 92239087022, 92239087023, 92239087024, 92239087025, 92239087026, 92239087027, 92239087028, 92239087029, 92239087030, 92239087031, 92239087032, 92239087033, 92239087034, 92239087035, 92239087036, 92239087037, 92239087038

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | ND | 0.020 | 03/03/15 02:38 | |
| 1-Chloro-2-bromopropane (S) | % | 91 | 60-140 | 03/03/15 02:38 | |

LABORATORY CONTROL SAMPLE & LCSD: 1400762 1400763

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | .29 | 0.25 | 0.25 | 88 | 90 | 60-140 | 0 | 20 | |
| 1-Chloro-2-bromopropane (S) | % | | | | 91 | 91 | 60-140 | | | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1400764 1400765

| Parameter | Units | 92239087019 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | ND | .28 | .28 | 0.26 | 0.25 | 92 | 90 | 60-140 | 2 | 20 | |
| 1-Chloro-2-bromopropane (S) | % | | | | | | 91 | 90 | 60-140 | | | |

SAMPLE DUPLICATE: 1400767

| Parameter | Units | 92239087020 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | ND | ND | | 20 | |
| 1-Chloro-2-bromopropane (S) | % | 90 | 91 | 3 | | |

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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

QC Batch: OEXT/33291 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 92239087039, 92239087040, 92239087041, 92239087042, 92239087043, 92239087044, 92239087045, 92239087046, 92239087048, 92239087049, 92239087050, 92239087051, 92239087052, 92239087053, 92239087054

METHOD BLANK: 1401074 Matrix: Water
Associated Lab Samples: 92239087039, 92239087040, 92239087041, 92239087042, 92239087043, 92239087044, 92239087045, 92239087046, 92239087048, 92239087049, 92239087050, 92239087051, 92239087052, 92239087053, 92239087054

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | ND | 0.020 | 03/03/15 17:15 | |
| 1-Chloro-2-bromopropane (S) | % | 93 | 60-140 | 03/03/15 17:15 | |

LABORATORY CONTROL SAMPLE & LCSD: 1401075 1401076

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | .29 | 0.26 | 0.28 | 92 | 96 | 60-140 | 6 | 20 | |
| 1-Chloro-2-bromopropane (S) | % | | | | 94 | 95 | 60-140 | | | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1401077 1401078

| Parameter | Units | 92239087039 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | ND | .28 | .28 | 0.26 | 0.26 | 94 | 94 | 60-140 | 0 | 20 | |
| 1-Chloro-2-bromopropane (S) | % | | | | | | 97 | 97 | 60-140 | | | |

SAMPLE DUPLICATE: 1401079

| Parameter | Units | 92239087040 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | ND | ND | | 20 | |
| 1-Chloro-2-bromopropane (S) | % | 109 | 103 | 6 | | |

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# QUALIFIERS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

## DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether, Styrene, and Vinyl chloride.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

## LABORATORIES

| | |
|---|---|
| PASI-C | Pace Analytical Services - Charlotte |

## ANALYTE QUALIFIERS

| | |
|---|---|
| L3 | Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias. |
| M0 | Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits. |
| P5 | The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes. |
| S4 | Surrogate recovery not evaluated against control limits due to sample dilution. |

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| 92239087001 | OHM1 | EPA 8011 | OEXT/33277 | EPA 8011 | GCSV/20499 |
| 92239087002 | MW1R | EPA 8011 | OEXT/33277 | EPA 8011 | GCSV/20499 |
| 92239087003 | MW2 | EPA 8011 | OEXT/33277 | EPA 8011 | GCSV/20499 |
| 92239087004 | MW3 | EPA 8011 | OEXT/33277 | EPA 8011 | GCSV/20499 |
| 92239087005 | MW4 | EPA 8011 | OEXT/33277 | EPA 8011 | GCSV/20499 |
| 92239087006 | MW5 | EPA 8011 | OEXT/33277 | EPA 8011 | GCSV/20499 |
| 92239087007 | MW7 | EPA 8011 | OEXT/33277 | EPA 8011 | GCSV/20499 |
| 92239087008 | MW8 | EPA 8011 | OEXT/33277 | EPA 8011 | GCSV/20499 |
| 92239087009 | MW9 | EPA 8011 | OEXT/33277 | EPA 8011 | GCSV/20499 |
| 92239087010 | MW10 | EPA 8011 | OEXT/33277 | EPA 8011 | GCSV/20499 |
| 92239087011 | MW11 | EPA 8011 | OEXT/33277 | EPA 8011 | GCSV/20499 |
| 92239087012 | MW12R | EPA 8011 | OEXT/33277 | EPA 8011 | GCSV/20499 |
| 92239087013 | MW13R | EPA 8011 | OEXT/33277 | EPA 8011 | GCSV/20499 |
| 92239087014 | MW14 | EPA 8011 | OEXT/33277 | EPA 8011 | GCSV/20499 |
| 92239087015 | MW15 | EPA 8011 | OEXT/33277 | EPA 8011 | GCSV/20499 |
| 92239087016 | MW16 | EPA 8011 | OEXT/33277 | EPA 8011 | GCSV/20499 |
| 92239087017 | DMW17 | EPA 8011 | OEXT/33277 | EPA 8011 | GCSV/20499 |
| 92239087018 | MW18 | EPA 8011 | OEXT/33277 | EPA 8011 | GCSV/20499 |
| 92239087019 | MW19 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087020 | MW20 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087021 | MW21 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087022 | MW22 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087023 | MW23 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087024 | MW24 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087025 | MW25 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087026 | MW26 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087027 | MW27 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087028 | MW28 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087029 | MW29 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087030 | MW30 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087031 | MW31 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087032 | MW32 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087033 | MW33 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087034 | MW34 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087035 | MW35 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087036 | DMW36 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087037 | DMW37 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087038 | DMW38 | EPA 8011 | OEXT/33278 | EPA 8011 | GCSV/20500 |
| 92239087039 | DMW39 | EPA 8011 | OEXT/33291 | EPA 8011 | GCSV/20511 |
| 92239087040 | DMW40 | EPA 8011 | OEXT/33291 | EPA 8011 | GCSV/20511 |
| 92239087041 | SW1 | EPA 8011 | OEXT/33291 | EPA 8011 | GCSV/20511 |
| 92239087042 | SW2 | EPA 8011 | OEXT/33291 | EPA 8011 | GCSV/20511 |
| 92239087043 | MW10 DUPLICATE | EPA 8011 | OEXT/33291 | EPA 8011 | GCSV/20511 |
| 92239087044 | MW2 DUPLICATE | EPA 8011 | OEXT/33291 | EPA 8011 | GCSV/20511 |
| 92239087045 | OMW1 DUPLICATE | EPA 8011 | OEXT/33291 | EPA 8011 | GCSV/20511 |
| 92239087046 | FIELD BLANK | EPA 8011 | OEXT/33291 | EPA 8011 | GCSV/20511 |
| 92239087048 | CLS-WW | EPA 8011 | OEXT/33291 | EPA 8011 | GCSV/20511 |
| 92239087049 | EMS-WW | EPA 8011 | OEXT/33291 | EPA 8011 | GCSV/20511 |



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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| 92239087050 | MCCULLOUGH - WW | EPA 8011 | OEXT/33291 | EPA 8011 | GCSV/20511 |
| 92239087051 | CAFE-WW | EPA 8011 | OEXT/33291 | EPA 8011 | GCSV/20511 |
| 92239087052 | OLD SERVICE STATION WW | EPA 8011 | OEXT/33291 | EPA 8011 | GCSV/20511 |
| 92239087053 | SCOTT WW | EPA 8011 | OEXT/33291 | EPA 8011 | GCSV/20511 |
| 92239087054 | FARM WW | EPA 8011 | OEXT/33291 | EPA 8011 | GCSV/20511 |
| 92239087041 | SW1 | EPA 8260 | MSV/30554 | | |
| 92239087042 | SW2 | EPA 8260 | MSV/30554 | | |
| 92239087048 | CLS-WW | EPA 8260 | MSV/30554 | | |
| 92239087049 | EMS-WW | EPA 8260 | MSV/30554 | | |
| 92239087050 | MCCULLOUGH - WW | EPA 8260 | MSV/30554 | | |
| 92239087051 | CAFE-WW | EPA 8260 | MSV/30554 | | |
| 92239087052 | OLD SERVICE STATION WW | EPA 8260 | MSV/30554 | | |
| 92239087053 | SCOTT WW | EPA 8260 | MSV/30554 | | |
| 92239087054 | FARM WW | EPA 8260 | MSV/30554 | | |
| 92239087001 | OHM1 | EPA 8260 | MSV/30579 | | |
| 92239087002 | MW1R | EPA 8260 | MSV/30531 | | |
| 92239087003 | MW2 | EPA 8260 | MSV/30579 | | |
| 92239087004 | MW3 | EPA 8260 | MSV/30531 | | |
| 92239087005 | MW4 | EPA 8260 | MSV/30579 | | |
| 92239087006 | MW5 | EPA 8260 | MSV/30579 | | |
| 92239087007 | MW7 | EPA 8260 | MSV/30529 | | |
| 92239087008 | MW8 | EPA 8260 | MSV/30529 | | |
| 92239087009 | MW9 | EPA 8260 | MSV/30532 | | |
| 92239087010 | MW10 | EPA 8260 | MSV/30531 | | |
| 92239087011 | MW11 | EPA 8260 | MSV/30531 | | |
| 92239087012 | MW12R | EPA 8260 | MSV/30532 | | |
| 92239087013 | MW13R | EPA 8260 | MSV/30531 | | |
| 92239087014 | MW14 | EPA 8260 | MSV/30532 | | |
| 92239087015 | MW15 | EPA 8260 | MSV/30529 | | |
| 92239087016 | MW16 | EPA 8260 | MSV/30529 | | |
| 92239087017 | DMW17 | EPA 8260 | MSV/30529 | | |
| 92239087018 | MW18 | EPA 8260 | MSV/30529 | | |
| 92239087019 | MW19 | EPA 8260 | MSV/30532 | | |
| 92239087020 | MW20 | EPA 8260 | MSV/30532 | | |
| 92239087021 | MW21 | EPA 8260 | MSV/30532 | | |
| 92239087022 | MW22 | EPA 8260 | MSV/30580 | | |
| 92239087023 | MW23 | EPA 8260 | MSV/30532 | | |
| 92239087024 | MW24 | EPA 8260 | MSV/30580 | | |
| 92239087025 | MW25 | EPA 8260 | MSV/30580 | | |
| 92239087026 | MW26 | EPA 8260 | MSV/30580 | | |



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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

| Lab ID | Sample ID | QC Batch Method | QC Batch | Analytical Method | Analytical Batch |
|---|---|---|---|---|---|
| **92239087027** | **MW27** | EPA 8260 | MSV/30532 | | |
| **92239087028** | **MW28** | EPA 8260 | MSV/30532 | | |
| **92239087029** | **MW29** | EPA 8260 | MSV/30580 | | |
| **92239087030** | **MW30** | EPA 8260 | MSV/30529 | | |
| **92239087031** | **MW31** | EPA 8260 | MSV/30531 | | |
| **92239087032** | **MW32** | EPA 8260 | MSV/30580 | | |
| **92239087033** | **MW33** | EPA 8260 | MSV/30532 | | |
| **92239087034** | **MW34** | EPA 8260 | MSV/30532 | | |
| **92239087035** | **MW35** | EPA 8260 | MSV/30580 | | |
| **92239087036** | **DMW36** | EPA 8260 | MSV/30529 | | |
| **92239087037** | **DMW37** | EPA 8260 | MSV/30529 | | |
| **92239087038** | **DMW38** | EPA 8260 | MSV/30529 | | |
| **92239087039** | **DMW39** | EPA 8260 | MSV/30529 | | |
| **92239087040** | **DMW40** | EPA 8260 | MSV/30532 | | |
| **92239087043** | **MW10 DUPLICATE** | EPA 8260 | MSV/30580 | | |
| **92239087044** | **MW2 DUPLICATE** | EPA 8260 | MSV/30580 | | |
| **92239087045** | **OMW1 DUPLICATE** | EPA 8260 | MSV/30580 | | |
| **92239087046** | **FIELD BLANK** | EPA 8260 | MSV/30529 | | |
| **92239087047** | **TRIP BLANK1** | EPA 8260 | MSV/30529 | | |
| **92239087055** | **TRIP BLANK 2** | EPA 8260 | MSV/30529 | | |



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Client Name: M. Lands

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other_____

Optional
Proj. Due Date:
Proj. Name:

Custody Seal on Cooler/Box Present: ☐ yes ☐ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other_____

Thermometer Used: IR Gun T1401 Type of Ice: Wet Blue None ☐ Samples on ice, cooling process has begun

Temp Correction Factor T1401 No Correction

Corrected Cooler Temp.: 4.6 °C Biological Tissue is Frozen: Yes No N/A

Date and Initials of person examining contents: AP 2-27-15

Temp should be above freezing to 6°C

| | | Comments: |
|---|---|---|
| Chain of Custody Present: | ☐Yes ☐No ☐N/A | 1. |
| Chain of Custody Filled Out: | ☐Yes ☐No ☐N/A | 2. |
| Chain of Custody Relinquished: | ☐Yes ☐No ☐N/A | 3. |
| Sampler Name & Signature on COC: | ☐Yes ☐No ☐N/A | 4. |
| Samples Arrived within Hold Time: | ☐Yes ☐No ☐N/A | 5. |
| **Short Hold Time Analysis (<72hr):** | ☐Yes ☐No ☐N/A | 6. |
| **Rush Turn Around Time Requested:** | ☐Yes ☐No ☐N/A | 7. |
| Sufficient Volume: | ☐Yes ☐No ☐N/A | 8. |
| Correct Containers Used: | ☐Yes ☐No ☐N/A | 9. |
| -Pace Containers Used: | ☐Yes ☐No ☐N/A | |
| Containers Intact: | ☐Yes ☐No ☐N/A | 10. |
| Filtered volume received for Dissolved tests | ☐Yes ☐No ☐N/A | 11. |
| Sample Labels match COC: | ☐Yes ☐No ☐N/A | 12. No dates or times on bottles |
| -Includes date/time/ID/Analysis Matrix:_____ | | |
| All containers needing preservation have been checked. | ☐Yes ☐No ☐N/A | 13. |
| All containers needing preservation are found to be in compliance with EPA recommendation. | ☐Yes ☐No ☐N/A | |
| exceptions: VOA, coliform, TOC, O&G, WI-DRO (water) | ☐Yes ☐No | |
| Samples checked for dechlorination: | ☐Yes ☐No ☐N/A | 14. |
| Headspace in VOA Vials ( >6mm): | ☐Yes ☐No ☐N/A | 15. |
| Trip Blank Present: | ☐Yes ☐No ☐N/A | 16. |
| Trip Blank Custody Seals Present | ☐Yes ☐No ☐N/A | |
| Pace Trip Blank Lot # (if purchased):_____ | | |

**Client Notification/ Resolution:** Field Data Required? Y / N

Person Contacted:_____ Date/Time:_____

Comments/ Resolution:_____

| | | | |
|---|---|---|---|
| **SCURF Review:** | AMB | Date: | 2-27-15 |
| **SRF Review:** | AMB | Date: | 2-27-15 |

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office ( i.e out of hold, incorrect preservative, out of temp, incorrect containers)

WO#: 92239087

92239087

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 6

1888060

**Section A** Required Client Information:
Company: Midlands Environmental
Address: 231 Dooley Rd
Lexington, SC, 29073
Email To: JLC@meci.net
Phone: 803-808-2043 Fax: 803-808-2048
Requested Due Date/TAT:

**Section B** Required Project Information:
Report To: B. Shane
Copy To:
Purchase Order No.:
Project Name: Crawford's Country Store
Project Number: MECI# 14-5053

**Section C** Invoice Information:
Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: A. Baioni
Pace Profile #: 8240-5

**REGULATORY AGENCY**
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC

**Section D** Required Client Information

**SAMPLE ID** (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

**Matrix Codes** MATRIX / CODE
Drinking Water DW
Water WT
Waste Water WW
Product P
Soil/Solid SL
Oil OL
Wipe WP
Air AR
Tissue TS
Other OT

| ITEM # | SAMPLE ID | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED COMPOSITE START DATE | COMPOSITE START TIME | COMPOSITE END/GRAB DATE | COMPOSITE END/GRAB TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives: Unpreserved | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | $Na_2S_2O_3$ | Methanol | Other | Analysis Test Y/N: BTEX, Naph, MTBE | 1,2-DCA | 8-Oxygenates | EDB | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. 9223987 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | OHM 1 | WT | G | | | 2/25/15 | 1230 | | 6 | | | | 6 | | | | | X | X | X | X | | odor 001 |
| 2 | MW 1R | " | " | | | " | 1240 | | " | | | | " | | | | | " | " | " | " | | 002 |
| 3 | MW 2 | " | " | | | " | 1150 | | " | | | | " | | | | | " | " | " | " | | 003 |
| 4 | MW 3 | " | " | | | " | 1250 | | " | | | | " | | | | | " | " | " | " | | 004 |
| 5 | MW 4 | " | " | | | " | 1140 | | " | | | | " | | | | | " | " | " | " | | 005 |
| 6 | MW 5 | " | " | | | " | 1255 | | " | | | | " | | | | | " | " | " | " | | 006 |
| 7 | MW 6 | | | | | | | | | | | | | | | | | | | | | | ^Blocked |
| 8 | MW 7 | " | " | | | " | 1315 | | " | | | | " | | | | | " | " | " | " | | 007 |
| 9 | MW 8 | " | " | | | " | 1323 | | " | | | | " | | | | | " | " | " | " | | 008 |
| 10 | MW 9 | " | " | | | " | 1305 | | " | | | | " | | | | | " | " | " | " | | 009 |
| 11 | MW 10 | " | " | | | " | 1130 | | " | | | | " | | | | | " | " | " | " | | 010 |
| 12 | MW 11 | WT | G | | | 2/25/15 | 1050 | | 6 | | | | 6 | | | | | X | X | X | X | | 011 |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS |
|---|---|---|---|---|---|---|---|
| | [signature] | 2/27/15 | 9:00 | DMoody Pace | 02-27-15 | 09:00 | |
| | B Moody | 02-27-15 | 1255 | Pace Courier | 2-27-15 | 1255 | 4.6 V N N |
| | | | | | | | |
| | | | | | | | |

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Adam Looper
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 2/25/15

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

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# CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 2 of 6

1888059

**Section A** Required Client Information:
Company: Midlands Environmental
Address: 231 Dooley Rd
Lexington, SC, 29073
Email To: SLE@mec.net
Phone: 803-808-2043 Fax: 803-808-2048
Requested Due Date/TAT:

**Section B** Required Project Information:
Report To: B. Shane
Copy To:
Purchase Order No.:
Project Name: Crawford's Country Store
Project Number: MECI # 14-5053

**Section C** Invoice Information:
Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: A. Baioni
Pace Profile #:

**REGULATORY AGENCY**
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER
Site Location STATE: SC

**Section D** Required Client Information

**SAMPLE ID** (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

**Matrix Codes** MATRIX / CODE
Drinking Water DW
Water WT
Waste Water WW
Product P
Soil/Solid SL
Oil OL
Wipe WP
Air AR
Tissue TS
Other OT

| ITEM # | SAMPLE ID | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED COMPOSITE START DATE | COMPOSITE START TIME | COMPOSITE END/GRAB DATE | COMPOSITE END/GRAB TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives: Unpreserved | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | $Na_2S_2O_3$ | Methanol | Other | Analysis Test Y/N: BTEX, Naphthalene | 1,2-DCA | 5 Oxygenates EDB | | | | | | | | | | | | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW 12R | WT | G | | | 2/25/15 | 1110 | | 6 | | | | 6 | | | | | X | X | X | X | | | | | | | | | | no odor | 012 |
| 2 | MW 13R | | | | | | 1030 | | | | | | | | | | | | | | | | | | | | | | | | | 013 |
| 3 | MW 14 | | | | | | 1339 | | | | | | | | | | | | | | | | | | | | | | | | | 014 |
| 4 | MW 15 | | | | | | 1349 | | | | | | | | | | | | | | | | | | | | | | | | | 015 |
| 5 | MW 16 | | | | | | 1352 | | | | | | | | | | | | | | | | | | | | | | | | | 016 |
| 6 | DMW 17 | | | | | | 1220 | | | | | | | | | | | | | | | | | | | | | | | | | 017 |
| 7 | MW 18 | | | | | | 1404 | | | | | | | | | | | | | | | | | | | | | | | | | 018 |
| 8 | MW 19 | | | | | | 1100 | | | | | | | | | | | | | | | | | | | | | | | | | 019 |
| 9 | MW 20 | | | | | | 1040 | | | | | | | | | | | | | | | | | | | | | | | | no odor | 020 |
| 10 | MW 21 | | | | | | 1145 | | | | | | | | | | | | | | | | | | | | | | | | | 021 |
| 11 | MW 22 | ↓ | ↓ | | | ↓ | 11:48 | | ↓ | | | | ↓ | | | | | ↓ | ↓ | ↓ | ↓ | | | | | | | | | | no odor | 022 |
| 12 | MW 23 | WT | G | | | 2/25/15 | 1122 | | 6 | | | | 6 | | | | | X | X | X | X | | | | | | | | | | no odor | 023 |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS: Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |
|---|---|---|---|---|---|---|---|---|---|---|
| | B.C. Perry | 2/27/15 | 9:00 | Bmoody Pace | 02-27-15 | 09:00 | | | | |
| | Bmoody | 02-27-15 | 1255 | Chris Pace/PAL | 2-27-15 | 1255 | 4.6 | V | N | V |
| | | | | | | | | | | |
| | | | | | | | | | | |

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Adam Looper
SIGNATURE of SAMPLER: Adam Looper
DATE Signed (MM/DD/YY): 2/25/15

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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# CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 3 of 6

1888058

**Section A** Required Client Information:
Company: Midlands Environmental
Address: 231 Dooley Rd
Lexington, SC, 29073
Email To: JZC@mecj.net
Phone: 803-808-2043 Fax: 803-808-2048
Requested Due Date/TAT:

**Section B** Required Project Information:
Report To: B. Shane
Copy To:
Purchase Order No.:
Project Name: Crawford's Country Store
Project Number: MECF#14-5053

**Section C** Invoice Information:
Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: A. Baioni
Pace Profile #:

**REGULATORY AGENCY**
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER
Site Location STATE: SC

**Section D** Required Client Information

**SAMPLE ID** (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

**Matrix Codes** MATRIX / CODE
Drinking Water DW
Water WT
Waste Water WW
Product P
Soil/Solid SL
Oil OL
Wipe WP
Air AR
Tissue TS
Other OT

Requested Analysis Filtered (Y/N)

| ITEM # | SAMPLE ID | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED COMPOSITE START DATE | COMPOSITE START TIME | COMPOSITE END/GRAB DATE | COMPOSITE END/GRAB TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives: Unpreserved | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | $Na_2S_2O_3$ | Methanol | Other | Analysis Test Y/N: BTEX, Naph, MTBE | 1,2-DCA | 8-Oxygenates EDB | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. 92239087 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW 24 | WT | G | | | 2/25/15 | 1055 | | 6 | | | | 6 | | | | | X | X | X | X | no odor 024 |
| 2 | MW 25 | " | " | | | " | 1104 | | " | | | | " | | | | | " | " | " | " | 025 |
| 3 | MW 26 | " | " | | | " | 1111 | | " | | | | " | | | | | " | " | " | " | 026 |
| 4 | MW 27 | " | " | | | " | 1115 | | " | | | | " | | | | | " | " | " | " | 027 |
| 5 | MW 28 | " | " | | | " | 1118 | | " | | | | " | | | | | " | " | " | " | 028 |
| 6 | MW 29 | " | " | | | " | 1126 | | " | | | | " | | | | | " | " | " | " | 029 |
| 7 | MW 30 | " | " | | | " | 1133 | | " | | | | " | | | | | " | " | " | " | 030 |
| 8 | MW 31 | " | " | | | " | 1138 | | " | | | | " | | | | | " | " | " | " | 031 |
| 9 | MW 32 | " | " | | | " | 1142 | | " | | | | " | | | | | " | " | " | " | 032 |
| 10 | MW 33 | " | " | | | " | 1138 | | " | | | | " | | | | | " | " | " | " | 033 |
| 11 | MW 34 | ↓ | ↓ | | | ↓ | 1410 | | ↓ | | | | ↓ | | | | | ↓ | ↓ | ↓ | ↓ | no odor 034 |
| 12 | MW 35 | WT | G | | | 2/25/15 | 1440 | | 6 | | | | 6 | | | | | X | X | X | X | no odor 035 |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS: Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |
|---|---|---|---|---|---|---|---|---|---|---|
| | [signature] | 2/27/15 | 9:00 | [signature] | 02-27-15 | 09:00 | | | | |
| | [signature] | 02-27-15 | 1255 | [signature] | 2-27-15 | 1255 | 4.6 | V | N | V |

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Adam Looper
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 2/25/15

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

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# CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 4 of 6

1885145

**Section A** Required Client Information:

Company: Midlands Environmental
Address: 231 Dooley Rd
Lexington, SC, 29073
Email To: SLC@mec.net
Phone: 803-808-2043 Fax: 803-808-2018
Requested Due Date/TAT:

**Section B** Required Project Information:

Report To: B. Shane
Copy To:
Purchase Order No.:
Project Name: Crawford's Country Store
Project Number: MELS # 14-5053

**Section C** Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: A. Baioni
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC

**Section D** Required Client Information

**SAMPLE ID** (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

| ITEM # | SAMPLE ID | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED COMPOSITE START DATE | COMPOSITE START TIME | COMPOSITE END/GRAB DATE | COMPOSITE END/GRAB TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives: Unpreserved | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | $Na_2S_2O_3$ | Methanol | Other | Analysis Test Y/N | BTEX, Naph, MTBE | 1,2-DCA | 8-Oxygenates | EDB | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | DMW 36 | WT | G | | | 2/25/15 | 1125 | | 6 | | | | 6 | | | | | X | X | X | X | | | 92239087 0036 |
| 2 | DMW 37 | | | | | | 1132 | | | | | | | | | | | | | | | | | 0037 |
| 3 | DMW 38 | | | | | | 1136 | | | | | | | | | | | | | | | | | 0038 |
| 4 | DMW 39 | | | | | | 1139 | | | | | | | | | | | | | | | | | 0039 |
| 5 | DMW 40 | | | | | | 1020 | | | | | | | | | | | | | | | | | 0040 |
| 6 | SW 1 | DW | | | | | 1300 | | | | | | | | | | | | | | | | | LDL 0041 |
| 7 | SW 2 | DW | | | | | 1305 | | | | | | | | | | | | | | | | | LDL 0042 |
| 8 | MW 10 Duplicate | | | | | | 1130 | | | | | | | | | | | | | | | | | Duplicate 0043 |
| 9 | MW 2 Duplicate | | | | | | 1150 | | | | | | | | | | | | | | | | | Duplicate 0044 |
| 10 | OMW 1 Duplicate | | | | | | 1230 | | ↓ | | | | ↓ | | | | | | | | | | | Duplicate 0045 |
| 11 | Field Blank | ↓ | ↓ | | | ↓ | 1430 | | 6 | | | | 6 | | | | | ↓ | ↓ | ↓ | X | | | Field Blank 0046 |
| 12 | Trip Blank 1 | WT | G | | | 2/25/15 | 1431 | | 2 | | | | 2 | | | | | X | X | X | | | | Trip Blank 0047 |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS: Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |
|---|---|---|---|---|---|---|---|---|---|---|
| SW 1 & 2 → Matrix code DW & LDL for samples | [signature] | 2/27/15 | 9:00 | [signature] | 02-27-15 | 09:00 | | | | |
| | [signature] | 02-27-15 | 1255 | [signature] | 2-27-15 | 1255 | 4.0 | V | N | V |
| | | | | | | | | | | |
| | | | | | | | | | | |

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Adam Looper
SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 2/25/15

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 5 of 6

1885148

**Section A** Required Client Information:
Company: Midlands Environmental
Address: 231 Dooley Rd
Lexington, SC, 29073
Email To: slc@mecl.net
Phone: 803-808-2043 Fax: 803-808-2048
Requested Due Date/TAT:

**Section B** Required Project Information:
Report To: B. Shane
Copy To:
Purchase Order No.:
Project Name: Crawford's Country Store
Project Number: MECL# 14-5053

**Section C** Invoice Information:
Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: A. Baioni
Pace Profile #:

**REGULATORY AGENCY**
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC

**Section D** Required Client Information

**SAMPLE ID** (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

**Matrix Codes** MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

| ITEM # | SAMPLE ID | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED COMPOSITE START DATE | COMPOSITE START TIME | COMPOSITE END/GRAB DATE | COMPOSITE END/GRAB TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives: Unpreserved | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | $Na_2S_2O_3$ | Methanol | Other | Analysis Test Y/N | BTEX Naph, MTBE 1,2-DCA 6-Oxygenates EDB | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. 92239087 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | CLS - WW | DW | G | | | 2/25/15 | 1400 | | 6 | | | | 6 | | | | | | X XX X | | LDL 048 |
| 2 | LP - WW | | | | | | | | | | | | | | | | | | | | Not Sampled |
| 3 | LP - WW 2 | | | | | | | | | | | | | | | | | | | | Not Sampled |
| 4 | EMS - WW | DW | G | | | 2/25/15 | 1045 | | 6 | | | | 6 | | | | | | X X X X | | LDL 049 |
| 5 | McCullough - WW | | | | | | 1115 | | 6 | | | | 6 | | | | | | X X X X | | LDL 050 |
| 6 | Cafe - WW | | | | | | 1415 | | 6 | | | | 6 | | | | | | X X X X | | LDL 051 |
| 7 | Old Service Station WW | | | | | | 1420 | | 6 | | | | 6 | | | | | | X X X X | | LDL 052 |
| 8 | Scott WW | ↓ | ↓ | | | ↓ | 1425 | | 6 | | | | 6 | | | | | | X X X X | | LDL 053 |
| 9 | Farm WW | DW | G | | | 2/25/15 | 1210 | | 6 | | | | 6 | | | | | | X X X X | | LDL 054 |
| 10 | Major WW | | | | | | | | | | | | | | | | | | | | Not Sampled |
| 11 | Driver WW | | | | | | | | | | | | | | | | | | | | Not Sampled |
| 12 | Gin House WW | | | | | | | | | | | | | | | | | | | | Not Sampled |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS: Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |
|---|---|---|---|---|---|---|---|---|---|---|
| | [illegible] | 2/27/15 | 9:00 | Bmoody-Pace | 02-27-15 | 09:00 | | | | |
| | Bmoody | 02-27-15 | 1055 | Amy Pace | 2-27-15 | 1255 | 4.6 | V | N | V |
| | | | | | | | | | | |
| | | | | | | | | | | |

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Adam Looper
SIGNATURE of SAMPLER: Adam Looper
DATE Signed (MM/DD/YY): 2/25/15

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 6 of 6

1885149

**Section A** Required Client Information:
Company: Midlands Environmental
Address: 231 Dooley Rd
Lexington, SC, 29073
Email To: JCL@meci.net
Phone: 803-808-2043 Fax: 803-808-2048
Requested Due Date/TAT:

**Section B** Required Project Information:
Report To: B. Shane
Copy To:
Purchase Order No.:
Project Name: Crawford's Country Store
Project Number: MECI # 14-5053

**Section C** Invoice Information:
Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: A. Bryant
Pace Profile #:

**REGULATORY AGENCY**
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☑ UST ☐ RCRA ☐ OTHER

Site Location STATE: SC

**Section D** Required Client Information

**Matrix Codes** MATRIX / CODE
Drinking Water DW
Water WT
Waste Water WW
Product P
Soil/Solid SL
Oil OL
Wipe WP
Air AR
Tissue TS
Other OT

**SAMPLE ID** (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

| ITEM # | SAMPLE ID | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED COMPOSITE START DATE | COLLECTED COMPOSITE START TIME | COLLECTED COMPOSITE END/GRAB DATE | COLLECTED COMPOSITE END/GRAB TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives: Unpreserved | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | $Na_2S_2O_3$ | Methanol | Other | Analysis Test Y/N: BTEX, Naph, MTBE | 1,2-DCA | 8-Oxygenates EDB | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Trip Blank 2 | WT | G | | | 2/25/15 | 1435 | | 2 | | | | 2 | | | | | X | X | X | | 92239087 Trip Blank 2 OSS |
| 2 | | | | | | | | | | | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS: Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |
|---|---|---|---|---|---|---|---|---|---|---|
| | JCL-PM | 2/27/15 | 9:00 | B Moody-Pace | 02-27-15 | 9:00 | | | | |
| | B Moody | 02-27-15 | 1255 | CWX Pace Mid | 2-27-15 | 1255 | 4.6 | V | N | V |
| | | | | | | | | | | |
| | | | | | | | | | | |

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Adam Looper
SIGNATURE of SAMPLER: Adam Looper
DATE Signed (MM/DD/YY): 2/25/15

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

**APPENDIX C:**

**TAX MAP**

***(Not Applicable)***

**APPENDIX D:**

**SOIL BORING/FIELD SCREENING LOGS & 1903 FORMS**

***(Not Applicable)***

**APPENDIX E:**

**WELL COMPLETION LOGS & 1903 FORMS**

***(Not Applicable)***

**APPENDIX F:**

# AQUIFER EVALUATION SUMMARY FORMS, DATA, GRAPHS, EQUATIONS

***(Not Applicable)***

**APPENDIX G:**

**DISPOSAL MANIFEST**

Midlands
Environmental
Consultants, Inc.

March 10, 2015

Re: Treatment of Purge Water
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID Number 12335
MECI Project Number 15-5105

To Whom It May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.

2. No free-product was detected in any of the purge water drums.

3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.

4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.

5. Record of usage is maintained by Contractor.

6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.

7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

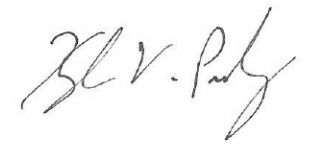
Post Office Box 854, Lexington SC 29071 • 231 Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

**262.25 gallons of wastewater was disposed on February 25th, 2015 during the sampling/purging of the monitoring well network.**

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,
Midlands Environmental Consultants, Inc.



Kyle V. Pudney
Project Biologist

**APPENDIX H:**

**LOCAL ZONING REGULATIONS**

***(Not Applicable)***

# APPENDIX I:
# FATE AND TRANSPORT MODELING
*(Not Applicable)*

**APPENDIX J:**

**ACCESS AGREEMENTS**

***(Not Applicable)***

# APPENDIX K:
# DATA VERIFICATION CHECKLIST

**Contractor Checklist**

| Item# | Item | Yes | No | N/A |
|---|---|---|---|---|
| 1 | Are Facility Name, Permit #, and address provided? | X | | |
| 2 | Is UST Owner/Operator name, address, & phone number provided? | X | | |
| 3 | Is name, address, & phone number of current property owner provided? | X | | |
| 4 | Is the DHEC Certified UST Site Rehabilitation Contractor's Name, Address, telephone number, and certification number provided? | X | | |
| 5 | Is the name, address, telephone number, and certification number of the well driller that installed borings/monitoring wells provided? | | | X |
| 6 | Is the name, address, telephone number, and certification number of the certified laboratory(ies) performing analytical analyses provided? | X | | |
| 7 | Has the facility history been summarized? | X | | |
| 8 | Has the regional geology and hydrogeology been described? | X | | |
| 9 | Are the receptor survey results provided as required? | | | X |
| 10 | Has current use of the site and adjacent land been described? | X | | |
| 11 | Has the site-specific geology and hydrogeology been described? | X | | |
| 12 | Has the primary soil type been described? | X | | |
| 13 | Have field screening results been described? | | | X |
| 14 | Has a description of the soil sample collection and preservation been detailed? | | | X |
| 15 | Has the field screening methodology and procedure been detailed? | | | X |
| 16 | Has the monitoring well installation and development dates been provided? | | | X |
| 17 | Has the method of well development been detailed? | | | X |
| 18 | Has justification been provided for the locations of the monitoring wells? | | | X |
| 19 | Have the monitoring wells been labeled in accordance with the UST QAPP guidelines? | | | X |
| 20 | Has the groundwater sampling methodology been detailed? | X | | |
| 21 | Have the groundwater sampling dates and groundwater measurements been provided? (Table 2 & Figure 5) | X | | |
| 22 | Has the purging methodology been detailed? | X | | |
| 23 | Has the volume of water purged from each well been provided along with measurements to verify that purging is complete? (Appendix B) | X | | |
| 24 | If free-product is present, has the thickness been provided? | | | X |
| 25 | Does the report include a brief discussion of the assessment done and the results? | X | | |
| 26 | Does the report include a brief discussion of the aquifer evaluation and results? | | | X |
| 27 | Does the report include a brief discussion of the fate & transport models used? | | | X |

| Item# | Item | Yes | No | N/A |
|---|---|---|---|---|
| 28 | Are the site-conceptual model tables included? (Tier 1 Risk Evaluation) | | | X |
| 29 | Have the exposure pathways been analyzed? (Tier 2 Risk Evaluation) | | | X |
| 30 | Have the SSTLs for each compound and pathway been calculated? (Tier 2 Risk Evaluation) | | | X |
| 31 | Have recommendations for further action been provided and explained? | X | | |
| 32 | Has the soil analytical data for the site been provided in tabular format? (Table 1) | | | X |
| 33 | Has the potentiometric data for the site been provided in tabular format? (Table 2) | X | | |
| 34 | Has the current and historical laboratory data been provided in tabular format? (Tables 3 & 3A) | X | | |
| 35 | Have the aquifer characteristics been provided and summarized on the appropriate form? (Appendix F) | | | X |
| 36 | Have the Site conceptual model tables been included? (Tier 1 Risk Evaluation) | | | X |
| 37 | Has the topographic map been provided with all required elements? (Figure 1) | X | | |
| 38 | Has the site base map been provided with all required elements? (Figure 2) | X | | |
| 39 | Have the CoC site maps been provided? (Figures 3, 4) | X | | |
| 40 | Has the site potentiometric map been provided? (Figure 5) | X | | |
| 41 | Have the geologic cross-sections been provided? (Figure 6) | | | X |
| 42 | Have maps showing the predicted migration of the CoCs through time been provided? (Tier 2 Risk Evaluation) | | | X |
| 43 | Has the site survey been provided and include all necessary elements? (Appendix A) | | | X |
| 44 | Have the sampling logs, chain of custody forms, and the analytical data package been included with all required elements? (Appendix B) | X | | |
| 45 | Is the laboratory performing the analyses properly certified? | X | | |
| 46 | Has the tax map been included with all necessary elements? (Appendix C) | | | X |
| 47 | Have the soil boring/field screening logs been provided? (Appendix D) | | | X |
| 48 | Have the well completion logs and SCDHEC Form 1903 been provided? (Appendix E) | | | X |
| 49 | Have the aquifer evaluation forms, data, graphs, equations, etc. been provided? (Appendix F) | | | X |
| 50 | Have the disposal manifests been provided? (Appendix G) | X | | |
| 51 | Has a copy of the local zoning regulations been provided? (Appendix H) | | | X |
| 52 | Has all fate and transport modeling been provided? (Appendix I) | | | X |
| 53 | Have copies of all access agreements obtained by the contractor been provided? (Appendix J) | | | X |
| 54 | Has a copy of this form been attached to the final report and are explanations for any missing or incomplete data been provided? (Appendix K) | X | | |

D H E C
PROMOTE PROTECT PROSPER
W. Marshall Taylor Jr., Acting Director
*Promoting and protecting the health of the public and the environment*

**MR FRANK CRAWFORD**
**CRAWFORDS COUNTRY STORE**
**5870 HIGHWAY 28 NORTH**
**ABBEVILLE SC 29620**

MAR 2 3 2015

**Re: Corrective Action Options**
Crawford's Country Store, 5870 Highway 28 North, Abbeville, SC
UST Permit #12335
Release reported December 3, 1991
Monitoring Report received March 20, 2015
Abbeville County

Dear Mr. Crawford

The Underground Storage Tank (UST) Management Division (Division) of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the referenced report submitted by Midland's Environmental Consultants, Inc. on your behalf. The report indicates that active corrective action is necessary at the site to mitigate petroleum impact and ensure that there is no detrimental exposure to human health or the environment.

Funds from the State Underground Petroleum Environmental Response Bank (SUPERB) Account will soon be available for active corrective action. The selected technology must reduce the petroleum chemicals of concern (CoC) concentrations to site-specific target levels (SSTLs) determined by the Division.

The SUPERB Site Rehabilitation and Fund Access Regulations R.61-98 require the UST owner/operator to develop and implement a reasonable, cost-effective corrective action to be performed by an Agency-certified site rehabilitation contractor. As the owner/operator you are the responsible party for the release reported on December 3, 1991. You may choose one of two options as to how to proceed with this requirement: State lead or owner/operator lead.

State Lead Option:

- If you choose the state lead option, the Division will procure a certified site rehabilitation contractor to perform corrective action on your behalf. The Agency will enter into an enforceable contract with the awarded contractor. As long as you do not interfere with or prohibit the work at your site, DHEC will not hold you responsible for the failure of the state selected contractor to meet the terms of the contract. To utilize the state lead option, please sign and return the applicable Permission and Right-of-Entry forms within 15 days of the date of this letter.

Owner/Operator Lead Option:

- If you select the owner/operator lead option, you will be required to select a contractor to perform the corrective action. In order to assist you in determining the clean-up technology, time frame, clean-up levels, and associated costs, the Division will prepare a technical specification package and provide you copies to send to contractors of your choice. In addition, the Division will announce the request for solicitations in the South Carolina Business Opportunities, a bi-weekly state government publication, to ensure that an adequate solicitation response is obtained so that a fair and competitive price can be established. This announcement will clearly indicate that you will select the contractor to implement the corrective action.
- Compensation to the contractor will be from the SUPERB Account, but you may have the obligation to pay your selected contractor for any costs not approved by the Agency.
- The Division strongly suggests that a written contract between you and the selected contractor be developed following the completion of the solicitation process. The parties to this contract would be you and the contractor you choose; the Agency would not be a party to this contract. The Division's function would be to monitor and ensure progress of corrective action activities.
- If the contractor you select does not or cannot complete the required activities, you will be required to find another certified contractor to complete the required activities for the remainder of the existing financial approval amount. No additional funding from the SUPERB Account may be allowed. Under R.61-92, Part 280: Underground Storage Tank Control Regulations, you as the owner/operator are ultimately responsible to the Agency for the actions of your contractor. The Agency will pursue enforcement actions against you if the contractor you select does not make satisfactory progress towards achieving established corrective actions goals. To utilize the owner/operator lead option, please sign and return the enclosed Active Corrective Action Options Form within 15 days of the date of this letter.

On all correspondence or inquiries regarding this project, please reference **UST Permit #12335.** If you have any questions, please contact me at (803) 896-0607 or by email at thrasham@dhec.sc.gov.

Sincerely,

Ashleigh Thrash

Ashleigh Thrash, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Permission/Right-of-Entry form
Active Corrective Action Options form
List of SCDHEC Certified Contractors

cc: Technical file (w/o enc)

D H E C
PROMOTE PROTECT PROSPER
W. Marshall Taylor Jr., Acting Director
*Promoting and protecting the health of the public and the environment*

**MR & MRS MCCULLOUGH**
**5804 HWY 28 NORTH**
**ABBEVILLE SC 29620-3447**

MAR 2 4 2015

UST DOCKETING 3764

Re: **Water Supply Well & Stream Sampling Results**
Crawford's Country Store
5870 Hwy 28 North, Abbeville, SC 29620
UST Permit #12335
Petroleum Release Reported December 3, 1991
Monitoring Report Received March 20, 2015
Abbeville County

Dear Mr. and Mrs. McCullough:

On February 25, 2015, Midlands Environmental Consultants, Inc., collected groundwater samples from your water supply well and the stream located on your property. This sampling work was directed by the Underground Storage Tank Management Division (UST Division) to evaluate the extent of the underground petroleum release from Crawford's Country Store. The lab results from your water supply well sample indicate that Methyl tertiary butyl ether (MTBE) is present at a concentration of 1.1 µg/L, and Diisopropyl ether (DIPE) is present at an estimated concentration of 9.2 µg/L. The safe drinking water standard/Risk Based Screening Level (RBSL) for MTBE is 40 µg/L, and the Action Level for DIPE is 150 µg/L. Based on current scientific evidence, concentrations below RBSLs and ALs do not pose any risk to your health. Additionally, for the sample collected from the stream located in your pasture, all Contaminants of Concern (COCs) were below RBSLs.

Based on these results, the UST Management Division plans to periodically resample your water supply well and stream to ensure that contaminants remain below the safe drinking water standards. If concentrations increase, or if you so desire, a granular activated carbon (GAC) unit can be installed on your well to remove chemicals of concern.

On all correspondence concerning this site, please reference **UST Permit #12335**. If you have any questions concerning this correspondence, please feel free to contact me at (803) 898-0607 or via email at thrasham@dhec.sc.gov.

Sincerely,

Ashleigh Thrash

Ashleigh Thrash, Hydrogeologist
Corrective Action Section
UST Management Division
Bureau of Land & Waste Management

enc: Lab Results for Water Supply Well and Stream Samples
cc: Technical File (w/ enc.)

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: EMS-WW** **Lab ID: 92239087049** Collected: 02/25/15 10:45 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Low Level SC** | Analytical Method: EPA 8260 | | | | | | | | |
| Diisopropyl ether | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 03:47 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 33.0 | 1 | | 03/03/15 03:47 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 03/03/15 03:47 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 0.070 | 1 | | 03/03/15 03:47 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 1.0 | 0.21 | 1 | | 03/03/15 03:47 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 1.0 | 0.24 | 1 | | 03/03/15 03:47 | 91-20-3 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 03/03/15 03:47 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 03:47 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 03:47 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 1.0 | 0.23 | 1 | | 03/03/15 03:47 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 99 | % | 70-130 | | 1 | | 03/03/15 03:47 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 103 | % | 70-130 | | 1 | | 03/03/15 03:47 | 17060-07-0 | |
| Toluene-d8 (S) | 94 | % | 70-130 | | 1 | | 03/03/15 03:47 | 2037-26-5 | |

**Sample: MCCULLOUGH - WW** **Lab ID: 92239087050** Collected: 02/25/15 11:15 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 03/03/15 15:48 | 03/03/15 22:24 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 98 | % | 60-140 | | 1 | 03/03/15 15:48 | 03/03/15 22:24 | 301-79-56 | |
| **8260 MSV Low Level SC** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 04:04 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 0.10 | 1 | | 03/03/15 04:04 | 994-05-8 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 03/03/15 04:04 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 04:04 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 3.6 | 1 | | 03/03/15 04:04 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 1.9 | 1 | | 03/03/15 04:04 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 04:04 | 107-06-2 | |
| Diisopropyl ether | **9.2** | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 04:04 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 33.0 | 1 | | 03/03/15 04:04 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 03/03/15 04:04 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 0.070 | 1 | | 03/03/15 04:04 | 637-92-3 | |
| Methyl-tert-butyl ether | **1.1** | ug/L | 1.0 | 0.21 | 1 | | 03/03/15 04:04 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 1.0 | 0.24 | 1 | | 03/03/15 04:04 | 91-20-3 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 03/03/15 04:04 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 04:04 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 04:04 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 1.0 | 0.23 | 1 | | 03/03/15 04:04 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 98 | % | 70-130 | | 1 | | 03/03/15 04:04 | 460-00-4 | |

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Pace Analytical Services, Inc.
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 92239087

**Sample: MCCULLOUGH - WW** **Lab ID: 92239087050** Collected: 02/25/15 11:15 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Low Level SC** | Analytical Method: EPA 8260 | | | | | | | | |
| ***Surrogates*** | | | | | | | | | |
| 1,2-Dichloroethane-d4 (S) | 102 | % | 70-130 | | 1 | | 03/03/15 04:04 | 17060-07-0 | |
| Toluene-d8 (S) | 94 | % | 70-130 | | 1 | | 03/03/15 04:04 | 2037-26-5 | |

**Sample: CAFE-WW** **Lab ID: 92239087051** Collected: 02/25/15 14:15 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.019 | 0.019 | 1 | 03/03/15 15:48 | 03/03/15 22:43 | 106-93-4 | |
| ***Surrogates*** | | | | | | | | | |
| 1-Chloro-2-bromopropane (S) | 101 | % | 60-140 | | 1 | 03/03/15 15:48 | 03/03/15 22:43 | 301-79-56 | |
| **8260 MSV Low Level SC** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 04:21 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 0.10 | 1 | | 03/03/15 04:21 | 994-05-8 | |
| Benzene | ND | ug/L | 1.0 | 0.25 | 1 | | 03/03/15 04:21 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 50.0 | 1 | | 03/03/15 04:21 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 3.6 | 1 | | 03/03/15 04:21 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 1.9 | 1 | | 03/03/15 04:21 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 04:21 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 1.0 | 0.12 | 1 | | 03/03/15 04:21 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 33.0 | 1 | | 03/03/15 04:21 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 1.0 | 0.30 | 1 | | 03/03/15 04:21 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 0.070 | 1 | | 03/03/15 04:21 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 1.0 | 0.21 | 1 | | 03/03/15 04:21 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 1.0 | 0.24 | 1 | | 03/03/15 04:21 | 91-20-3 | |
| Toluene | ND | ug/L | 1.0 | 0.26 | 1 | | 03/03/15 04:21 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 04:21 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 2.0 | 0.66 | 1 | | 03/03/15 04:21 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 1.0 | 0.23 | 1 | | 03/03/15 04:21 | 95-47-6 | |
| ***Surrogates*** | | | | | | | | | |
| 4-Bromofluorobenzene (S) | 101 | % | 70-130 | | 1 | | 03/03/15 04:21 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 105 | % | 70-130 | | 1 | | 03/03/15 04:21 | 17060-07-0 | |
| Toluene-d8 (S) | 93 | % | 70-130 | | 1 | | 03/03/15 04:21 | 2037-26-5 | |

**Sample: OLD SERVICE STATION WW** **Lab ID: 92239087052** Collected: 02/25/15 14:20 Received: 02/27/15 12:55 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.019 | 0.019 | 1 | 03/03/15 15:48 | 03/03/15 23:03 | 106-93-4 | |

## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

MDE
Maryland Department of the Environment

# FACTS ABOUT:
## METHYL TERTIARY-BUTYL ETHER (MTBE)

## METHYL TERTIARY-BUTYL ETHER (MTBE)

Methyl tertiary-butyl ether (MTBE) is a chemical compound made from a chemical reaction of methanol and isobutylene. At one time, MTBE was produced in very large quantities and was used primarily as a fuel additive in gasoline. During the summer of 2006, the gasoline refiners phased MTBE out of Maryland's gasoline and replaced it with ethanol.

## WHY WAS MTBE USED AS A FUEL ADDITIVE?

MTBE replaced lead as an octane enhancer to help prevent gasoline engines from "knocking." MTBE is known as an oxygenate because it raises the oxygen content of gasoline. Oxygen helps gasoline burn more completely, thereby reducing harmful tailpipe emissions from motor vehicles. Most refiners used MTBE in higher concentrations over other oxygenates primarily for its blending characteristics to fulfill some requirements set by Congress in the 1990 Clean Air Act Amendments. MTBE became more prevalently used in the Baltimore-Washington Metropolitan region in 1995 when the Clean Air Act required areas with the worst ground-level ozone air pollution to reduce emissions of pollutants that form ground-level ozone by using reformulated, or oxygenated, gasoline. This continued until the summer of 2006 when ethanol replaced MTBE as the primary oxygenate used by gasoline refiners.

## WHY IS MTBE AN ENVIRONMENTAL CONCERN?

MTBE is more soluble and mobile in water, has a smaller molecular size, and is less biodegradable than other gasoline components. MTBE can become introduced into the environment, particularly to water, from leaking underground and aboveground petroleum storage tank (USTs and ASTs) systems through liquid and vapor releases. Other sources of MTBE include atmospheric deposition, storm water runoff, watercraft, and residential fuel use.

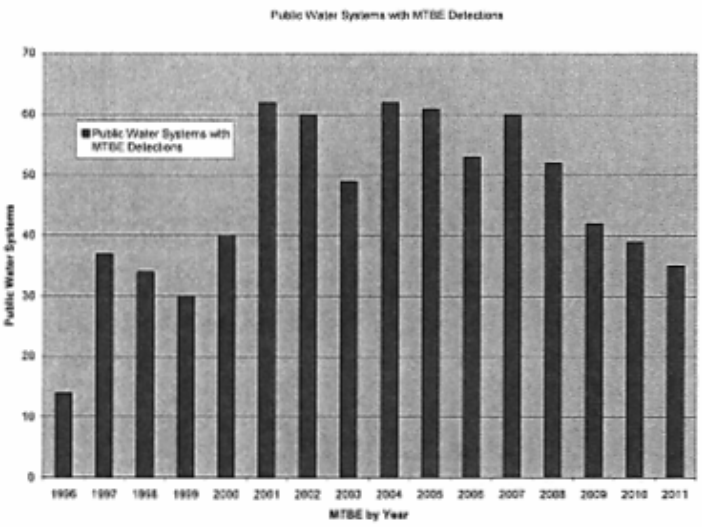
## IS MTBE A HEALTH CONCERN?

The U.S. Environmental Protection Agency (EPA) reviewed all available information and concluded that there was insufficient data to quantify health risks from low-level MTBE exposures in drinking water. EPA's health advisory, issued in December 1997, states that levels of contamination at or below 20 to 40 parts per billion (ppb) provides a large margin of safety from toxic effects and that water would not have an unpleasant taste and odor. In 1999, an EPA Panel investigated concerns about MTBE in drinking water supplies. The Panel recommended that EPA work with Congress and the states to implement reforms to protect drinking water

supplies from MTBE while maintaining air pollution reductions. Specific Panel recommendations included:

- Substantially reducing the use of MTBE while ensuring no loss in air quality benefits;
- Enhancing public drinking water monitoring, assessment, and protection programs;
- Enhancing enforcement of UST upgrade or replacement programs; and
- Enhancing programs for public education and clean-up of gasoline spills.

## HAVE THE WATERS OF MARYLAND BEEN IMPACTED?




Since 1995, MDE has periodically sampled community and non-transient, non-community public water systems for MTBE. Of the 1,023 public water systems, MTBE was detected in 35 systems in 2011. MDE continues to require sampling for MTBE contamination at all leaking underground storage tank (LUST) sites with groundwater impacts. Data from all such LUST sites indicated that 652 domestic wells have been impacted by MTBE to date. Carbon filtration systems are typically installed to remove contamination or alternative water supplies are provided to address MTBE concerns.

## WHAT IS MDE DOING ABOUT MTBE CONTAMINATION?

The MDE continues to test for the presence of MTBE in groundwater. For public water supplies, sampling frequency increases when MTBE is detected, and contamination levels over 10 ppb trigger an investigation for the contamination source. For private wells, treatment is recommended for wells with levels at or above 20 ppb at the point of use. However, at higher levels other options including well replacement may be needed. Follow-up action has included providing alternative sources of water, adding treatment, conducting additional monitoring, and implementing remediation strategies. MDE continues to assist local governments to develop wellhead protection programs to reduce the risk of contaminating public supplies. Many local government water sampling programs include MTBE in there sampling.

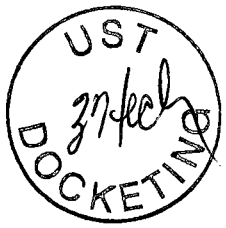
## GOVERNOR TASK FORCE ON MTBE:

- On May 11, 2000, the Governor signed an emergency bill that created a Task Force charged with determining and addressing the environmental and health risks associated with ground and surface water MTBE contamination, examining national and regional efforts on MTBE contamination, recommending a plan to minimize and counteract MTBE risks, and exploring alternatives to MTBE. The Task Force published its findings in Preliminary and Final Reports. (Click here to view Governor's Office Press Release)
- The Preliminary Report by the Task Force became available by December 2000. (Click here to download the Preliminary Report)
- The Final Report by the Task Force became available by December 2001. (Click here to download the Final Report)

If you need more information, please contact MDE's Oil Control Program at (410) 537-3442, and if you have questions concerning the presence of MTBE in public water supplies, contact MDE's Water Supply Program at (410) 537-3714.

D H E C
PROMOTE PROTECT PROSPER

W. Marshall Taylor Jr., Acting Director
*Promoting and protecting the health of the public and the environment*




CERTIFIED MAIL
9214 8969 0099 9790 1400 8138 77

**MR FRANK CRAWFORD**
**CRAWFORDS COUNTRY STORE**
**TURTLE POINT**
**ABBEVILLE SC 29620**

APR 30 2015

**Re: Corrective Action Options**
Crawford's Country Store, 5870 Highway 28 North, Abbeville, SC
UST Permit #12335
Release reported December 3, 1991
Monitoring Report received March 20, 2015
Abbeville County

Dear Mr. Crawford

The Underground Storage Tank (UST) Management Division (Division) of the South Carolina Department of Health and Environmental Control (Agency) has reviewed the referenced report submitted by Midland's Environmental Consultants, Inc. on your behalf. The report indicates that active corrective action is necessary at the site to mitigate petroleum impact and ensure that there is no detrimental exposure to human health or the environment.

Funds from the State Underground Petroleum Environmental Response Bank (SUPERB) Account will soon be available for active corrective action. The selected technology must reduce the petroleum chemicals of concern (CoC) concentrations to site-specific target levels (SSTLs) determined by the Division.

The SUPERB Site Rehabilitation and Fund Access Regulations R.61-98 require the UST owner/operator to develop and implement a reasonable, cost-effective corrective action to be performed by an Agency-certified site rehabilitation contractor. As the owner/operator you are the responsible party for the release reported on December 3, 1991. You may choose one of two options as to how to proceed with this requirement: State lead or owner/operator lead.

State Lead Option:

- If you choose the state lead option, the Division will procure a certified site rehabilitation contractor to perform corrective action on your behalf. The Agency will enter into an enforceable contract with the awarded contractor. As long as you do not interfere with or prohibit the work at your site, DHEC will not hold you responsible for the failure of the state selected contractor to meet the terms of the contract. To utilize the state lead option, please sign and return the applicable

D H E C
PROMOTE PROTECT PROSPER
W. Marshall Taylor Jr., Acting Director
*Promoting and protecting the health of the public and the environment*

CERTIFIED MAIL
9214 8969 0099 9790 1400 8138 60

**MR FRANK CRAWFORD**
**CRAWFORDS COUNTRY STORE**
**5870 HIGHWAY 28 NORTH**
**ABBEVILLE SC 29620**

APR 3 0 2015

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Permission and Right-of-Entry forms within 15 days of the date of this letter.

Owner/Operator Lead Option:

- If you select the owner/operator lead option, you will be required to select a contractor to perform the corrective action. In order to assist you in determining the clean-up technology, time frame, clean-up levels, and associated costs, the Division will prepare a technical specification package and provide you copies to send to contractors of your choice. In addition, the Division will announce the request for solicitations in the South Carolina Business Opportunities, a bi-weekly state government publication, to ensure that an adequate solicitation response is obtained so that a fair and competitive price can be established. This announcement will clearly indicate that you will select the contractor to implement the corrective action.
- Compensation to the contractor will be from the SUPERB Account, but you may have the obligation to pay your selected contractor for any costs not approved by the Agency.
- The Division strongly suggests that a written contract between you and the selected contractor be developed following the completion of the solicitation process. The parties to this contract would be you and the contractor you choose; the Agency would not be a party to this contract. The Division's function would be to monitor and ensure progress of corrective action activities.
- If the contractor you select does not or cannot complete the required activities, you will be required to find another certified contractor to complete the required activities for the remainder of the existing financial approval amount. No additional funding from the SUPERB Account may be allowed. Under R.61-92, Part 280: Underground Storage Tank Control Regulations, you as the owner/operator are ultimately responsible to the Agency for the actions of your contractor. The Agency will pursue enforcement actions against you if the contractor you select does not make satisfactory progress towards achieving established corrective actions goals.
- To utilize the owner/operator lead option, please sign and return the enclosed Active Corrective Action Options Form within 15 days of the date of this letter.

On all correspondence or inquiries regarding this project, please reference **UST Permit #12335.** If you have any questions, please contact me at (803) 896-0607 or by email at thrasham@dhec.sc.gov.

Sincerely,

Ashleigh Thrash

Ashleigh Thrash, Hydrogeologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc: Permission/Right-of-Entry form
Active Corrective Action Options form
List of SCDHEC Certified Contractors

cc: Technical file (w/o enc)

**State Lead Option**
**PERMISSION FORM**
**UNDERGROUND STORAGE TANK AND PROPERTY OWNER**
**UST Permit #12335**

**If you are both the owner of the former or existing underground storage tanks for the release reported on December 3, 1991 and the current property owner, please complete this form.**

I, _____, certify that I am the identified legal owner of the underground storage tanks for the release reported on December 3, 1991 and property located at the facility identified below or serve as the authorized representative for the owner. I grant permission to the South Carolina Department of Health and Environmental Control (SCDHEC) to secure on my behalf contractor services to conduct assessment and corrective action activities as required, and authorize SCDHEC, or a contractor selected by SCDHEC, to enter this property at reasonable times only to accomplish these site rehabilitation tasks. The contractor(s) will be designated as my contractor for only the required site rehabilitation activities. Compensation to the contractor(s) will be from the SUPERB Account and I will have no obligation to pay the contractor(s). I understand that SCDHEC or its contractor will be responsible for notifying me of all activities that are necessary prior to their initiation and will promptly provide to me a copy of each environmental report. I understand that I may choose to select my own contractor at the completion of any phase of work by notifying the Division of Underground Storage Tank Management in writing.

Name of Facility _____Phone # _____

Street Address of Facility _____

Town, City, District, Suburb _____

Name of nearest intersecting street, road, highway, alley _____

_____Is this facility within the city limits?

(yes or no) _____

Does a public water or sewer utility service this facility? (yes or no) _____, if no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines _____, phone number _____

Is the property currently leased or rented to someone? (yes or no) _____. If yes, please provide their name _____and phone number _____ _____and let them know about the pending site rehabilitation activities. If vehicles or other mobile structures are parked over the monitoring wells, they should be moved before SCDHEC's contractor arrives at the site.

NAME of UST/property owner (Please Print):_____

Phone Number (home)_____(work)_____

Signature of UST/property Owner:_____

Witness:_____

Date:_____Month _____Day_____Year

**Owner/ Operator Lead Option**
**ACTIVE CORRECTIVE ACTION**
**OPTIONS FORM**
**UST PERMIT #12335**

I, _____, certify that I am the legal owner on record for the underground storage tanks at the facility identified below for the release reported on December 3, 1991 or serve as the authorized representative for the owner. I wish to secure price quotations for corrective action activities as required by SCDHEC, and to select my own corrective action contractor after price quotation results are received. I understand that the SCDHEC will also advertise for price quotations in the South Carolina Business Opportunities and provide the results to me. **I understand compensation to the contractor will be from the SUPERB Account, but I may have the obligation to pay the contractor for any costs not approved by the SCDHEC. I understand that if the contractor I select does not or cannot complete the required activities, I will be required to find another certified contractor to complete the required activities for the remainder of the existing financial approval amount and that no additional funding from the SUPERB Account may be allowed. I also understand that the SCDHEC will pursue enforcement actions against me if the contractor I select does not make satisfactory progress towards achieving established corrective actions goals.**

NAME of UST owner or authorized representative (Please Print):_____

Phone Number (home)_____ (work)_____

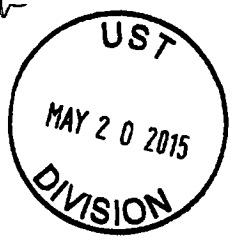
Signature of UST Owner:_____

Date:_____

Witness:_____

Date:_____

fshleigh




**State Lead Option**
**PERMISSION FORM**
**UNDERGROUND STORAGE TANK AND PROPERTY OWNER**
**UST Permit #12335**

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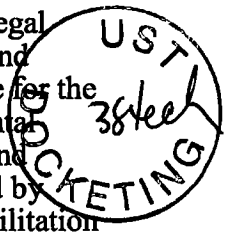


I, HAROLD FRANKLIN CRAWFORD, certify that I am the identified legal owner of the underground storage tanks for the release reported on December 3, 1991 and property located at the facility identified below or serve as the authorized representative for the owner. I grant permission to the South Carolina Department of Health and Environmental Control (SCDHEC) to secure on my behalf contractor services to conduct assessment and corrective action activities as required, and authorize SCDHEC, or a contractor selected by SCDHEC, to enter this property at reasonable times only to accomplish these site rehabilitation tasks. The contractor(s) will be designated as my contractor for only the required site rehabilitation activities. Compensation to the contractor(s) will be from the SUPERB Account and I will have no obligation to pay the contractor(s). I understand that SCDHEC or its contractor will be responsible for notifying me of all activities that are necessary prior to their initiation and will promptly provide to me a copy of each environmental report. I understand that I may choose to select my own contractor at the completion of any phase of work by notifying the Division of Underground Storage Tank Management in writing.

Name of Facility Crawford's Country Store Phone # 864-348-7442

Street Address of Facility 5870 HWY 28 NORTH

Town, City, District, Suburb ABBEVILLE SC 29620

Name of nearest intersecting street, road, highway, alley Intersection of #28 and 184

Is this facility within the city limits?

(yes or no) NO

Does a public water or sewer utility service this facility? (yes or no) NO, if no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines FRANK CRAWFORD, phone number 864-348-7442 864 933 3210 CELL

Is the property currently leased or rented to someone? (yes or no) NO. If yes, please provide their name _____ and phone number _____ and let them know about the pending site rehabilitation activities. If vehicles or other mobile structures are parked over the monitoring wells, they should be moved before SCDHEC's contractor arrives at the site.

NAME of UST/property owner (Please Print): HAROLD FRANKLIN CRAWFORD'S COUNTRY STORE

Phone Number (home) 864 446-2000 (work) 864 348-7442 CELL 8649333210

Signature of UST/property Owner: Harold Franklin Crawford

Witness: Gina Lewis

Date: May Month 18th Day 2015 Year

Ashleigh

UST MAY 20 2015 DIVISION

**State Lead Option**
**PERMISSION FORM**
**UNDERGROUND STORAGE TANK AND PROPERTY OWNER**
**UST Permit #12335**

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UST DOCKETING

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Street Address of Facility 5870 HWY 28 North

Town, City, District, Suburb Abbeville SC 29620

Name of nearest intersecting street, road, highway, alley #28 and #184

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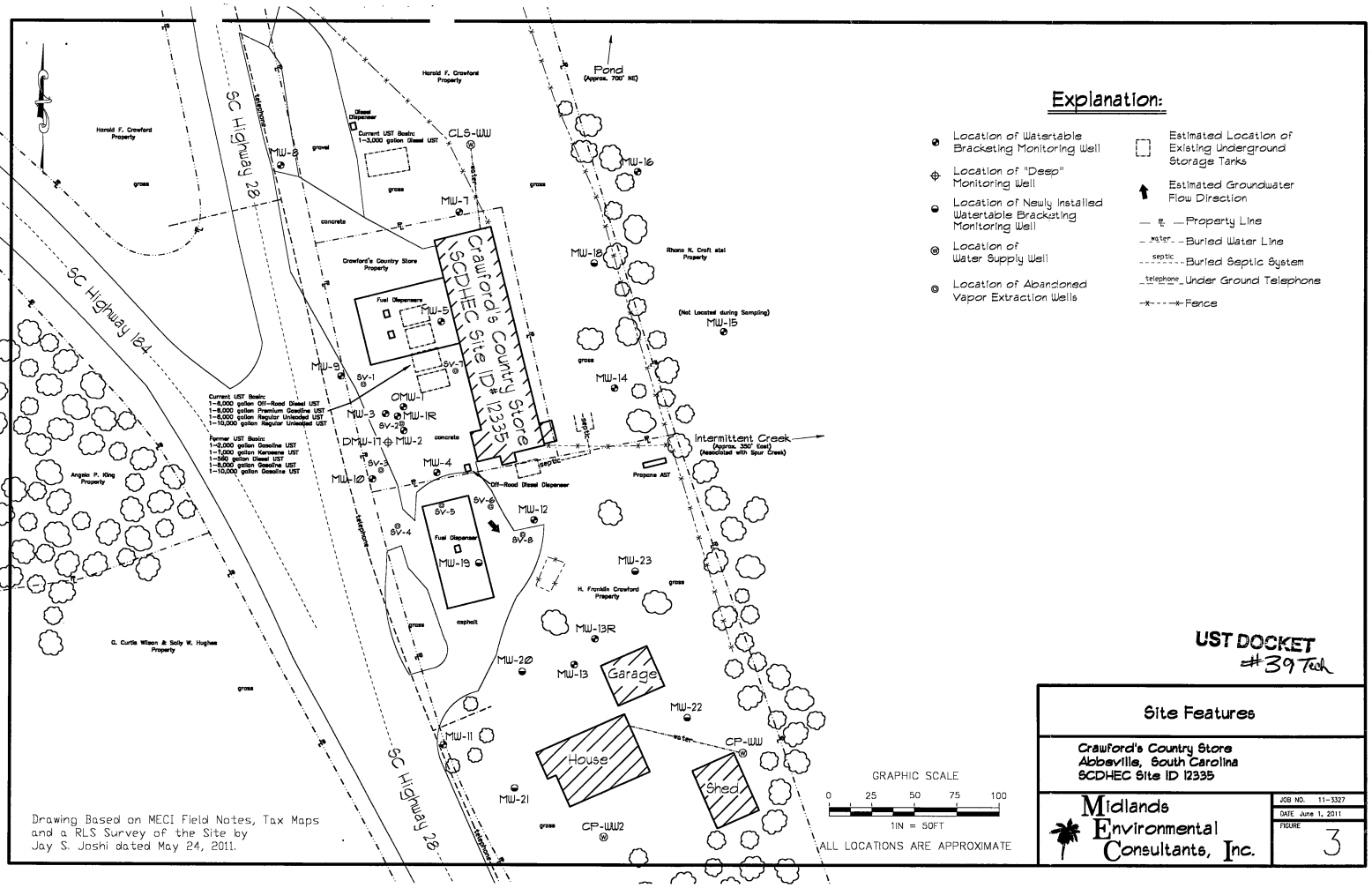
Phone Number (home) 864 446-2000 (work) 864 348-7442 CELL 8649333210

Signature of UST/property Owner: Harold Franklin Crawford

Witness: Gina Lewis

Date: May Month 18th Day 2015 Year



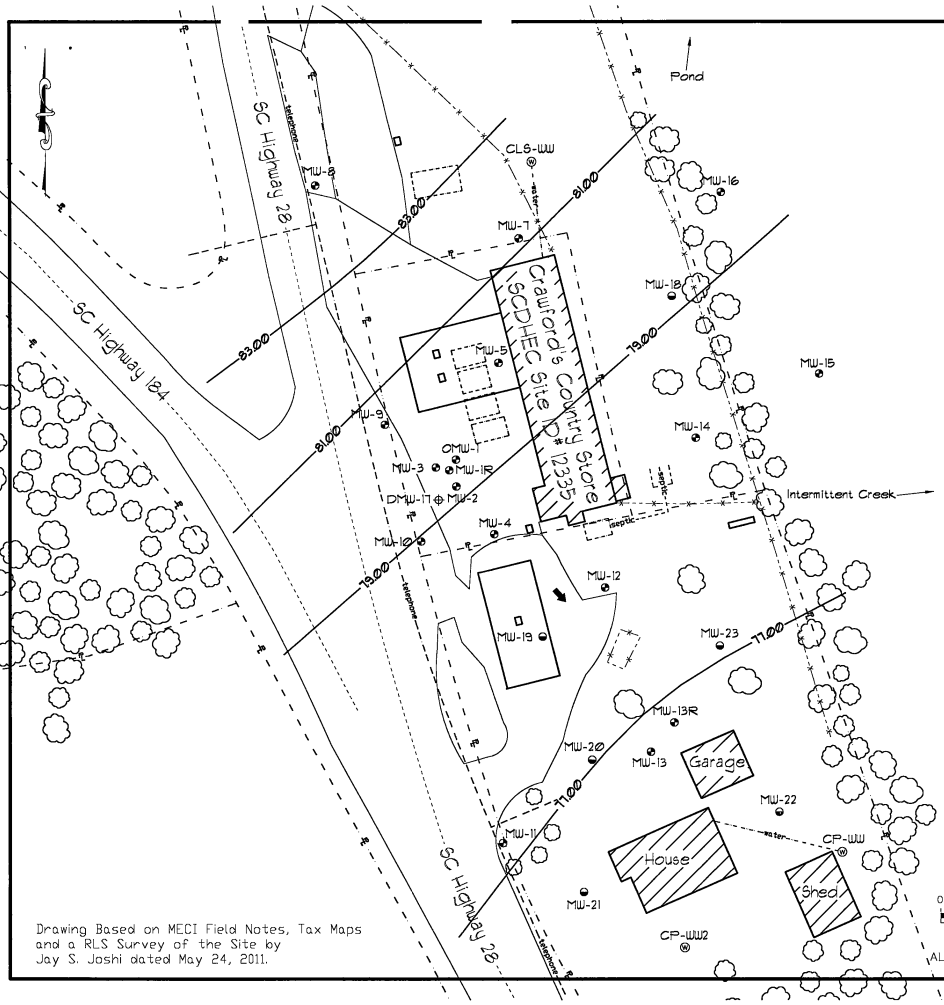

UST DOCKET #39 Tech

## Site Features

**Crawford's Country Store**
**Abbeville, South Carolina**
**SCDHEC Site ID 12335**

Midlands Environmental Consultants, Inc.

JOB NO. 11-3327
DATE June 1, 2011
FIGURE 3




Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated May 24, 2011.

## Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of "Deep" Monitoring Well
- Location of Newly Installed Watertable Bracketing Monitoring Well
- Location of Water Supply Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Groundwater Elevation Contour (feet)

**Groundwater Elevation Data**

| Well # | Screen Interval | Depth to Product (feet) | Depth to Water (feet) | Product Thickness (feet) | Well Head Elevation | Groundwater Elevation |
|---|---|---|---|---|---|---|
| OMW-1 | 7-22 | --- | 18.13 | --- | 97.50 | 79.37 |
| MW-1R | 13-25 | 18.06 | 18.17 | 0.11 | 97.51 | 79.35 |
| MW-2 | 10-25 | --- | 18.47 | --- | 97.57 | 79.10 |
| MW-3 | 10-25 | --- | 18.18 | --- | 97.72 | 79.54 |
| MW-4 | 10-25 | --- | 18.73 | --- | 97.37 | 78.64 |
| MW-5 | 10-25 | --- | 17.58 | --- | 97.09 | 79.51 |
| MW-6 | 10-25 | --- | NL | --- | NL | NL |
| MW-7 | 10-25 | --- | 16.04 | --- | 97.20 | 81.16 |
| MW-8 | 10-25 | --- | 15.27 | --- | 100.09 | 84.82 |
| MW-9 | 10-25 | --- | 17.37 | --- | 98.30 | 80.93 |
| MW-10 | 10-25 | --- | 18.45 | --- | 97.40 | 78.95 |
| MW-11 | 10-25 | --- | 16.65 | --- | 94.17 | 77.52 |
| MW-12 | 10-25 | --- | 18.13 | --- | 96.32 | 78.19 |
| MW-13 | 10-25 | --- | 22.06 | --- | 98.95 | 76.89 |
| MW-13R | 18-30 | --- | 22.25 | --- | 98.74 | 76.49 |
| MW-14 | 10-25 | --- | 8.77 | --- | 87.15 | 78.38 |
| MW-15 | 10-25 | --- | NS | --- | NS | NS |
| MW-16 | 10-25 | --- | 11.74 | --- | 91.51 | 79.77 |
| DMW-17 | 70-75 | --- | 17.81 | --- | 97.83 | 80.02 |
| MW-18 | 8-18 | --- | 9.12 | --- | 88.25 | 79.13 |
| MW-19 | 15-25 | --- | 19.14 | --- | 97.30 | 78.16 |
| MW-20 | 17-27 | --- | 22.19 | --- | 99.24 | 77.05 |
| MW-21 | 15-25 | --- | 21.05 | --- | 96.79 | 75.74 |
| MW-22 | 19-29 | --- | 21.93 | --- | 97.63 | 75.70 |
| MW-23 | 13-23 | --- | 15.02 | --- | 92.38 | 77.36 |

Notes:
- Depth to groundwater measured on May 11, 2011.
- Contour Interval = 2.00 feet
- "Deep" Monitoring Well DMW-17 not used in contouring
- Site Datum Based on Assumed Spot Elevation.
- NL = Not Located
- NS = Monitoring well MW-15 was not located during sampling activities, but was located during the comprehensive survey.
- Groundwater Contours Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

GRAPHIC SCALE
0 25 50 75 100
1IN = 50FT

ALL LOCATIONS ARE APPROXIMATE

# Groundwater Contour Map

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 11-3327
DATE June 1, 2011
FIGURE 4

12335

**SENDER:**

- ☐ Complete items 1 and/or 2 for additional services. Complete items 3, 4a, and 4b.
- ☐ Print your name and address on the reverse of this form so that we can return this card to you.
- ☐ Attach this form to the front of the mailpiece, or on the back if space does not permit.
- ☐ Write *"Return Receipt Requested"* on the mailpiece below the article number.
- ☐ The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

3. Article Addressed to:

H FRANKLIN CRAFORD
31 TURTLE POINT
ABBEVILLE SC 29620

4a. Article Number
P 350 403 109

4b. Service Type

| | |
|---|---|
| ☐ Registered | ☒ Certified |
| ☐ Express Mail | ☐ Insured |
| ☐ Return Receipt for Merchandise | ☐ COD |

Delivery 3-24 SSS

5. Received By: *(Print Name)* H. Franklin Crawford

6. Signature *(Addressee or Agent)*

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form **3811**, December 1994 102595-99-B-0223 Domestic Return Receipt

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

UNITED STATES POSTAL SERVICE

First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

• Print your name, address, and ZIP Code in this box •

RECEIVED
MAR 27 2000
Bureau of Underground
Storage Tank Management

BUREAU OF UST MANAGEMENT
DEPARTMENT OF HEALTH AND
ENVIRONMENTAL CONTROL
2600 BULL STREET
COLUMBIA, SC 29201

B. Corley

9201+1708

Is your RETURN ADDRESS completed on the reverse side?

**SENDER:**

- ☐ Complete items 1 and/or 2 for additional services. Complete items 3, 4a, and 4b.
- ☐ Print your name and address on the reverse of this form so that we can return this card to you.
- ☐ Attach this form to the front of the mailpiece, or on the back if space does not permit.
- ☐ Write *"Return Receipt Requested"* on the mailpiece below the article number.
- ☐ The Return Receipt will show to whom the article was delivered and the date delivered. #112335

I also wish to receive the following services (for an extra fee):

1. ☐ Addressee's Address
2. ☐ Restricted Delivery

3. Article Addressed to:

Sally Hughes
PO Box 124
Abbeville SC
29620

4a. Article Number
Z 350 438 110

4b. Service Type
- ☐ Registered
- ☒ Certified
- ☐ Express Mail
- ☐ Insured
- ☐ Return Receipt for Merchandise
- ☐ COD

7. Date of Delivery 3.24.00

5. Received By: *(Print Name)*

6. Signature *(Addressee or Agent)*

8. Addressee's Address *(Only if requested and fee is paid)*

PS Form **3811,** December 1994 102595-99-B-0223 Domestic Return Receipt

Thank you for using Return Receipt Service.

UNITED STATES POSTAL SERVICE

First-Class Mail
Postage & Fees Paid
USPS
Permit No. G-10

● Print your name, address, and ZIP Code in this box ●

BUREAU OF UST MANAGEMENT
SC DEPARTMENT OF HEALTH AND
ENVIRONMENTAL CONTROL
2600 BULL STREET
COLUMBIA SC 29201

Bureau of Underground
Storage Tank Management

MAR 2 7 2000

RECEIVED

Corley

Crawford's Country Store- Post-ACA data
UST Permit #12335

| | MR | MR | AR |
|---|---|---|---|
| OMW-1 | 10/20/04 | 5/17/06 | 5/11/11 |
| DTW | 16.25 | 15.13 | 18.13 |
| Benzene | **5900** | **9100** | **6110** |
| Toluene | **60000** | **30000** | **50000** |
| Ethylbenzene | **2200** | **1900** | **3130** |
| Xylenes | **13900** | 9400 | **20600** |
| MTBE | **5800** | **23000** | **1420** |
| Naphthalene | **450** | **1100** | **<2500** |
| Lead | **21** | <5 | <5 |
| DCA | na | **<1000** | **<2500** |
| EDB | **4.00** | **0.11** | **9.90** |
| DIPE | na | **19000** | **7500** |
| TAA | na | **18000** | **<50000** |
| TAME | na | **2200** | **<5000** |
| TBA | na | **<2000** | **<50000** |

| MW-1R | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | 16.12 | nm | **FP** |
| Benzene | **13000** | ns | (0.11') |
| Toluene | **42000** | | |
| Ethylbenzene | **2400** | | |
| Xylenes | 9900 | | |
| MTBE | **24000** | | |
| Naphthalene | **370** | | |
| Lead | 8 | | |
| DCA | na | | |
| EDB | **0.30** | | |
| DIPE | na | | |
| TAA | na | | |
| TAME | na | | |
| TBA | na | | |

| MW-2 | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | 16 32 | 15 50 | 18.47 |
| Benzene | **4900** | **6100** | **5210** |
| Toluene | **1500** | **9600** | 778 |
| Ethylbenzene | 680 | **2800** | **1870** |
| Xylenes | 450 | **13100** | 1080 |
| MTBE | **7500** | **9400** | **3530** |
| Naphthalene | **150** | **830** | **387** |
| Lead | 6 | <5 | <5 |
| DCA | na | **<250** | **<250** |
| EDB | **0.06** | **0.44** | **<0.02** |
| DIPE | na | **7200** | **4990** |
| TAA | na | **11000** | **5700** |
| TAME | na | **840** | **532** |
| TBA | na | **2300** | **<5000** |

| MW-3 | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | 16.22 | 15.23 | 18.18 |
| Benzene | **8200** | **9900** | **4000** |
| Toluene | **46000** | **60000** | **22700** |
| Ethylbenzene | **3000** | **2700** | **2730** |
| Xylenes | **15000** | **14600** | **13900** |
| MTBE | **4300** | **5600** | **5830** |
| Naphthalene | **360** | **2500** | **388** |
| Lead | **26** | <5 | <5 |
| DCA | na | **<2500** | **<125** |
| EDB | **1.70** | **2.40** | **1.60** |
| DIPE | na | **9900** | **6070** |
| TAA | na | **32000** | **15200** |
| TAME | na | **<5000** | **1250** |
| TBA | na | **<5000** | **<2500** |

| MW-4 | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | 16.80 | 15.84 | 18.73 |
| Benzene | **6100** | **7200** | **904** |
| Toluene | **9000** | **11000** | 544 |
| Ethylbenzene | **2400** | **3300** | **1430** |
| Xylenes | **11900** | **15800** | 263 |
| MTBE | **7400** | **9800** | **438** |
| Naphthalene | **620** | **1000** | **549** |
| Lead | **95** | **170** | 6 |
| DCA | na | **<250** | **<50** |
| EDB | **190.00** | **78.00** | **0.46** |
| DIPE | na | **8300** | **582** |
| TAA | na | **12000** | **1920** |
| TAME | na | **1000** | <100 |
| TBA | na | **4300** | <1000 |

| MW-5 | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | 14.67 | 13.99 | 17.58 |
| Benzene | **68** | **73** | **17** |
| Toluene | **8600** | **3400** | 111 |
| Ethylbenzene | **2000** | **1300** | 222 |
| Xylenes | 7400 | 3500 | 167 |
| MTBE | **<100** | **<120** | 7 |
| Naphthalene | **250** | **240** | **26** |
| Lead | 5 | 9 | 6 |
| DCA | na | **<120** | <12 |
| EDB | <0 02 | <0.02 | <0.02 |
| DIPE | na | 76 | 6 |
| TAA | na | **1400** | 195 |
| TAME | na | **<250** | <25 |
| TBA | na | <250 | <250 |

| MW-6 | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | 13.90 | 13.50 | well |
| Benzene | 3 | 2 | not |
| Toluene | <5 | <5 | located |
| Ethylbenzene | <5 | 2 | |
| Xylenes | 7 | 5 | |
| MTBE | <5 | 4 | |
| Naphthalene | <5 | <5 | |
| Lead | **120** | 11 | |
| DCA | na | <5 | |
| EDB | <0.02 | <0.02 | |
| DIPE | na | 11 | |
| TAA | na | <10 | |
| TAME | na | <10 | |
| TBA | na | <10 | |

| MW-7 | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | 13.80 | 13.59 | 16.04 |
| Benzene | <5 | <5 | <5 |
| Toluene | <5 | <5 | <5 |
| Ethylbenzene | <5 | <5 | <5 |
| Xylenes | <15 | <15 | <10 |
| MTBE | 9 | 8 | 8 |
| Naphthalene | <5 | 5 | 5 |
| Lead | 10 | 6 | 6 |
| DCA | na | <5 | <5 |
| EDB | <0.02 | <0.02 | <0.02 |
| DIPE | na | <5 | <5 |
| TAA | na | <10 | <100 |
| TAME | na | <10 | <10 |
| TBA | na | <10 | <100 |

| MW-8 | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | 13.89 | 12.32 | 15.27 |
| Benzene | <5 | <5 | <5 |
| Toluene | <5 | <5 | <5 |
| Ethylbenzene | <5 | <5 | <5 |
| Xylenes | <15 | <15 | <10 |
| MTBE | <5 | <5 | 8 |
| Naphthalene | <5 | <5 | 5 |
| Lead | 6 | 1 | 6 |
| DCA | na | <5 | <5 |
| EDB | <0.02 | <0.02 | 0.04 |
| DIPE | na | <5 | <5 |
| TAA | na | <10 | <100 |
| TAME | na | <10 | <10 |
| TBA | na | <10 | <100 |

| MW-9 | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | 15.36 | 14.62 | 17.37 |
| Benzene | <5 | <5 | 3 |
| Toluene | <5 | 3 | 9 |
| Ethylbenzene | 4 | 2 | 4 |
| Xylenes | 179 | 185 | 101 |
| MTBE | <5 | <5 | 5 |
| Naphthalene | 6 | 10 | 2 |
| Lead | **16** | **40** | 6 |
| DCA | na | <5 | <5 |
| EDB | <0.02 | <0.02 | <0.02 |
| DIPE | na | <5 | 8 |
| TAA | na | <10 | <100 |
| TAME | na | <10 | <10 |
| TBA | na | <10 | <100 |

| MW-10 | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | 16.50 | 15.26 | 18.45 |
| Benzene | **7700** | **7800** | **12300** |
| Toluene | **72000** | **62000** | **28200** |
| Ethylbenzene | **2700** | **2900** | **3830** |
| Xylenes | **15100** | **16400** | **20600** |
| MTBE | **2900** | **1800** | **13100** |
| Naphthalene | **420** | **570** | **610** |
| Lead | 8 | 14 | <5 |
| DCA | na | **<250** | **<1000** |
| EDB | **6.20** | **5.50** | **2.90** |
| DIPE | na | **5300** | **15700** |
| TAA | na | **7100** | **<20000** |
| TAME | na | **680** | **2650** |
| TBA | na | <500 | **<20000** |

| MW-11 | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | 14.82 | 13.65 | 16.65 |
| Benzene | **780** | **430** | **33** |
| Toluene | <50 | <250 | <5 |
| Ethylbenzene | <50 | <250 | <5 |
| Xylenes | <166 | <750 | <10 |
| MTBE | **8300** | **5100** | **855** |
| Naphthalene | **32** | **270** | 5 |
| Lead | **47** | 2 | <5 |
| DCA | na | **<250** | <5 |
| EDB | **0.06** | 0.02 | <0.02 |
| DIPE | na | **1200** | **454** |
| TAA | na | **2500** | **469** |
| TAME | na | **<500** | 46 |
| TBA | na | <500 | 160 |

| MW-12 | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | 16.20 | 15.52 | 18.13 |
| Benzene | <5 | **<10** | <5 |
| Toluene | <5 | <10 | <5 |
| Ethylbenzene | <5 | <10 | <5 |
| Xylenes | <15 | <30 | <10 |
| MTBE | **280** | **240** | **53** |
| Naphthalene | <5 | <10 | <5 |
| Lead | 4 | 7 | <5 |
| DCA | na | **<10** | <5 |
| EDB | <0.02 | <0.02 | **0.05** |
| DIPE | na | **240** | 9 |
| TAA | na | 140 | **549** |
| TAME | na | <20 | <10 |
| TBA | na | <20 | 145 |

| MW-13 | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | nm | 20.39 | 22.06 |
| Benzene | ns | **1700** | <5 |
| Toluene | | 5 | <5 |
| Ethylbenzene | | <5 | <5 |
| Xylenes | | 98 | <10 |
| MTBE | | **34000** | **4220** |
| Naphthalene | | **110** | <5 |
| Lead | | 1 | 4 |
| DCA | | **52** | <5 |
| EDB | | **0.07** | <0.02 |
| DIPE | | **5400** | **808** |
| TAA | | **5900** | 83 |
| TAME | | **<1000** | 96 |
| TBA | | **4900** | <100 |

| MW-13R | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | 20.36 | nm | 22.25 |
| Benzene | **1700** | ns | **530** |
| Toluene | 7 | | <5 |
| Ethylbenzene | <5 | | <5 |
| Xylenes | 122 | | 27 |
| MTBE | **35000** | | **15600** |
| Naphthalene | **93** | | **33** |
| Lead | 8 | | <5 |
| DCA | na | | **15** |
| EDB | **0.10** | | <0.02 |
| DIPE | na | | **4860** |
| TAA | na | | **3110** |
| TAME | na | | **510** |
| TBA | na | | 1090 |

| MW-14 | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | 6.76 | 6.83 | 8.77 |
| Benzene | <5 | <5 | <5 |
| Toluene | 9 | <5 | <5 |
| Ethylbenzene | <5 | <5 | <5 |
| Xylenes | <15 | <15 | <10 |
| MTBE | <5 | <5 | 2 |
| Naphthalene | <5 | <5 | <5 |
| Lead | **17** | **29** | <5 |
| DCA | na | <5 | <5 |
| EDB | <0.02 | <0.02 | <0 |
| DIPE | na | <5 | <0.02 |
| TAA | na | <10 | **570** |
| TAME | na | <10 | <10 |
| TBA | na | <10 | 137 |

| MW-15 | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | 4.88 | 5.13 | nm |
| Benzene | <5 | <5 | ns |
| Toluene | <5 | <5 | |
| Ethylbenzene | <5 | <5 | |
| Xylenes | <15 | <15 | |
| MTBE | <5 | <5 | |
| Naphthalene | <5 | <5 | |
| Lead | 6 | **24** | |
| DCA | na | <5 | |
| EDB | <0.02 | <0.02 | |
| DIPE | na | <5 | |
| TAA | na | <10 | |
| TAME | na | <10 | |
| TBA | na | <10 | |

| MW-16 | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | 9.60 | 9.64 | 11.74 |
| Benzene | 2 | <5 | <5 |
| Toluene | <5 | <5 | <5 |
| Ethylbenzene | <5 | <5 | <5 |
| Xylenes | <15 | <15 | <10 |
| MTBE | 8 | 5 | 8 |
| Naphthalene | <5 | <5 | 5 |
| Lead | 6 | 6 | 6 |
| DCA | na | <5 | <5 |
| EDB | <0.02 | <0.02 | <0.02 |
| DIPE | na | <5 | <5 |
| TAA | na | <10 | <100 |
| TAME | na | <10 | <10 |
| TBA | na | <10 | <100 |

| DMW-17 | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | 16.73 | 13.71 | 17.81 |
| Benzene | <5 | <5 | <5 |
| Toluene | <5 | <5 | <5 |
| Ethylbenzene | <5 | <5 | <5 |
| Xylenes | <15 | <15 | <10 |
| MTBE | <5 | <5 | <5 |
| Naphthalene | <5 | <5 | <5 |
| Lead | 3 | 1 | **20** |
| DCA | na | <5 | <5 |
| EDB | <0.02 | <0.02 | <0.02 |
| DIPE | na | <5 | <5 |
| TAA | na | <10 | <100 |
| TAME | na | <10 | <10 |
| TBA | na | <10 | <100 |

| MW-18 | | | 5/11/11 |
|---|---|---|---|
| DTW | | | 9.12 |
| Benzene | | | <5 |
| Toluene | | | <5 |
| Ethylbenzene | | | <5 |
| Xylenes | | | <10 |
| MTBE | | | <5 |
| Naphthalene | | | <5 |
| Lead | | | 4 |
| DCA | | | <5 |
| EDB | | | <0.02 |
| DIPE | | | <5 |
| TAA | | | <100 |
| TAME | | | <10 |
| TBA | | | <100 |

| MW-19 | | | 5/11/11 |
|---|---|---|---|
| DTW | | | 19.14 |
| Benzene | | | <5 |
| Toluene | | | <5 |
| Ethylbenzene | | | <5 |
| Xylenes | | | <10 |
| MTBE | | | **405** |
| Naphthalene | | | 5 |
| Lead | | | **23** |
| DCA | | | <5 |
| EDB | | | **0.15** |
| DIPE | | | 40 |
| TAA | | | <100 |
| TAME | | | <10 |
| TBA | | | <100 |

| MW-20 | | | 5/11/11 |
|---|---|---|---|
| DTW | | | 22.19 |
| Benzene | | | 4 |
| Toluene | | | <5 |
| Ethylbenzene | | | <5 |
| Xylenes | | | <10 |
| MTBE | | | 324 |
| Naphthalene | | | <5 |
| Lead | | | <15 |
| DCA | | | <5 |
| EDB | | | 0.04 |
| DIPE | | | 110 |
| TAA | | | 118 |
| TAME | | | 11 |
| TBA | | | <100 |

| MW-21 | | | 5/11/11 |
|---|---|---|---|
| DTW | | | 21.05 |
| Benzene | | | <5 |
| Toluene | | | <5 |
| Ethylbenzene | | | <5 |
| Xylenes | | | <10 |
| MTBE | | | **153** |
| Naphthalene | | | <5 |
| Lead | | | **108** |
| DCA | | | <5 |
| EDB | | | **0.05** |
| DIPE | | | 9 |
| TAA | | | <100 |
| TAME | | | <10 |
| TBA | | | <100 |

| MW-22 | | | 5/11/11 |
|---|---|---|---|
| DTW | | | 21.93 |
| Benzene | | | **269** |
| Toluene | | | <5 |
| Ethylbenzene | | | <5 |
| Xylenes | | | 22 |
| MTBE | | | **4010** |
| Naphthalene | | | 9 |
| Lead | | | 11 |
| DCA | | | 4 |
| EDB | | | **0.22** |
| DIPE | | | **1350** |
| TAA | | | **629** |
| TAME | | | 107 |
| TBA | | | 444 |

| MW-23 | | | 5/11/11 |
|---|---|---|---|
| DTW | | | 15.02 |
| Benzene | | | 2 |
| Toluene | | | <5 |
| Ethylbenzene | | | <5 |
| Xylenes | | | <10 |
| MTBE | | | 33 |
| Naphthalene | | | <5 |
| Lead | | | <5 |
| DCA | | | <5 |
| EDB | | | <0.02 |
| DIPE | | | 26 |
| TAA | | | <100 |
| TAME | | | <10 |
| TBA | | | <100 |

| CLS-WW | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | | | |
| Benzene | <5 | <5 | <5 |
| Toluene | <5 | <5 | <5 |
| Ethylbenzene | <5 | <5 | <5 |
| Xylenes | <15 | <15 | <10 |
| MTBE | <5 | <5 | <5 |
| Naphthalene | <5 | <5 | <5 |
| Lead | 3 | 1 | na |
| DCA | na | <5 | <5 |
| EDB | <0.02 | <0.02 | <0.02 |
| DIPE | na | <5 | <5 |
| TAA | na | <10 | <100 |
| TAME | na | <10 | <10 |
| TBA | na | <10 | <100 |

| CP-WW | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | | | |
| Benzene | ns | ns | ns |
| Toluene | | | |
| Ethylbenzene | | | |
| Xylenes | | | |
| MTBE | | | |
| Naphthalene | | | |
| Lead | | | |
| DCA | | | |
| EDB | | | |
| DIPE | | | |
| TAA | | | |
| TAME | | | |
| TBA | | | |

| CP-WW2 | 10/20/04 | 5/17/06 | 5/11/11 |
|---|---|---|---|
| DTW | | | |
| Benzene | ns | <5 | <5 |
| Toluene | | <5 | <5 |
| Ethylbenzene | | <5 | <5 |
| Xylenes | | <15 | <10 |
| MTBE | | <5 | <5 |
| Naphthalene | | <5 | <5 |
| Lead | | 1 | na |
| DCA | | <5 | <5 |
| EDB | | <0.02 | <0.02 |
| DIPE | | <5 | <5 |
| TAA | | <10 | <100 |
| TAME | | <10 | <10 |
| TBA | | <10 | <100 |

**FP**- free-phase product
na- not analyzed
nd- not detected
nm- not measured
ns- not sampled

UST Loc
APR 29 2011
PROGRAM

**UNDERGROUND STORAGE TANK (UST) OWNER/OPERATOR LEAD INFORMATION SHEET**

## 1. CONTRACTOR OF CHOICE

As the UST Owner/Operator of UST Permit # 12335, I would like to use the contractor or person(s)* listed below and request that they represent me for: (check one)

( ) Initial Groundwater Assessment
( ) Other (please specify)_____
(X) all future assessments scopes. **

Name of Contractor/Person(s): Midlands Environmental Consultants, Inc.

Address: 235-B Dooley Road, Lexington, SC 29073

Telephone Number: (803) 808-2043

Note: Site rehabilitation activities must be performed by a SCDHEC Certified Site Rehabilitation Contractor in accordance with R.61-98.

*indicate if the person listed is your own employee

** if you would like the contractor to perform all future assessment activities at this and/or other facilities that have confirmed releases, please provide a list of all sites on your letterhead and provide the information requested in items 2 and 3 below within the context of the letter.

## 2. FINANCIAL OR FAMILIAL RELATIONSHIP

Does a financial or familial relationship, as defined below, exist between you and the contractor/person that you listed above? _____ Yes _X_ No (please initial) ✓

Financial Relationship: A connection or association through a material interest of sources of income which exceed five percent of annual gross income from a business entity.

Familial Relationship: A connection or association by family or relatives, in which a family member or relative has a material interest. Family or relatives include: father, mother, son, daughter, brother, sister, uncle, aunt, first cousin, nephew, niece, husband, wife, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather, stepmother, stepson, stepdaughter, stepbrother, stepsister, half brother, half sister, grandparent, grandchild, great grandchild, step grandparent, step great grandparent, step grandchild, step great grandchild, or fiancee.

## 3. PAYMENT

You can pay the contractor and, upon the submittal of the canceled check (or a notarized statement from the contractor), be compensated from the SUPERB Account, or have payment issued directly from us to the contractor.

I request that payment be made to me after I have paid the contractor. _____ Yes _____ No (please initial)
I request that payment be made directly to the contractor. _X_ Yes _____ No (please initial) fc

Note: All costs must receive prior financial approval from the Department regardless of payment option.

Underground Storage Tank Owner/Operator Signature Harold Franklin Corp

Date 4-28-2011

UST
DOCKET
to Tech

SCANNED

ACA (1)

RECEIVED
OCT 20 1998
DIVISION OF UNDERGROUND STORAGE TANK MGMT.

**UNDERGROUND STORAGE TANK AND PROPERTY OWNER**

PERMISSION FORM - FACILITY ID #12335

**If you are the owner of the former or existing underground storage tanks and the property owner, please complete this form.**

I, Harold Franklin Crawford, certify that I am the legal owner of the underground storage tanks and property located at the facility identified below or serve as the authorized representative for the owner. I grant permission to the South Carolina Department of Health and Environmental Control (SCDHEC) to secure on my behalf contractor services to conduct assessment and corrective action activities as required, and authorize SCDHEC, or a contractor selected by SCDHEC, to enter this property at reasonable times only to accomplish these site rehabilitation tasks. The contractor(s) will be designated as my contractor for only the required site rehabilitation activities. Compensation to the contractor(s) will be from the SUPERB Account and I will have no obligation to pay the contractor(s). I understand that SCDHEC will be responsible for notifying me of all activities that are necessary prior to their initiation and will promptly provide to me a copy of each environmental report. I understand that I may choose to select my own contractor at the completion of any phase of work by notifying the Division of Underground Storage Tank Management in writing.

Name of Facility Crawfords Country Store Inc Phone # 864-348-7442

Street Address of Facility 5870 HWY 28 North

Town, City, District, Suburb Abbeville, SC 29620

Name of nearest intersecting street, road, highway, alley HWY 184

Is this facility within the city limits? (yes or no) NO

Is this facility serviced by a public water or sewer utility? (yes or no) NO, if no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines FRANK CRAWFORD, phone number 864-446-2000

Were underground storage tanks previously removed from the ground at this facility? (yes or no) YES, if yes, please provide the name of a person we can contact that can assist in the location of the former underground storage tank excavation FRANK CRAWFORD, Phone number 864-446-2000

Is the property currently leased or rented to someone? (yes or no) NO, if yes, please provide their name _____ and phone number _____ and let them know about the pending assessment activities. If vehicles or other mobile structures are parked over the former or existing underground storage tanks, they should be moved before SCDHEC's contractor gets to the site.

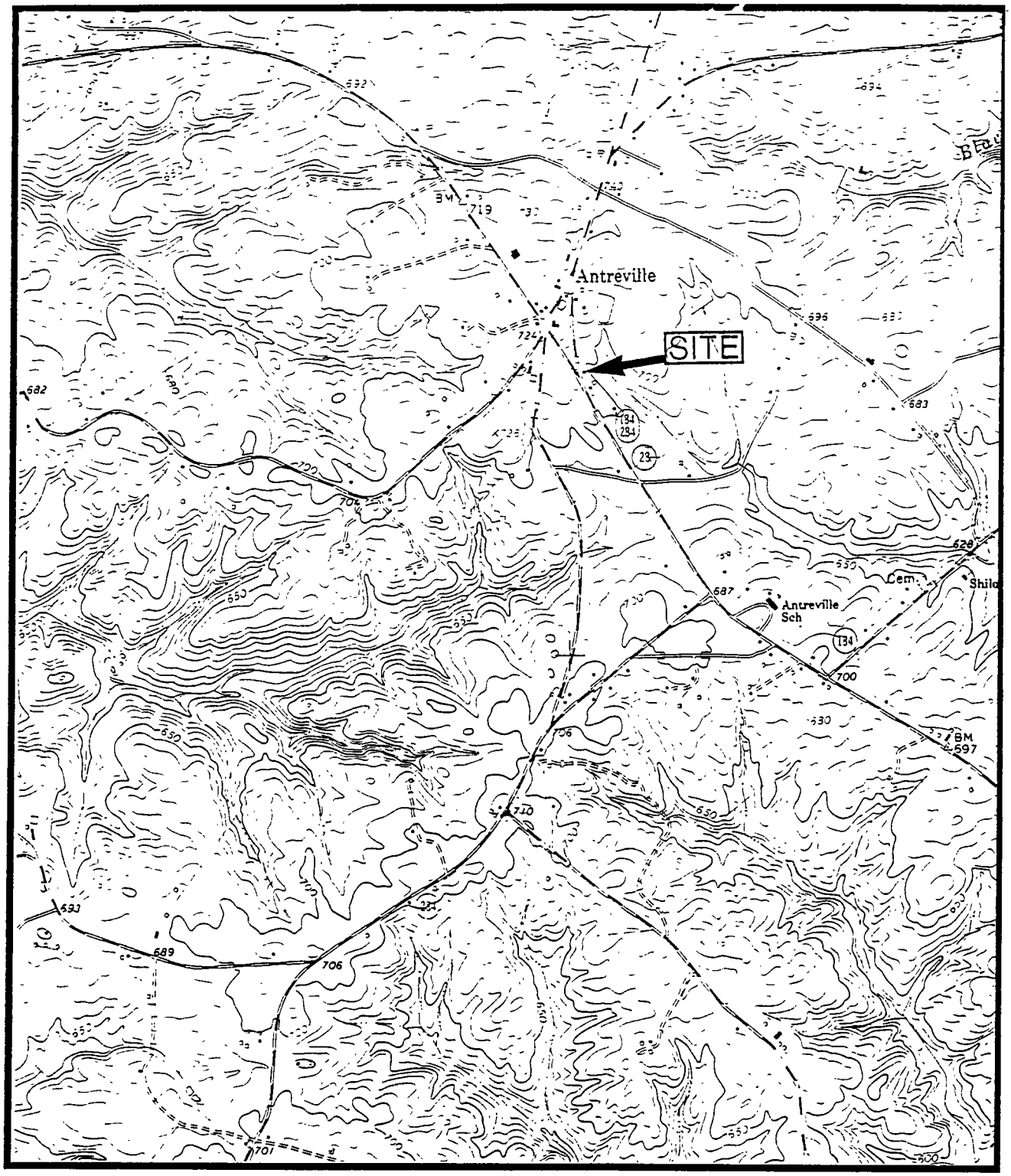
NAME of UST/property owner (Please Print): HAROLD FRANKLIN CRAWFORD

Phone Number (home) 864-446-2000 (work) 864-348-7442

Signature of ~~UST~~/property Owner: Harold Franklin Crawford

Witness: _____

Date: 10-13-98 Month _____ Day _____ Year




*SCDHEC – CRAWFORD'S COUNTRY STORE*

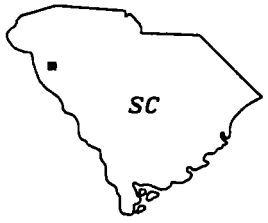
SOUTHEAST SECTION OF USGS 7.5' ANTREVILLE, SC QUADRANGLE

*Prepared by:*

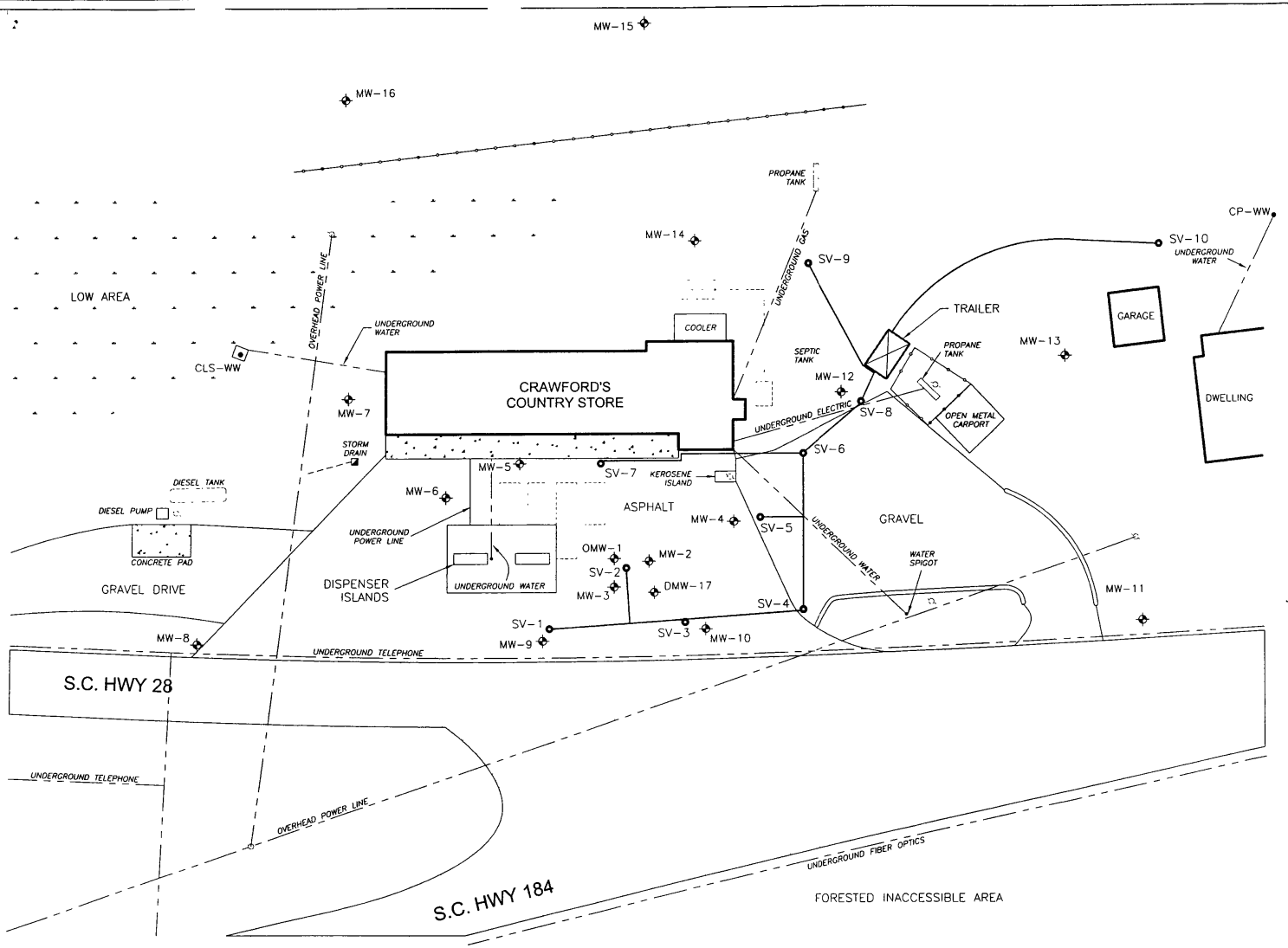
MARSHALL MILLER & ASSOCIATES

2,000' 0 2,000'

*SCALE 1:24,000*




# *VICINITY MAP*




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 08/24/2000

DRAWN BY: J.Driscoll

FIGURE NO: 1

FIGURE TITLE: REMEDIAL SYSTEM AS-BUILT

**UST Permit:** 12335
**Facility:** Crawford's County Store
**County:** Clarendon

| WELL # | SCREEN | TOC |
|---|---|---|
| OMW-1 | 7-22' | 99.82' |
| MW-1R | 13-25' | 99.82' |
| MW-2 | 10-25' | 99.83' |
| MW-3 | 10-25' | 99.98' |
| MW-4 | 10-25' | 99.59' |
| MW-5 | 10-25' | 99.42' |
| MW-6 | 10-25' | 99.47' |
| MW-7 | 10-25' | 99.47' |
| MW-8 | 10-25' | 102.42' |
| MW-9 | 10-25' | 100.53' |
| MW-10 | 10-25' | 99.65' |
| MW-11 | 10-25' | 96.47' |
| MW-12 | 10-25' | 98.63' |
| MW-13 | 10-25' | 100.80' |
| MW-13R | 18-30' | 100.80' |
| MW-14 | 10-25' | 89.38' |
| MW-15 | 10-25' | 87.33' |
| MW-16 | 10-25' | 93.74' |
| DMW-17 | 70-75' | 100.08' |

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

*Promoting and protecting the health of the public and the environment*

MAY 08 2006

**RONNY LOWDER**
**EMERALD INC**
**PO BOX 3050**
**SUMTER SC 29151**

Re: **Notice to Proceed-Groundwater Sampling**
Bid # SB-27496-03/08/05; PO# 574989

Dear Mr. Lowder:

Based on the award of the referenced bid package, enclosed are the information packets to conduct twenty (20) groundwater-sampling events. The packets contain all necessary information for work to begin. The facility has been assigned an individual Cost Agreement (CA) number as listed below. Please reference the CA number and Purchase Order #574989 on the appropriate invoice submitted for payment against the facility.

| UST Permit # | Facility | County | # wells | UST Project Manager | Sampling Due Date | Parameters-Groundwater | PACE CA# | EMERALD CA# |
|---|---|---|---|---|---|---|---|---|
| 02382 | Blacks 66 | Sumter | 11 | D. Thoma | 5/19/06 | BTEXMN, 1,2-DCA, & EDB | 26930 | 26931 |
| 09413 | Gaulden's Groc. | York | 11 | D. Thoma | 5/19/06 | BTEXMN, 1,2-DCA, & EDB | 26850 | 26851 |
| 12355 | Crawford's Store | Abbeville | 20 | J. Abernathy | 5/19/06 | BTEXMN, 1,2-DCA, EDB, Oxygenates, & total lead | 26743 | 26742 |
| 15971 | Nesmith Well | Williamsburg | 25 | W. Clymer | 5/19/06 | BTEXMN, & 1,2-DCA | 26936 | 26935 |
| 09160 | Rock Hill Maint | York | 15 | D. Thoma | 5/26/06 | BTEXMN, 1,2-DCA, & EDB | 26845 | 26847 |
| 09284 | Off Ramp 83 | York | 18 | D. Thoma | 5/26/06 | BTEXMN, 1,2-DCA, & EDB | 26848 | 26849 |
| 09325 | Hershmans Gulf | York | 11 | D. Thoma | 5/26/06 | BTEXMN, 1,2-DCA, & EDB | 26447 | 26448 |
| 09454 | Bargain City | York | 14 | D. Thoma | 5/26/06 | BTEXMN & 1,2-DCA | 26785 | 26786 |
| 10724 | S&G Conven. | York | 8 | D. Thoma | 5/26/06 | BTEXMN, 1,2-DCA, & EDB | 26839 | 26840 |
| 19103 | Arkwright Mill | Spartanburg | 11 | S. Block | 5/26/06 | BTEXMN, 1,2-DCA, & EDB | 26943 | 26944 |
| 05865 | Hardaway Concrete | Lexington | 11 | K. Akhvlediani | 6/02/06 | BTEXMN, EDB, 8 RCRA Metals | 26952 | 26951 |
| 05972 | Rose Talbert Paints | Lexington | 4 | K. Akhvlediani | 6/02/06 | BTEXMN & EDB | 26940 | 26941 |
| 07545 | Abd. Warehouse | Richland | 4 | S. Block | 6/02/06 | BTEXMN, 1,2-DCA, & EDB | 26621 | 26622 |
| 05437 | Crolley's Groc | Kershaw | 11 | D. Thoma | 6/02/06 | BTEXMN, 1,2-DCA, & EDB | 26781 | 26782 |
| 08872 | Youngs 21 | Sumter | 16 | D. Thoma | 6/02/06 | BTEXMN, 1,2-DCA, EDB, & Oxygenates | 26923 | 26924 |
| 14118 | Shoe's Grocery | Sumter | 8 | D. Thoma | 6/02/06 | BTEXMN, 1,2-DCA, & EDB | 26852 | 26853 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 13204 | Gene's Game Room | Lee | 16 | D. Thoma | 6/09/06 | BTEXMN & 1,2-DCA | 26783 | 26784 |
| 16844 | Selma Conven | Dillon | 16 | S. Block | 6/09/06 | BTEXMN, 1,2-DCA, & EDB | 26497 | 26498 |
| 02584 | Grocery Corner | Colleton | 13 | R. Miner | 6/09/06 | BTEXMN & 1,2-DCA | 26893 | 26894 |
| 01236 | Nathans Grocery | Berkeley | 6 | R. Miner | 6/09/06 | BTEXMN & 1,2-DCA | 26900 | 26901 |

Emerald, Inc. will perform services at the sites on behalf of the site's responsible party (RP); however, payment will be made from the SUPERB Account. The site's RP has no obligation for payment for this scope of work. Please coordinate access to the facility with the property owner. Contact information has been provided in the information packet. The Bureau grants pre-approval for transportation of drums of groundwater from the referenced sites to a permitted treatment facility. The contaminated groundwater must be properly stored in labeled 55-gallon drums or equivalent containers. The contaminated groundwater must be accepted by the approved treatment facility. There can be no spillage or leakage in transport. A copy of the disposal manifest from the receiving facility that clearly designates the quantity received must be included with the final report. **Please note, the final report is due within 3 weeks from the date the site is sampled. If the site is not sampled by the specified due date or the report is not received in the specified time period, a late fee may be imposed.**

Please contact me with the sampling schedule before commencing work at these facilities. If you have any questions or need further assistance, please contact me at (803) 896-6397 or thomadl@dhec.sc.gov.

Sincerely,

Debra L. Thoma

Debra L. Thoma, Hydrogeologist
Northeastern SC Corrective Action Section
Assessment & Corrective Action Division
Underground Storage Tank Program
Bureau of Land & Waste Management

enc: Information Packets
Approved Cost Agreements

cc: Teresa Adams, PACE Analytical Services, 9800 Kincey Ave. Ste. 100, Huntersville, NC, 28078 (w/ Approved CAs)
Technical/Read File

# Approved Cost Agreement : 13

Facility: 12335 CRAWFORDS STORE
ABERNAJD
PO Number:

| Task / Description | Categories | Item Description | Qty / Pct | Unit Price | Amount |
|---|---|---|---|---|---|
| 11 ANALYSES | | | | | |
| | GW GROUNDWATER | | | | |
| | | A BTEX+NAPTH+MTBE | 20.0000 | 23.00 | 460.00 |
| | | E LEAD | 20.0000 | 7.00 | 140.00 |
| | | F EDB | 20.0000 | 27.00 | 540.00 |
| | | P 8 OXYGENATES | 20.0000 | 70.00 | 1,400.00 |
| | | | **Total Amount** | | 2,540.00 |

# Approved Cost Agreement : 12

Facility: 12335 CRAWFORDS STORE
ABERNAJD
PO Number:

| Task / Description | Categories | Item | Description | Qty / Pct | Unit Price | Amount |
|---|---|---|---|---|---|---|
| 04 MOB/DEMOB | | | | | | |
| | | B | PERSONNEL | 2.0000 | 104.00 | 208.00 |
| 10 SAMPLE COLLECTION | | | | | | |
| | | A | GROUND WATER | 14.0000 | 10.00 | 140.00 |
| | | C | WATER SUPPLY | 2.0000 | 10.00 | 20.00 |
| | | D | GROUNDWATER NO-PURGE | 4.0000 | 10.00 | 40.00 |
| 17 DISPOSAL | | | | | | |
| | | A2 | WASTEWATER - PUMPING TEST | 25.0000 | 0.50 | 12.50 |
| | | | | **Total Amount** | | 420.50 |

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

*Promoting and protecting the health of the public and the environment.*

OCT 0 8 2004

**MR JED HEAMES**
**DICK CORP**
**PMB#30**
**915 FOLLY RD STE O**
**CHARLESTON SC 29412**

Re: **Notice to Proceed**
Bid # SB-21868-3/18/03; PO# 463276

Dear Mr. Heames:

Based on the award of the referenced bid package, enclosed are the information packets to conduct twenty-seven (27) groundwater-sampling events. The packets contain all necessary information for work to begin. The facility has been assigned an individual Cost Agreement (CA) number as listed below. Please reference the CA number and Purchase Order #463276 on the appropriate invoice submitted for payment against the facility.

| UST Permit # | Priority Rank | Facility | County | # wells | UST Project Manager | Parameters-Groundwater | PACE CA# | DICK CA# |
|---|---|---|---|---|---|---|---|---|
| 09210* | 2B | Brownies Super Service | York | 29 | D. Thoma | BTEXNM, 1,2-DCA, & EDB | 22936 | 22937 |
| 09395* | 2B | Sharon Kwik Stop | York | 25 | D. Thoma | BTEXNM, 1,2-DCA, & EDB | 22921 | 22922 |
| 09313* | 1D | Lake Wylie Marina | York | 6 | D. Thoma | BTEXMN | 23095 | 23096 |
| 09340* | 2B | Westbrook's Grocery | York | 16 | D. Thoma | BTEXNM, 1,2-DCA, & EDB | 23016 | 23017 |
| 09374* | 3B | One Stop Groceries | York | 10 | D. Thoma | BTEXNM, 1,2-DCA, & EDB | 21300 | 21301 |
| 09427 | 3B | Tega Cay Marina | York | 7 | D. Thoma | BTEXMN | 22917 | 22918 |
| 16238 | 2B | Kay's Count ry Corner | Spartanburg | 15 | K. Doran | BTEXNM & EDB | 22129 | 22128 |
| 04102* | 2A | City of Greenville | Greenville | 17 | J. Abernathy | BTEXNM & EDB | 22971 | 22970 |
| 16090* | 2A | Frm Ellison's Grocery | Greenville | 17 | J. Abernathy | BTEXNM, EDB, & Lead | 22976 | 22977 |
| 11276* | 2A | Moons Landing | Laurens | 7 | J. Abernathy | 7-BTEXNM<br>6-Nitrate, Sulfate, Fe2+ | 23086 | 23087 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 12335* | 1D | Crawfords Country Store | Abbeville | 19 | J. Abernathy | BTEXNM, EDB, & Lead | 22978 | 22979 |
| 04732* | 2A | Handy Pantry 91 | Greenwood | 20 | J. Surber | 20-BTEXNM, 1,2-DCA 8-Oxygenates | 22939 | 22940 |
| 00140 | 2B | Majik Market | Aiken | 26 | J. Surber | BTEXNM, & EDB | 23018 | 23019 |
| 18317 | 4A | McDonald's | Richland | 15 | S. Block | BTEXMN | 22480 | 22481 |
| 02382* | 2A | Frm Black's 66 | Sumter | 11 | D. Thoma | BTEXMN & Lead | 22925 | 22926 |
| 13973 | 3B | Tindalls Grocery | Sumter | 5 | D. Thoma | BTEXMN & EDB | 22933 | 22934 |
| 12007 | 2B | Sonnys Grocery | Clarendon | 5 | K. Doran | BTEXMN & EDB | 22524 | 22523 |
| 16844* | 2B | Selma Convenience | Dillon | 16 | K. Doran | BTEXMN & EDB | 22992 | 22991 |
| 06175 | 3B | Marion Maint | Marion | 34 | A. Butler | BTEXMN, EDB, & Lead | 22703 | 22702 |
| 05237 | 3B | Buffkin Service | Horry | 4 | W. Clymer | BTEXMN, EDB, & Lead | 22943 | 22944 |
| 15062* | 2A | Gateway Homes | Horry | 16 | W. Clymer | BTEXNM, 1,2-DCA, & EDB | 22910 | 22909 |
| 10902* | 3A | Carmichael Exxon | Horry | 11 | W. Clymer | BTEXNM, 1,2-DCA, EDB, & Lead | 23003 | 23004 |
| 03714* | 2B | Fmr Gas Plus | Georgetown | 28 | D. Thoma | BTEXNM, 1,2-DCA, & EDB | 22867 | 22868 |
| 17347 | 3B | Brown Property | Georgetown | 6 | D. Thoma | BTEXNM, & EDB | 22854 | 22855 |
| 17238* | 2B | Frm Dick's | Berkeley | 28 | R. Miner | BTEXNM, 1,2-DCA & EDB | 23021 | 23022 |
| 01055 | 2B | Hilton Head SS | Beaufort | 12 | J. Surber | BTEXNM, & EDB | 23036 | 23037 |
| 14907 | 2B | Golden Property | Hampton | 10 | J. Surber | BTEXNM, & EDB | 23033 | 23034 |

*** These facilities should be sampled on or before November 20, 2004. If sampling is not completed by this date, a late fee of $25 per day may be levied in accordance with Special Condition 15.**

DICK Environmental Corp. will perform services at the sites on behalf of the site's responsible party (RP); however, payment will be made from the SUPERB Account. The site's RP has no obligation for payment for this scope of work. Please coordinate access to the facility with the property owner. Contact information has been provided in the information packet. The Bureau grants pre-approval for transportation of drums of groundwater from the referenced sites to a permitted treatment facility. The contaminated groundwater must be properly stored in labeled 55-gallon drums or equivalent containers. The contaminated groundwater must be accepted by the approved treatment facility. There can be no spillage or leakage in transport. A copy of the disposal manifest from the receiving facility that clearly designates the quantity received must be included with the final report.

Please contact me with the sampling schedule before commencing work at these facilities. If you have any questions or need further assistance, please contact me at (803) 896-6397 or thomadl@dhec.sc.gov.

Sincerely,

Debra L. Thoma

Debra L. Thoma, Hydrogeologist
Northeastern SC Corrective Action Section
Assessment & Corrective Action Division
Underground Storage Tank Program
Bureau of Land & Waste Management

enc: Information Packets
Approved Cost Agreements

cc: Sherri Stabel, PACE Analytical Services, 9800 Kincey Ave. Ste. 100, Huntersville, NC, 28078
(w/ Approved Cost Agreements)
Technical/Read File

# Approved Cost Agreement 2[illegible]78

Facility: 12335 CRAWFORDS STORE
ABERNAJD
PO Number:

| Task / Description | Categories | Item | Description | Qty / Pct | Unit Price | Amount |
|---|---|---|---|---|---|---|
| 11 ANALYSES | | | | | | |
| | GW GROUNDWATER | A | BTEX+NAPTH+MTBE | 19.0000 | 30.00 | 570.00 |
| | | F | EDB | 19.0000 | 40.00 | 760.00 |
| | | | | **Total Amount** | | 1,330.00 |

# Approved Cost Agreement 2[illegible]79

Facility: 12335 CRAWFORDS STORE
ABERNAJD
PO Number:

| Task / Description | Categories | Item | Description | Qty / Pct | Unit Price | Amount |
|---|---|---|---|---|---|---|
| 04 MOB/DEMOB | | | | | | |
| | | B | PERSONNEL | 2.0000 | 59.95 | 119.90 |
| 10 SAMPLE COLLECTION | | | | | | |
| | | A | GROUND WATER | 18.0000 | 19.95 | 359.10 |
| | | C | WATER SUPPLY | 1.0000 | 9.85 | 9.85 |
| 17 DISPOSAL | | | | | | |
| | | A2 | WASTEWATER - PUMPING TEST | 50.0000 | 0.50 | 25.00 |
| | | | | **Total Amount** | | 513.85 |

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

*Promoting and protecting the health of the public and the environment.*

MAR 03 2004

**RICHARD GILLESPIE**
**H20 ENVIRONMENTAL INC**
**130 CENTRUM DR STE 3B**
**IRMO SC 29063**

Re: Crawford's Country Store, 5870 Hwy 28 N., Abbeville, SC
UST Permit # 12335; CA # 10156:P
Bid # SB-9570-12/02/99-TC; PO # 230000
Monitoring Report received February 2, 2004
Abbeville County

Dear Mr. Gillespie:

The Underground Storage Tank (UST) Program of the South Carolina Department of Health and Environmental Control has reviewed the referenced report and noted its findings. Please note that the new Green water supply well must be sampled next quarter. Additionally, the location of the new well should be included on the site map. The next quarterly monitoring report is due on or before April 15, 2004.

On all correspondence pertaining to this facility, please reference the UST Permit Number. If you have any questions or comments, please contact me by telephone at (803) 896-6629 or (800) 826-5435 or by e-mail at hydricpa@dhec.sc.gov.

Sincerely,

Patricia Hydrick

Patricia A. Hydrick, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management

enc: CASE Report

cc: Technical File (w/out enc)

SCDHEC/UST/SEB/022304

D H E C

PROMOTE PROTECT PROSPER

C Earl Hunter, Commissioner

*Promoting and protecting the health of the public and the environment.*

MAR 03 2004

**FRANK CRAWFORD**
**5870 HWY 28 N**
**ABBEVILLE SC 29620**

Re: Crawford's Country Store, 5870 Hwy 28 N., Abbeville, SC
UST Permit # 12335; CA # 10156:P
Bid # SB-9570-12/02/99-TC; PO # 230000
Monitoring Report received February 2, 2004
Abbeville County

Dear Mr. Crawford:

The Underground Storage Tank (UST) Program of the South Carolina Department of Health and Environmental Control has reviewed the referenced report submitted by $H_2O$ Environmental, Inc. $H_2O$ Environmental, Inc. is currently conducting corrective action activities in response to groundwater contamination at the referenced facility. Enclosed is a copy of the monitoring report received February 2, 2004. This information is being sent to you in order to keep you informed of the environmental conditions in the area. The next quarterly sampling will be conducted in approximately three months. The UST Program will forward a copy of that report to you after review.

If you have any questions or comments regarding the corrective action, please contact me by telephone at (803) 896-6629 or (800) 826-5435 or by e-mail at hydricpa@dhec.sc.gov.

Sincerely,

Patricia Hydrick

Patricia A. Hydrick, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management

enc: CASE Report

cc: Technical File (w/out enc)

SCDHEC/UST/SEB/022304

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

**UNDERGROUND STORAGE TANK PROGRAM**
**BUREAU OF LAND AND WASTE MANAGEMENT**

**Phone (800) 826-5435 Fax (803) 896-6245**

OCT 2 0 2003

**FRANK CRAWFORD**
**5870 HWY 28 NORTH**
**ABBEVILLE SC 29620**

Re: Crawford's Country Store, 5870 Hwy 28 North, Antreville, SC
**UST Permit #12335**; Cost Agreement #10156:P
Bid # SB-9570-12/02/99-TC; PO# 230000
Quarterly Monitoring Report received October 2, 2003
Abbeville County

Dear Mr. Crawford:

As you may be aware, a corrective action plan was implemented in May 2000, in response to a petroleum release from former USTs at the referenced facility. Please find enclosed a copy of the quarterly monitoring report. This information is being sent to you in order to keep you informed of the environmental conditions in the area. The next quarterly sampling will be conducted in approximately three months. The UST Program will forward a copy of that report to you after review. You will be informed when corrective action activities are complete. Please note that the site rehabilitation contractor is required to reduce the concentrations of chemicals of concern to Site Specific Target Levels (SSTLs) established by this Bureau.

On all correspondence regarding this site, please reference the UST Permit Number. Please feel free to contact me at (803) 896-6397 or (800) 826-5435 (within SC only) if you have questions or need additional information.

Sincerely,

Debra L. Thoma

Debra L. Thoma, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division

Enc: Quarterly Monitoring Report

CC: Technical file

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

UNDERGROUND STORAGE TANK PROGRAM
BUREAU OF LAND AND WASTE MANAGEMENT

Phone (803) 896-6240 Fax (803) 896-6245

OCT 2 0 2003

**RICHARD GILLESPIE PG**
**H2O ENVIRONMENTAL INC**
**130 CENTRUM DR STE 3B**
**IRMO SC 29063**

Re: Crawford's Country Store, 5870 Hwy 28 North, Antreville, SC
**UST Permit #12335**; Cost Agreement #10156:P
Bid # SB-9570-12/02/99-TC; PO# 230000
Quarterly Monitoring Report received October 2, 2003
Abbeville County

Dear Mr. Gillespie:

The Underground Storage Tank Program has reviewed the referenced report and noted its findings. It was noted that the pre-existing supply well (CP-WW) at the Green residence was not operational and that a new supply well had been installed. Please note the location of the new water supply well on the site map and indicate it as CP-WW2. In addition, as CP-WW cannot be sampled, please collect a sample from CP-WW2. Please note that the next quarterly monitoring report must be submitted on or before January 15, 2004.

On all correspondence pertaining to this facility, please reference the UST Permit Number. If you have any questions, please contact me at (803) 896-6397.

Sincerely,

Debra L. Thoma

Debra L. Thoma, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division

cc: Technical File (w/ original report)

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

UNDERGROUND STORAGE TANK PROGRAM
BUREAU OF LAND AND WASTE MANAGEMENT

Phone (803) 896-6240 Fax (803) 896-6245

AUG 0 6 2003

**RICHARD GILLESPIE PG**
**$H_2O$ ENVIRONMENTAL INC**
**130 CENTRUM DR STE 3B**
**IRMO SC 29063**

Re: Crawford's Country Store, 5870 Hwy 28 North, Antreville, SC
**UST Permit #12335**; Cost Agreement #10156:P
Bid # SB-9570-12/02/99-TC; PO# 230000
Quarterly Monitoring Report received August 4, 2003
Abbeville County

Dear Mr. Gillespie:

The Underground Storage Tank Program has reviewed the referenced report and noted its findings. Please note that the next quarterly monitoring report needs to be submitted **on or before October 15, 2003.**

On all correspondence pertaining to this facility, please reference the UST Permit Number. If you have any questions, please call me at (803) 896-6629.

Sincerely,

Umar K. Khattak, Ph.D., Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division

cc: Technical File

DHEC/UST/UKK/8.4.03

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

UNDERGROUND STORAGE TANK PROGRAM
BUREAU OF LAND AND WASTE MANAGEMENT

Phone (800) 826-5435 Fax (803) 896-6245

AUG 0 6 2003

**FRANK CRAWFORD**
**5870 HWY 28 NORTH**
**ABBEVILLE SC 29620**

Re: Crawford's Country Store, 5870 Hwy 28 North, Antreville, SC
**UST Permit #12335**; Cost Agreement #10156:P
Bid # SB-9570-12/02/99-TC; PO# 230000
Quarterly Monitoring Report received August 4, 2003
Abbeville County

Dear Mr. Crawford:

As you may be aware, a corrective action plan was implemented in May 2000, in response to a petroleum release from former USTs at the referenced facility. Please find enclosed a copy of the quarterly monitoring report. This information is being sent to you in order to keep you informed of the environmental conditions in the area. The next quarterly sampling will be conducted in approximately three months. The UST Program will forward a copy of that report to you after review. You will be informed when corrective action activities are complete. Please note that the site rehabilitation contractor is required to reduce the concentrations of chemicals of concern to Site Specific Target Levels (SSTLs) established by this Bureau.

On all correspondence regarding this site, please reference the UST Permit Number. Please feel free to contact me at (803) 896-6629 or (800) 826-5435 (within SC only) if you have questions or need additional information.

Sincerely,

Umar K. Khattak, Ph.D., Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division

Enc: Quarterly Monitoring Report

CC: Technical file (w/ original report)

DHEC/UST/UKK/8.4.03

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BUREAU OF LAND AND WASTE MANAGEMENT

Phone (800) 826-5435 Fax (803) 896-6245

MAY 28 2003

**FRANK CRAWFORD**
**5870 HWY 28 NORTH**
**ABBEVILLE SC 29620**

Re: Crawford's Country Store, 5870 Hwy 28 North, Antreville, SC
**UST Permit #12335**; Cost Agreement #10156:P
Bid # SB-9570-12/02/99-TC; PO# 230000
Quarterly Monitoring Report received May 16, 2003
Abbeville County

Dear Mr. Crawford:

As you may be aware, a corrective action plan was implemented in May 2000, in response to a petroleum release from former USTs at the referenced facility. Please find enclosed a copy of the quarterly monitoring report. This information is being sent to you in order to keep you informed of the environmental conditions in the area. The next quarterly sampling will be conducted in approximately three months. The UST Program will forward a copy of that report to you after review. You will be informed when corrective action activities are complete. Please note that the site rehabilitation contractor is required to reduce the concentrations of chemicals of concern to Site Specific Target Levels (SSTLs) established by this Bureau.

On all correspondence regarding this site, please reference the UST Permit Number. Please feel free to contact me at (803) 896-6396 or (800) 826-5435 (within SC only) if you have questions or need additional information.

Sincerely,

Umar K. Khattak, Ph.D., Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division

Enc: Quarterly Monitoring Report

CC: Technical file (w/ original report)

DHEC/UST/UKK/5.28.03

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2600 Bull Street
Columbia, SC 29201-1708

UNDERGROUND STORAGE TANK PROGRAM
BUREAU OF LAND AND WASTE MANAGEMENT

Phone (803) 896-6240 Fax (803) 896-6245

MAY 28 2003

**RICHARD GILLESPIE PG**
**$H_2O$ ENVIRONMENTAL INC**
**130 CENTRUM DR STE 3B**
**IRMO SC 29063**

Re: Crawford's Country Store, 5870 Hwy 28 North, Antreville, SC
**UST Permit #12335**; Cost Agreement #10156:P
Bid # SB-9570-12/02/99-TC; PO# 230000
Quarterly Monitoring Report received May 16, 2003
Abbeville County

Dear Mr. Gillespie:

The Underground Storage Tank Program has reviewed the referenced report and noted its findings. Please note that the next quarterly monitoring report needs to be submitted **on or before July 15, 2003**.

On all correspondence pertaining to this facility, please reference the UST Permit Number. If you have any questions, please call me at (803) 896-6629.

Sincerely,

Umar K. Khattak

Umar K. Khattak, Ph.D., Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division

cc: Technical File

DHEC/UST/UKK/5.28.03

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FEB 14 2003

RICHARD GILLESPIE P G
$H_2O$ ENVIRONMENTAL INC
130 CENTRUM DR STE 3B
IRMO SC 29063

Re: Crawford's Country Store, 5870 Hwy 28 North, Antreville, SC
UST Permit #12335; Cost Agreement #10156:P
Bid # SB-9570-12/02/99-TC; PO# 230000
Quarterly Monitoring Report received February 10, 2003
Abbeville County

Dear Mr. Gillespie:

The Underground Storage Tank Program has reviewed the referenced report and noted its findings. The next quarterly monitoring report is expected on or before April 15, 2003.

On all correspondence pertaining to this facility, please reference the UST Permit Number. If you have any questions, please call me at (803) 896-6629.

Sincerely,

U. K. Khattak

Umar K. Khattak, Ph.D., Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division

cc: Frank Crawford, 5870 Hwy. 28 N., Abbeville, SC 29620
Technical File

DHEC/UST/UKK/2.12.03

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2600 Bull Street
Columbia, SC 29201-1708

UNDERGROUND STORAGE TANK PROGRAM
BUREAU OF LAND AND WASTE MANAGEMENT

Phone (800) 826-5435 Fax (803) 896-6245

FEB 14 2003

FRANK CRAWFORD
5870 HWY 28 NORTH
ABBEVILLE SC 29620

Re: Crawford's Country Store, 5870 Hwy 28 North, Antreville, SC
UST Permit #12335; Cost Agreement #10156:P
Bid # SB-9570-12/02/99-TC; PO# 230000
Quarterly Monitoring Report received February 10, 2003
Abbeville County

Dear Mr. Crawford:

As you may be aware, a corrective action plan was implemented in May 2000, in response to a petroleum release from former USTs at the referenced facility. Please find enclosed a copy of the quarterly monitoring report. This information is being sent to you in order to keep you informed of the environmental conditions in the area. The next quarterly sampling will be conducted in approximately three months. The UST Program will forward a copy of that report to you after review if you wish to continue receiving such updates. You will be informed when corrective action activities are complete if you choose not to receive quarterly updates. If you do not wish to continue receiving quarterly updates, please contact me at (800) 826-5435 (within South Carolina only), (803) 896-6629, or by e-mail at Khattauk@dhec.sc.gov, and I will remove your name from the mailing list. If you wish to continue to receive quarterly updates, you do not need to do anything. Please note that the site rehabilitation contractor is required to reduce the concentrations of chemicals of concern to Site Specific Target Levels (SSTLs) established by this Bureau.

On all correspondence regarding this site, please reference the UST Permit Number. Please feel free to contact me at (803) 896-6396 or (800) 826-5435 (within SC only) if you have questions or need additional information.

Sincerely,

U.M.K. Khattak

Umar K. Khattak, Ph.D., Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division

Enc: Quarterly Monitoring Report

CC: technical file (w/o enc)

DHEC/UST/UKK/2.12.03

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NOV 0 1 2002

RICHARD GILLESPIE PG
$H_2O$ ENVIRONMENTAL INC
130 CENTRUM DR STE 3B
IRMO SC 29063

Re: Crawford's Country Store, 5870 Hwy 28 North, Abbeville, SC
UST Permit #12335; Cost Agreement #10156:P
Bid # SB-9570-12/02/99-TC; PO# 230000
Quarterly Monitoring Report received October 29, 2002
Abbeville County

Dear Mr. Gillespie:

The Underground Storage Tank Program has reviewed the referenced report and noted its findings. A work order will be issued to replace the dry monitoring wells. A copy of the installation report will be forwarded to you upon receipt by this office. The next quarterly monitoring report is expected on or before January 15, 2003.

On all correspondence pertaining to this facility, please reference the UST Permit Number. If you have any questions, please call me at (800) 826-5435 (within SC only) or (803) 896-6396.

Sincerely,

John D. Abernathy, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division

cc: Frank Crawford, 5870 Hwy. 28 N., Abbeville, SC 29620
Technical File

SCDHEC/SLFSS/UST/12335_8th/JDA/10.30.02

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NOV 0 4 2002

FRANK CRAWFORD
5870 HWY 28 NORTH
ABBEVILLE SC 29620

Re: Crawford's Country Store, 5870 Hwy 28 North, Abbeville, SC
UST Permit #12335; Cost Agreement #10156:P
Bid # SB-9570-12/02/99-TC; PO# 230000
Quarterly Monitoring Report received October 29, 2002
Abbeville County

Dear Mr. Crawford:

As you may be aware, a corrective action plan was implemented in May 2000, in response to a petroleum release from former USTs at the referenced facility. Please find enclosed a copy of the referenced report, which is sent to you in an effort to keep you informed of the remediation activities taking place. The report includes an overview of the current site conditions and details the most recent groundwater sampling activities. The results of this report provide analytical data that is used to determine the effectiveness of the remediation system. The next monitoring report will be forwarded to you as soon as this office has reviewed the findings.

The report indicated that two monitoring wells (MW-15 & MW-16) have been destroyed (see quarterly report). SUPERB funds can only be expended where reasonably justified, i.e. replacement of dry monitoring wells due to drought conditions. Therefore costs associated with the replacement of these wells cannot be paid by the SUPERB account. Please select a contractor from the enclosed list to reinstall these two wells. Note that financial and technical approval must be granted before work can commence.

On all correspondence regarding this site, please reference the UST Permit Number. Please feel free to contact me at (803) 896-6396 or (800) 826-5435 (within SC only) if you have questions or need additional information.

Sincerely,

John D. Abernathy, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division

Enc: Quarterly Monitoring Report
Certified Contractors List

CC: Technical file (w/o enc)

SCDHEC/SLFSS/UST/12335_8thrp/JDA/11.4.02

Task F

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BUREAU OF LAND AND WASTE MANAGEMENT

Phone (800) 826-5435 Fax (803) 896-6245

NOV 0 5 2002

GREG FORCE
FORCE & ASSOCIATES INC
147 VERA RD STE A
LEXINGTON SC 29171-0854

Re: Crawford's Country Store, 5870 Hwy 28 N, Abbeville, SC
UST Permit #12335; CA # 17563:P; UMW-16698
Bid # SB-19189-04/30/02-EMW; PO#409044
Abbeville County

Dear Mr. Force:

The Underground Storage Tank (UST) Program of the South Carolina Department of Health and Environmental Control (SCDHEC) has prepared a monitoring well installation package for the referenced facility (ies). Monitoring well approval for two (2) permanent monitoring wells is enclosed for your records. Please note that all applicable South Carolina certification requirements regarding well installation and report preparation must be met. All wells to be replaced should be gauged prior to drilling commencement. Please contact this office if site conditions have changed.

Cost Agreement (CA) #17563:P has been approved up to the amount of the enclosed cost agreement form and will be kept on file so that compensation can begin. **The SCDHEC reserves the authority to pay only for work properly performed and/or technically justified and will only pay rates in accordance with bid number SB-19189-04/30/02-EMW.** Further SCDHEC reserves the right to question and/or reject costs if deemed unreasonable. The SCDHEC reserves the right to audit project records at any time during the project or after completion of the work. The Monitoring Well Installation Report (two copies) must be submitted within 60 days from the date of this letter.

The Bureau grants pre-approval for transportation of drums of virgin petroleum contaminated soil and/or drums of groundwater from the referenced site to a permitted treatment facility. The contaminated soil and/or groundwater must be properly stored in labeled 55-gallon drums or equivalent containers. The contaminated soil and/or groundwater must be accepted by the approved treatment facility. There can be no spillage or leakage in transport. A copy of the disposal manifest from the receiving facility that clearly designates the quantity received must be included in the report.

A copy of the approved Cost Agreement is enclosed for your information. Future invoices and/or other criteria included therein must comply with current SUPERB criteria per Section 44-2-20(2). Please reference **Cost Agreement Number 17563:P** on all pertinent invoices and correspondence. Please note that Sections 44-2-110(4) and 44-2-130(B) of the SUPERB Statute state that no costs will be allowed (considered for payment) unless prior approval from the Department is obtained. If for any reason there is a change in this Cost Agreement, any associated changes to this Cost Agreement must be pre-approved by this Department in order for Force & Associates, Inc. to seek future cost compensation.

**Any item(s) not clearly or completely addressed in the report (SC certified driller's number, disposal manifest for soil cuttings, disposal manifests for generated ground water, etc.) WILL NOT be compensated by the SUPERB Account.** As agreed to in the referenced contract, the owner/operator of the referenced facility will not be responsible for any costs associated with this assessment.

On all correspondence regarding this site, please reference the UST Permit # 12335 and Cost Agreement #17563:P. If you have questions concerning this correspondence or would like to submit additional information, please contact me at (803) 896-6396 or (800) 826-5435 (within SC only).

Sincerely,

John D. Abernathy, Hydrogeologist
State Lead & Field Services Section
Assessment & Corrective Action Division

Enc.: Approved Cost Agreement #17563
Information Packet
Monitoring Well Approval (MWA)

cc: Frank Crawford, 5870 Hwy 28 N, Abbeville, SC 29620 (w/ MWA)
Upper Savannah District EQC (w/ copy of Monitoring Well Approval)
Financial Section (w/ copy of Approved Assessment Component Cost Agreement)
Read Miner, State Lead and Field Services Section (w/o enc)
Technical File (w/ Monitoring Well Approval)
Read File (without enclosures)

D H E C
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2600 Bull Street
Columbia, SC 29201-1708

# Monitoring Well Installation Approval Form

Date of Issue: October 30, 2002
Approval No.: UMW-16698
Approval is hereby granted to: Force & Associates, Inc.
On behalf of: Frank Crawford
UST Permit # 12335
County: Abbeville

This approval is for the construction of two (2) permanent monitoring well(s) in accordance with the construction plans and technical specifications outlined in the SC Well Standards and Regulations. The well(s) are to be constructed within the surficial aquifer for the intended purpose of monitoring ground-water quality and/or water level(s) at the referenced facility. Approval is provided with the following conditions:

1. The latitude and longitude, surveyed elevations, boring and/or geologist logs and actual (as built) construction details for each well be submitted to my attention as part of the Monitoring Well Installation Report.

2. Each well shall be labeled with an identification plate constructed of a durable material affixed to the casing or surface pad where it is readily visible. The plate shall provide monitoring well I.D.#, date of construction, static water level, and driller name and state certification #.

3. Temporary wells must be properly abandoned within 30 days from the date of installation.

4. Well construction and sampling derived waste including, but not necessarily limited to, drill cuttings, drilling fluids, development and purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regard to contents, source, and date of activity.

5. A minimum of forty-eight (48) hours prior to initiation of drilling activities, please provide notice to John D. Abernathy at (803) 896-6396.

6. Please provide ground-water quality analytical data (chemical analysis and/or water level(s)) associated measurements (i.e., in-situ field measurements) to my attention with the Assessment Report.

7. Monitoring wells shall be installed by a permanently licensed well driller certified by the State of South Carolina.

This approval is pursuant to the provisions of Section 44-55-40 of the 1976 South Carolina Code of Laws and the Department of Health and Environmental Control Regulations R.61-71. **Please remember to have a copy of this approval on the site during well installation.**

Approved by:

John D. Abernathy, Hydrogeologist
State Lead & Field Services Section
Assessment & Corrective Action Division
Underground Storage Tank Program

cc: Upper Savannah District EQC
Frank Crawford, 5870 Hwy 28 N, Abbeville, SC 29620
Technical File

SCDHEC/SLFSS/UST/12335_wellrplcmnt-force/JDA/10.30.02

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Columbia, SC 29201-1708

**UNDERGROUND STORAGE TANK PROGRAM**
**BUREAU OF LAND AND WASTE MANAGEMENT**

**Phone (800) 826-5435 Fax (803) 896-6245**

**MAY 02 2002**

FRANK CRAWFORD
5870 HWY 28 NORTH
ABBEVILLE SC 29620

Re: Crawford's Country Store, 5870 Hwy 28 North, Antreville, SC
UST Permit #12335; Cost Agreement #10156:P
Bid # SB-9570-12/02/99-TC; PO# 230000
Quarterly Monitoring Report received April 29, 2002
Abbeville County

Dear Mr. Crawford:

As you may be aware, a corrective action plan was implemented in May 2000, in response to a petroleum release from former USTs at the referenced facility. Please find enclosed a copy of the quarterly monitoring report, which is sent to you in an effort to keep you informed of the remediation activities taking place. Please note that the site rehabilitation contractor is required to reduce the concentrations of chemicals of concern to Site Specific Target Levels (SSTLs) established by this Bureau.

On all correspondence regarding this site, please reference the UST Permit Number. Please feel free to contact me at (803) 896-6396 or (800) 826-5435 (within SC only) if you have questions or need additional information.

Sincerely,

John D. Abernathy, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division

Enc: Quarterly Monitoring Report

CC: technical file (w/o enc)

SCDHEC/SLFSS/UST/12335_7thrp/JDA/4.30.02

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**UNDERGROUND STORAGE TANK PROGRAM**
**BUREAU OF LAND AND WASTE MANAGEMENT**

**Phone (800) 826-5435** **Fax (803) 896-6245**

MAY 02 2002

RICHARD GILLESPIE P G
$H_2O$ ENVIRONMENTAL INC
130 CENTRUM DR STE 3B
IRMO SC 29063

Re: Crawford's Country Store, 5870 Hwy 28 North, Antreville, SC
UST Permit #12335; Cost Agreement #10156:P
Bid # SB-9570-12/02/99-TC; PO# 230000
Quarterly Monitoring Report received April 29, 2002
Abbeville County

Dear Mr. Gillespie:

The Underground Storage Tank Program has reviewed the referenced report and noted its findings. The next quarterly monitoring report is expected on or before June 30, 2002.

On all correspondence pertaining to this facility, please reference the UST Permit Number. If you have any questions, please call me at (800) 826-5435 (within SC only) or (803) 896-6396.

Sincerely,

John D. Abernathy, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division

cc: Frank Crawford, 5870 Hwy. 28 N., Abbeville, SC 29620
Technical File

SCDHEC/SLFSS/UST/12335_7th/JDA/4.30.02

D H E C
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600 Bull Street
olumbia, SC 29201-1708

UNDERGROUND ST AGE TANK PROGRAM
BUREAU OF LAND AND WASTE MANAGEMENT

Phone (800) 826-5435 Fax (803) 898-4330

FEB 11 2002

Frank Crawford
5870 Hwy. 28 North
Abbeville, SC 29620

Re: Crawford's Country Store, 5870 Hwy 28 North, Abbeville, SC
UST Permit #12335; Cost Proposal #10156:P
Bid # SB-9570-12/02/99-TC; PO# 230000
Quarterly Monitoring Report received February 6, 2002
Abbeville County

Dear Mr. Crawford:

As you may be aware, a corrective action plan was implemented in May 2000, in response to a petroleum release from former USTs at the referenced facility. Please find enclosed a copy of the quarterly monitoring report, which is sent to you in an effort to keep you informed of the remediation activities taking place. Please note that the site rehabilitation contractor is required to reduce the concentrations of chemicals of concern to Site Specific Target Levels (SSTLs) established by this Bureau.

On all correspondence regarding this site, please reference the UST Permit Number. Please feel free to contact me at (803) 898-4360 or (800) 826-5435 (within SC only) if you have questions or need additional information.

Sincerely,

John D. Abernathy, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division

Enc: Quarterly Monitoring Report

CC: technical file (w/o enc)

SCDHEC/SLFSS/UST/4142_11thrp/JDA/2.6.02

D H E C
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600 Bull Street
olumbia, SC 29201-1708

UNDERGROUND ST  AGE TANK PROGRAM
BUREAU OF LAND AND WASTE MANAGEMENT

Phone (800) 826-5435  Fax (803) 898-4330

FEB 11 2002

Richard Gillespie, P.G.
$H_2O$ Environmental, Inc.
130 Centrum Drive, Suite 3B
Irmo, SC 29063

Re: Crawford's Country Store, 5870 Hwy 28 North, Antreville, SC
UST Permit #12335; Cost Proposal #10156:P
Bid # SB-9570-12/02/99-TC; PO# 230000
Quarterly Monitoring Report received February 6, 2002
Abbeville County

Dear Mr. Gillespie:

The Underground Storage Tank Program has reviewed the referenced report and noted its findings. The report indicates a continuing increase of MTBE in monitoring well MW-11, which may signal a loss of plume containment. The next quarterly monitoring report is expected on or before March 20, 2002.

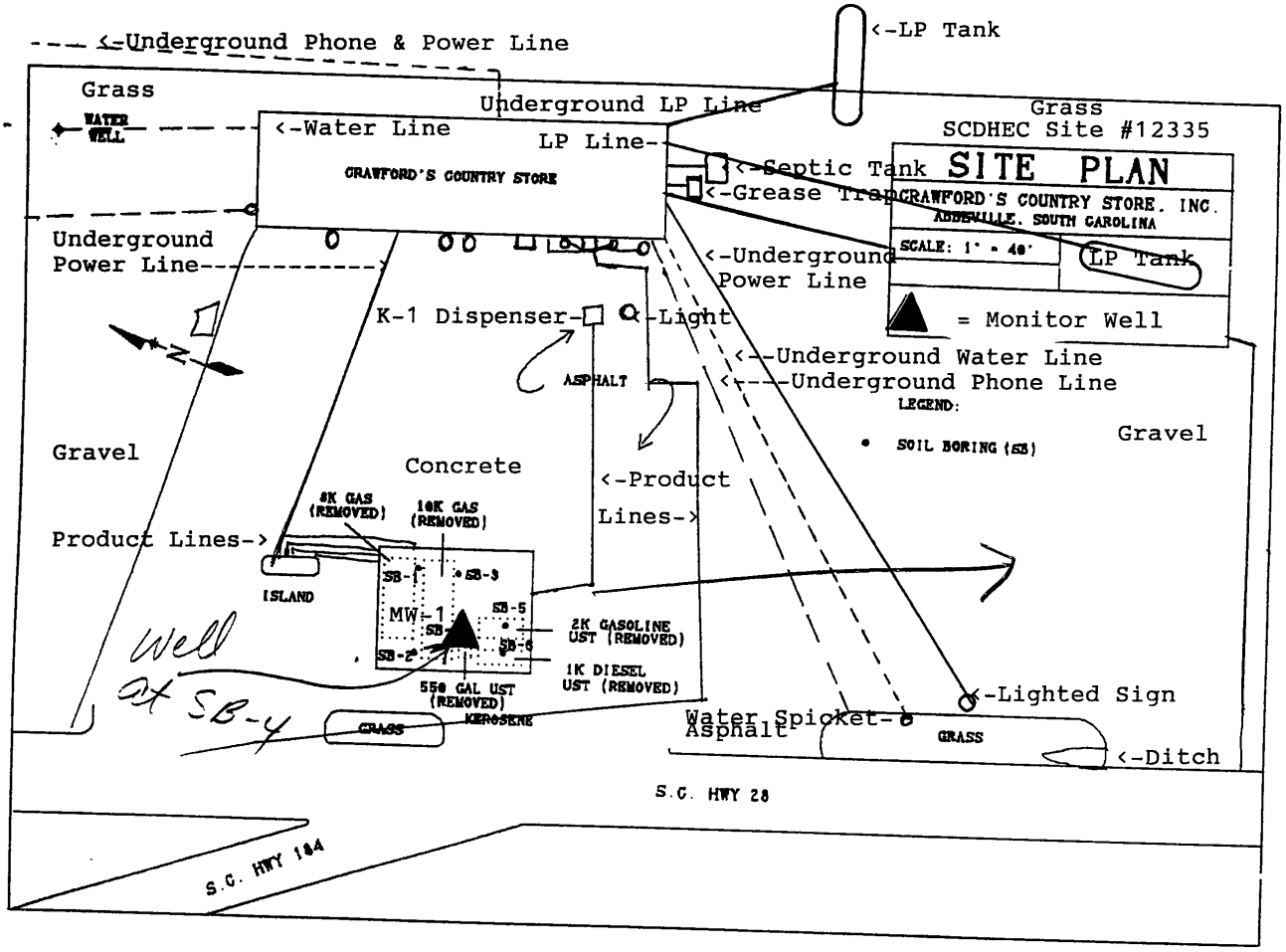
On all correspondence pertaining to this facility, please reference the UST Permit Number. If you have any questions, please call me at (800) 826-5435 (within SC only) or (803) 898-4360.

Sincerely,

John D. Abernathy, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division

cc: Frank Crawford, 5870 Hwy. 28 N., Abbeville, SC 29620
Technical File

SCDHEC/SLFSS/UST/12335_6th/JDA/2.6.02


<-Underground Phone & Power Line
<-LP Tank
Grass
WATER WELL
Underground LP Line
Grass
SCDHEC Site #12335
<-Water Line
LP Line-
CRAWFORD'S COUNTRY STORE
<-Septic Tank
<-Grease Trap
SITE PLAN
CRAWFORD'S COUNTRY STORE, INC.
ASHEVILLE, SOUTH CAROLINA
SCALE: 1" = 40'
LP Tank
Underground Power Line
<-Underground Power Line
K-1 Dispenser
<-Light
= Monitor Well
<-Underground Water Line
<-Underground Phone Line
ASPHALT
LEGEND:
SOIL BORING (SB)
Gravel
Gravel
Concrete
<-Product Lines->
Product Lines->
4K GAS (REMOVED)
10K GAS (REMOVED)
ISLAND
SB-1
SB-3
MW-1
SB
SB-5
SB-6
SB-2
2K GASOLINE UST (REMOVED)
1K DIESEL UST (REMOVED)
550 GAL UST (REMOVED) KEROSENE
Well at SB-4
GRASS
Water Spicket
Asphalt
GRASS
<-Lighted Sign
<-Ditch
S.C. HWY 28
S.C. HWY 184

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UNDERGROUND ST  AGE TANK PROGRAM
BUREAU OF LAND AND WASTE MANAGEMENT

Phone (800) 826-5435  Fax (803) 898-4330

OCT 26 2001

$H_2O$ Environmental, Inc.
Attn: Richard Gillespie, P.G.
130 Centrum Drive, Suite 3B
Irmo, SC 29063

Re: Crawford's Country Store
**UST Permit #12335**
5th Quarterly Monitoring Report received October 22, 2001
Abbeville County

Dear Mr. Gillespie:

The Underground Storage Tank Program has reviewed the referenced report and noted its findings. Please be aware of the increase in COC in down gradient well MW-13. The next quarterly monitoring report is expected on or before December 30, 2001.

On all correspondence pertaining to this facility, please reference the UST Permit Number. If you have any questions, please call me at (800) 826-5435 (within SC only) or (803) 898-4360.

Sincerely,

John D. Abernathy, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division

cc: Frank Crawford, 5870 Hwy. 28 N., Abbeville, SC 29620 (w/copy of report)

SCDHEC/SLFSS/UST/12335_5th/JDA/10.24.01

D H E C
ROMOTE PROTECT PROSPER
600 Bull Street
Columbia, SC 29201-1708

**UNDERGROUND ST( GE TANK PROGRAM**
**BUREAU OF LAND AND WASTE MANAGEMENT**

**2600 Bull St., Columbia, SC 29201**
**Phone (800) 826-5435 Fax (803) 898-4330**

AUG 23 2001

$H_2O$ Environmental, Inc.
Attn: Richard Gillespie, P.G.
130 Centrum Drive, Suite 3B
Irmo, SC 29063

Re: Crawford's Country Store
**UST Permit #12335**
4th Quarterly Monitoring Report received August 2, 2001
Abbeville County

Dear Mr. Gillespie:

The Underground Storage Tank Program has reviewed the referenced report and noted its findings. The next quarterly monitoring report is expected on or before September 30, 2001.

On all correspondence pertaining to this facility, please reference the UST Permit Number. If you have any questions, please call me at (800) 826-5435 (within SC only) or (803) 898-4360.

Sincerely,

John D. Abernathy, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division
Underground Storage Tank Program

cc: Frank Crawford, 5870 Hwy. 28 N., Abbeville, SC 29620 (w/copy of report)
Technical File

SCDHEC/SLFSS/UST/12335_4th/JDA/8.16.01

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

**BUREAU OF**
**UNDERGROUND STORAGE TANK MANAGEMENT**

**Phone (800) 826-5435 Fax (803) 898-4330**

AUG 25 2000

Force & Associates, Inc.
Attn: Greg Force
138 Middlebrook Drive
Lexington, South Carolina 29072

Re: Water supply well installation
Contract SB-7691-12/02/99-TC
Purchase Order #230099
Notice to Proceed

Dear Mr. Force:

The Bureau of Underground Storage Tank Management of the South Carolina Department of Health and Environmental Control (SCDHEC) is requesting the submittal of cost proposals for the installation of a water supply well at the following facility.

| | | | |
|---|---|---|---|
| Crawford's Country Store | 12335 | Abbeville | private water supply well |

**Please submit the cost proposals within 10 days of the date of this letter.** The Letter of Intent and Health and Safety Plan shall be submitted to me within 15 days after approval of the cost proposal.

Plan implementation shall not commence on any site prior to receipt of written technical and financial approval from the Department. Installation of the water supply well shall proceed in accordance with implementation schedules established in the referenced bid specification and provided in applicable correspondence.

On all correspondence regarding these sites, please reference the UST Permit number. All documents shall be submitted to the attention of Read Miner.

Sincerely,

Read S Miner

Read S. Miner, P.G., Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division
Bureau of Underground Storage Tank Management

Enc: Package (1)

cc: Technical/Read Files (without enclosures)

SCDHEC/UST/RSM/082300

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

**BUREAU OF**
**UNDERGROUND STORAGE TANK MANAGEMENT**

**Phone (800) 826-5435 Fax (803) 898-4330**

JUL 24 2000

Test America
Attn: Mark Clark
9440 Two Notch Road, Ste. B
Columbia, SC 29223

Re: Crawfords Country Store
UST Permit #12335
Bid # SB-7690-06/17/99-REB
Purchase Order **#179220**
CP #11729:P
Abbeville County

Dear Mr. Clark:

Under the term and conditions of the referenced bid package, analytical sampling has been approved for the referenced facility. The facility has been assigned an individual Cost Proposal (CP) number as listed above. Please reference the CP number and Purchase Order #179220 on the invoice submitted for payment.

DHEC personnel will perform the required sampling at the facility within a few days and deliver the samples to Test America for the required analyses.

If you have any questions or need further assistance, please contact me at (803) 898-4360 or (800) 826-5435 (within SC only).

Sincerely,

H. Reed Corley, Hydrogeologist
State Lead and Field Services Section
Assessment & Corrective Action Division
Bureau of Underground Storage Tank Management

Hrc/12335sa2.doc

Cc: Bob Faller, Bureau of UST Management
Technical File
Financial File
Read File

DHEC/UST/071800

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

**BUREAU OF**
**UNDERGROUND STORAGE TANK MANAGEMENT**

**Phone (800) 826-5435 Fax (803) 898-4330**

JUL 24 2000

V.E. Amick & Associates
Attn: Jim Cooper
2440 Stoneridge Dr. Ste. 450
Columbia, SC 29210

Re: Crawford's Country Store
UST Permit #12335
Bid # SB-11171-04/25/00-HW
Purchase Order #252493
CP #11726:P
Abbeville County

Dear Mr. Cooper:

Under the term and conditions of the referenced bid package, a GAC filter pack replacement and mileage have been approved for the referenced facility. This facility has been assigned an individual Cost Proposal (CP) number as listed above. Please reference the CP number and Purchase Order #252493 on the invoice submitted for payment.

In order to facilitate the installation of the GAC filter pack, you were notified via telephone on July 18, 2000, to proceed to the site and initiate the work immediately as the rental property is currently being utilized.

If you have any questions or need further assistance, please contact me at (803) 898-4360 or (800) 826-5435 (within SC only).

Sincerely,

H. Reed Corley, Hydrogeologist
State Lead & Field Services Section
Assessment & Corrective Action Division
Bureau of Underground Storage Tank Management

Hrc/12335fil.doc

Cc: Bob Faller, Bureau of UST Management
Technical File
Financial File
Read File

DHEC/UST/071800

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

**UNDERGROUND S[illegible]AGE TANK PROGRAM**
**BUREAU OF LAND AND WASTE MANAGEMENT**

**2600 Bull St., Columbia, SC 29201**
**Phone (800) 826-5435 Fax (803) 898-4330**

$H_2O$ Environmental, Inc.
Attn: Richard Gillespie, P.G.
130 Centrum Drive, Suite 3B
Irmo, SC 29063

APR 10 2001

Re: Crawford's Country Store
**UST Permit #12335**
2nd and 3rd Quarterly Monitoring Reports received February 22 & March 29, 2001 Respectively
Abbeville County

Dear Mr. Gillespie:

Thank you for submitting the 2nd and 3rd Quarterly Monitoring Reports for the referenced facility. The reports have been reviewed and their findings noted. The next quarterly monitoring report (three-copies) is expected on or before May 30, 2001.

On all correspondence pertaining to this facility, please reference the UST Permit Number. If you have any questions, please call me at (800) 826-5435 (within SC only) or (803) 898-4360.

Sincerely,

John D. Abernathy, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division
Underground Storage Tank Program

cc: Frank Crawford, 5870 Hwy. 28 N., Abbeville, SC 29620 (w/copy of reports)
[redacted]

SCDHEC/SLFSS/UST/12335_2nd&3rd/JDA/4.9.01

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

**BUREAU OF**
**LAND AND WASTE MANAGEMENT**

**Phone (800) 826-5435 Fax (803) 898-4330**

**NOV 13 2000**

V.E. Amick & Associates
Attn: Jim Cooper
2440 Stoneridge Dr. Ste. 450
Columbia, SC 29210

Re: Crawfords Country Store
UST Permit #12335
Bid # SB-11171-04/25/00-HW
Purchase Order #252493
CP #12647:P
Abbeville County

Dear Mr. Cooper:

As discussed in our October 31, 2000 telephone conversation, a new water well has been constructed and the use of the GAC unit is no longer necessary. Therefore, under the terms and conditions of the referenced bid package, the removal of the existing GAC unit from the Crawford's Rental Property well has been approved for the referenced facility. This facility has been assigned an individual Cost Proposal (CP) number as listed above. Please reference the CP number and Purchase Order #252493 on the invoice submitted for payment.

If you have any questions or need further assistance, please contact me at (803) 898-4360 or (800) 826-5435 (within SC only).

Sincerely,

H. Reed Corley, Hydrogeologist
State Lead & Field Services Section
Assessment & Corrective Action Division
Underground Storage Tank Program

Hrc/12335ga2.doc

Cc: Bob Faller, UST Program
Frank Crawford, 5870 Hwy. 28 N., Abbeville, SC 29620
Technical File
Financial File
Read File

DHEC/UST/103100

D H E C
PROMOTE PROTECT PROSPER

# NOTICE OF INTENT (NOI) 1335

CONSTRUCTION OF INDIVIDUAL RESIDENTIAL OR IRRIGATION WELL UNDER THE SOUTH CAROLINA GENERAL PERMIT #SCW00000000

BUREAU OF WATER

*SEE REVERSE FOR INSTRUCTIONS*

Submission of this Notice of Intent constitutes notice that the party identified in Section III of this form intends to be authorized by a permit issued for construction of an individual residential or irrigation well in the location identified in Section II of this form. Becoming a permittee obligates the construction to comply with the terms and conditions of the permit. ALL NECESSARY INFORMATION MUST BE PROVIDED ON THIS FORM. **A FEE OF $70 FOR INDIVIDUAL RESIDENTIAL WELLS OR $50 FOR IRRIGATION WELLS IS REQUIRED FOR COVERAGE UNDER THIS PERMIT.**

SCW ____ — ____ SCDHEC/USE ONLY

## I. Well Owner Information

Name: Crawford (last) Frank (first)

Address: 5870 Hwy 28 N Phone: (864) 348-7442

City: Abbeville State: SC Zip: 29620-

## II. Well/Site Location Information (if different from above)

Name: (last) (first) ☐ No Address Exists Location Map Attached

Address:

City: State: SC Zip: —

County:

RECEIVED
OCT 3 2000
PRIVATE WELL SECTION

☒ RESIDENTIAL ☐ IRRIGATION ☐ REPLACEMENT ☐ EMERGENCY

## III. Well Driller Information

Well Drillers Name: Force Greg (last, first) SC Cert No: 1346

Company Name: Force & Associates

Company Address: 1138 Middlebrook Drive

City: Lexington State: SC Zip: 29072-

## IV. Proposed Well Construction

Proposed Start Date: 10/4/00 (month/day/year) Check # 2945

The Well Standards and Regulations R.61-71.8(A) requires a Water Well Record form be completed and submitted to SCDHEC within 30 days of well completion.

## V. Certification:

I certify that this document and all attachments were prepared under my direction or supervision and the information submitted is, to the best of my knowledge and belief, true, accurate and complete.

Print Name: Greg Force Title: President

Signature: Greg Force Date: 10/2/00

DHEC 3647 (08/1999)

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

COMMISSIONER:
Douglas E. Bryant

BOARD:
Bradford W. Wyche
Chairman

William M. Hull, Jr., MD
Vice Chairman

Mark B. Kent
Secretary

Howard L. Brilliant, MD

Brian K. Smith

Rodney L. Grandy

Larry R. Chewning, Jr., DMD

#12335

October 3, 2000

GREGORY L. FORCE 1346
138 MIDDLEBROOK DR
LEXINGTON, SC 29072

Verification of Receipt of a Notice of Intent
Permit Number: 01015374

Dear Sir:

The Department of Health and Environmental Control has received your Notice of Intent to construct an Individual Residential Well for the FRANK CRAWFORD well at 5870 HWY 28N, ABBEVILLE.

Please reference the permit number above in any correspondence to the Department.

The well owner may wish to have the well analyzed for the presence or absence of bacteria. This is done after well installation has been completed and at least a week after the well has been properly disinfected. If possible, please inform the well owner that sample bottles and sampling instructions may be picked up at the nearest EQC District Office, County Health Department, or Health District Office. Samples must be delivered to the SCDHEC office on the same day the sample is taken and samples can only be accepted Monday through Wednesday. The well owner will also need to write the permit number on the laboratory form sent in with the water sample.

This approval to install a private drinking water well does not assure that the groundwater is free from contamination and is safe for the intended use. If you have any reason to believe contamination is present in the area of the well location, contact the Private Well Program (number below). Also, other local permits or licenses may be necessary to construct a well in your area of the state.

If you have any questions, please contact the Private Well Program at 1-888-761-5989.

D H E C
PROMOTE PROTECT PROSPER

**BUREAU OF**
**UNDERGROUND STORAGE TANK MANAGEMENT**

2600 Bull Street
Columbia, SC 29201-1708

**Phone (800) 826-5435 Fax (803) 898-4330**

SEP 28 2000

H2O Environmental, Inc.
Attn: Richard Gillespie, P.G.
130 Centrum Drive, Suite 3B
Irmo, SC 29063

Re: Crawford's Country Store
**UST Permit #12335**
Corrective Action System Evaluation Report received August 30, 2000
Abbeville County

Dear Mr. Gillespie:

This office has reviewed the findings in the referenced report. According to the report, sparging activities have commenced; however, your free product recovery activities were not addressed. Please keep this office apprised of your free product recovery activities in the quarterly monitoring reports. The next quarterly report (three-copies) is due on or before November 15, 2000.

On all correspondence regarding this site, please reference UST Permit #12335. If you have any questions, please contact me at (803) 898-4360.

Sincerely,

H. Reed Corley, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division
Bureau of Underground Storage Tank Management

Hrc/123351[redacted]doc

cc: Frank Crawford, 5870 Hwy. 28 N., Abbeville, SC 29620 (w/copy of monitoring report)
[redacted] (w/o enc.)

DHEC/UST/092500

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

BUREAU OF
UNDERGROUND STORAGE TANK MANAGEMENT

Phone (800) 826-5435 Fax (803) 898-4330

SEP 25 2000

Force & Associates, Inc.
Attn: Greg Force
138 Middlebrook Drive
Lexington, South Carolina 29072

Re: Crawford's Country Store
**UST Permit #12335, CP #12349:P**
Private Water Supply Well Cost Proposal received September 14, 2000
SCDHEC Contract # SB-7691-12/02/99-TC
Purchase Order # 230099
Abbeville County

Dear Mr. Force:

The Bureau of Underground Storage Tank Management has reviewed the referenced cost proposal for the replacement of the private water supply well at the Crawford's Rental Property. Please submit your Notice of Intent and Health and Safety Plan to my attention within 15 days of the date of this letter. Well installation should be initiated within five days of receipt of Notice of Intent approval. The analytical results should be submitted to my attention by facsimile (803-898-4330) within 48 hours of receipt by the contractor. Well completion records should be submitted within 10 days of well completion.

Cost Proposal (CP) #12349:P has been approved in the amount shown on the enclosed cost proposal spreadsheet and will be kept on file so that compensation can begin.

**The SCDHEC reserves the authority to pay only for work properly performed and/or technically justified and will only pay rates in accordance with bid number SB-7691-12/02/99-TC.** Further SCDHEC reserves the right to question and/or reject costs if deemed unreasonable. The SCDHEC reserves the right to audit project records at any time during the project or after completion of the work.

A copy of the approved cost proposal is enclosed for your information. Future invoices and/or other criteria included therein must comply with current SUPERB criteria per Section 44-2-20(2). Please reference **Cost Proposal #12349:P** on all pertinent invoices and correspondence. Please note that Sections 44-2-110(4) and 44-2-130(B) of the SUPERB Statute state that no costs will be allowed (considered for payment) unless prior approval from the Department is obtained. If for any reason there is a change in this cost proposal, any associated changes to this cost proposal must be pre-approved by this Department in order for Force & Associates, Inc. to seek future cost compensation.

**Any item(s) not clearly or completely addressed in the report (SC certified driller's number, disposal manifest for soil cuttings, disposal manifests for generated ground water, etc.) WILL NOT be compensated by the SUPERB Account.** As agreed to in the referenced contract, the owner/operator of the referenced facility will not be responsible for any costs associated with this assessment.

Please note that all applicable South Carolina certification requirements regarding laboratory analyses, well installation, and report preparation must be met.

On all correspondence regarding this site, please reference the UST Permit #12335 and Cost Proposal #12349P. If you have questions concerning this correspondence or would like to submit additional information, please contact me at (803) 898-4362 or (800) 826-5435 (within SC only).

Sincerely,

H. Reed Corley, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division
Bureau of Underground Storage Tank Management

Hrc/12335cp.doc

Enc: Approved Assessment Component Cost Proposal

Cc: Frank Crawford, 5870 Hwy. 28 N., Abbeville, SC 29620 (w/enc.)
Greg Whithycombe, Bureau of Water (w/out enc.)
Upper Savannah District EQC (w/out enc.)
Financial Section (w/enc.)
Technical File (w/out enc.)
Read File (w/out enc.)

SCDHEC/UST/DLT/092100

Force & Associates, Inc.

138 Middlebrook Drive
Lexington, South Carolina 29072
803-359-7847
803-359-6682 (fax)

September 12, 2000

RECEIVED
SEP 14 2000
Bureau of Underground Storage Tank Management

Mr. Read Miner, P.G.
Bureau of UST Management
SCDHEC
2600 Bull Street
Columbia, SC 29201-1708

RE: Water Well Replacement Cost Proposal
Crawford's Country Store (12335)
5870 Hwy 28 North
Antreville, SC

Dear Mr. Miner:

Force & Associates, Inc. is pleased to submit the attached cost proposal to install a private water supply well at the referenced site. This well will be installed to replace the existing supply well that has been impacted by petroleum hydrocarbons from an underground storage tank release. This cost proposal is being submitted as requested in your August 25, 2000 Notice to Proceed letter for Contract SB-7691-12/02/99-TC and Purchase Order #230099.

Thank you for the opportunity to submit this cost proposal to you for your review. Please note that this cost proposal is based on information obtained from water supply wells located near this area. If you have any questions or require additional information please contact my office at 803-359-3200.

Sincerely,
Force & Associates, Inc.

Greg Force

PRIVATE WATER SUPPLY WELL COST PROPOSAL
CRAWFORD'S COUNTRY STORE

| TASK | UNITS | UNIT RATE | COST |
|---|---|---|---|
| WELL INSTALLATION | 300-feet | $70.00/foot | $21,000.00 |
| WELL HOUSE | 1 well house | $500.00/well house | $500.00 |
| SUPPLY LINE | 100-feet | $2.00/foot | $200.00 |
| MOBILIZATION | 1 mobilization | $1,350.00/mob. | $1,350.00 |
| TOTAL | | | $23,050.00 |

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

**BUREAU OF**
**UNDERGROUND STORAGE TANK MANAGEMENT**

**Phone (800) 826-5435 Fax (803) 898-4330**

AUG 25 2000

V.E. Amick & Associates
Attn: Jim Cooper
2440 Stoneridge Dr. Ste. 450
Columbia, SC 29210

Re: Crawfords Country Store
UST Permit #12335
Bid # SB-11171-04/25/00-HW
Purchase Order #252493
CP #12130:P
Abbeville County

Dear Mr. Cooper:

Under the terms and conditions of the referenced bid package, eight (8) carbon, gravel, and filter replacements and the associated mileage has been approved for the GAC unit associated with the Crawford Rental Property. These changes should be completed on a weekly basis (unless notified otherwise). This facility has been assigned an individual Cost Proposal (CP) number as listed above. Please reference the CP number and Purchase Order #252493 on the invoice submitted for payment.

V.E. Amick & Associates should complete the work in accordance with the established schedule. A hard copy will follow via United States postal service.

If you have any questions or need further assistance, please contact me at (803) 898-4362 or (800) 826-5435 (within SC only).

Sincerely,

H. Reed Corley, Hydrogeologist
State Lead & Field Services Section
Assessment & Corrective Action Division
Bureau of Underground Storage Tank Management

Hrc/12335fil.doc

cc: Technical File
Financial File
Read File

DHEC/UST/082300

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

BUREAU OF
UNDERGROUND STORAGE TANK MANAGEMENT
Phone (800) 826-5435 Fax (803) 898-4330

AUG 25 2000

Frank Crawford
5870 Hwy. 28 North
Abbeville, SC 29620

Re: Crawford's Country Store
UST Permit #12335
Telephone Conversation of August 23, 2000
Abbeville County

Dear Mr. Crawford:

A copy of the most recent analytical results obtained from your rental property well is enclosed. Per our referenced telephone discussion, it is my understanding that you have advised your tenants not to consume the water generated from the well associated with your rental property. Therefore, as Methyl-tert-butyl-ether is continuing to breakthrough the carbon filter pack on a regular basis, this office will direct its contractor to change out the filter pack every week until your private well is replaced. Well replacement is scheduled to commence within the next 60 days.

If you have questions concerning this correspondence, feel free to contact me at (803) 898-4360 or (800) 826-5435 (within SC only).

Sincerely,

H. Reed Corley, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division
Bureau of Underground Storage Tank Management

Hrc/12335wel.doc

Enc: Well Analytical Results

Cc: Technical File (w/out enc.)

DHEC/UST/082300

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

**BUREAU OF**
**UNDERGROUND STORAGE TANK MANAGEMENT**
**Phone (800) 826-5435 Fax (803) 898-4360**

JUN 07 2000

H2O Environmental, Inc.
Attn: Richard Gillespie, PG
130 Centrum Drive, Suite 3B
Irmo, SC 29063

Re: Crawford's Country Store
**UST Permit #12335**
Baseline Monitoring Report received May 19, 2000
Abbeville County

Dear Mr. Gillespie:

Thank you for submitting the referenced monitoring report. The report has been reviewed and its findings noted. The first quarterly report (two-copies) is due on or before August 15, 2000.

On all correspondence concerning this site, please reference the UST Permit Number. If you have any questions concerning the above, please call me at (800) 826-5435 (within SC only) or (803) 898-4360.

Sincerely,

H. Reed Corley, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division
Bureau of Underground Storage Tank Management

HRC/CSD12335bas.doc

cc: Frank Crawford, 5870 Hwy. 28 N., Abbeville, SC 29620 (w/copy of Monitoring Report)
[redacted]e

DHEC/UST/060600

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

**BUREAU OF**
**UNDERGROUND STORAGE TANK MANAGEMENT**

**Phone (800) 826-5435 Fax (803) 898-4330**

JUN 05 2000

Test America
Attn: Claudia Zimmerman
9440 Two Notch Road, Ste. B
Columbia, SC 29223

Re: Crawford's Country Store
UST Permit #12335
Bid # SB-7690-06/17/99-REB
Purchase Order #**179220**
CP #11306:P
Abbeville County

Dear Ms. Zimmerman:

Under the term and conditions of the referenced bid package, analytical sampling has been approved for the referenced facility. The facility has been assigned an individual Cost Proposal (CP) number as listed above. Please reference the CP number and Purchase Order #179220 on the invoice submitted for payment.

DHEC personnel will perform the required sampling at the facility within a few days and deliver the samples to Test America for the required analyses.

If you have any questions or need further assistance, please contact me at (803) 898-4360 or (800) 826-5435 (within SC only).

Sincerely,

H. Reed Corley, Hydrogeologist
State Lead and Field Services Section
Assessment & Corrective Action Division
Bureau of Underground Storage Tank Management

Hrc/12335sam.doc

Cc: Bob Faller, Bureau of UST Management
[redacted]
Financial File
Read File

DHEC/UST/052500

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

COMMISSIONER:
Douglas E. Bryant

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Bradford W. Wyche
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Vice Chairman

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Secretary

Howard L. Brilliant, MD

Brian K. Smith

Rodney L. Grandy

Larry R. Chewning, Jr., DMD

May 31, 2000

RECEIVED
JUN 02 2000
Bureau of Underground
Storage Tank Management

Harold Crawford
5870 Highway 28 North
Abbeville, SC 29620

Re: Underground Injection Control Permit #505
Crawford's Country Store, Site Id #12335
Abbeville County, South Carolina

Dear Mr. Crawford:

Enclosed is a Permit to Operate for ten (10) Class VA-I (Aquifer Remediation) injection well at the Crawford's Country Store as per your application.

If you have any questions, please feel free to call me at (803) 898-3549.

Sincerely,

Todd Adams, Hydrogeologist
GroundWater Management Section
Water Monitoring, Assessment & Protection Division
Bureau of Water

cc: Reed Corley, BUSTM
Noel Hudson, H2O Environmental

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

COMMISSIONER:
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William M. Hull, Jr., MD
Vice Chairman

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Secretary

Howard L. Brilliant, MD

Brian K. Smith

Rodney L. Grandy

Larry R. Chewning, Jr., DMD

## WATER MONITORING, ASSESSMENT AND PROTECTION DIVISION

Injection Well Operating Approval
for

Class II, III, and V.A. Injection Well(s)

Permit #505 Date of Issue: May 31, 2000

In accordance with the provisions of Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended, and pursuant to receiving a Permit to Construct ten (10) Class V.A.-I (Aquifer Remediation) injection wells, authorization is granted to Mr. Crawford to operate ten (10) Class V.A.-I (Aquifer Remediation) injection wells located at the Crawford's Country Store, Abbeville County, and are subject to the attached provisos noted for the operator.

The Class V.A.-I (Aquifer Remediation) injection wells are a true diameter of 1 inch, a total depth of 10-30 feet located at the Crawford's Country Store, Abbeville County, South Carolina.

Pursuant to Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended, this authorization may be rescinded if these injection wells should, at any time, contaminate, pollute, or otherwise adversely affect other water in the vicinity or for any other conditions contained in R61-87, Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended.

Expires: May 31, 2002

Todd Adams, Hydrologist
GroundWater Management Section
Bureau of Water

May 31, 2000
Date

RECEIVED
JUN 0 2000
Bureau of Underground
Storage Tank Management

DHEC 2104 (6/88)

Provisos to the Injection Well Operating Approval
for
Underground Injection Well Permit #505
Crawford's Country Store
Abbeville County, S.C.
May 31, 2000

1) Construction of new or abandonment of existing wells must be reported to the Department within thirty (30) days of completion.

2) Only ambient air may be injected into the subsurface. Any changes in the system operation other than as presented in the UIC Permit Application must be reported to the Department prior to implementation.

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

COMMISSIONER:
Douglas E. Bryant

BOARD:
Bradford W. Wyche
Chairman

William M. Hull, Jr., MD
Vice Chairman

Mark B. Kent
Secretary

Howard L. Brilliant, MD

Brian K. Smith

Rodney L. Grandy

Larry R. Chewning, Jr., DMD

May 3, 2000

RECEIVED
MAY 0 4 2000
Bureau of Underground Storage Tank Management

Harold Crawford
5870 Highway 28 North
Abbeville, SC 29620

Re: Underground Injection Control Permit #505
Crawford's Country Store, Site Id #12335
Abbeville County

Dear Mr. Crawford:

Enclosed is a Permit to Construct for one (1) additional Class VA-I injection well at the Crawford's Country Store, Site Id #12335 as requested in the UIC application addendum received May 1, 2000. An inspection of the UIC System must be conducted prior to issuance of Approval to Operate. After completion of the inspection, Approval to Operate #505 will be issued.

If you have any questions, please feel free to call me at (803) 898-3549.

Sincerely,

Todd Adams, Hydrogeologist
Groundwater Management Section
Water Monitoring, Assessment & Protection Division
Bureau of Water

cc: H. Reed Corley, DUSTM
Noel Hudson, $H_2O$ Environmental, Inc.

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

COMMISSIONER:
Douglas E. Bryant

BOARD:
Bradford W. Wyche
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William M. Hull, Jr., MD
Vice Chairman

Mark B. Kent
Secretary

Howard L. Brilliant, MD

Brian K. Smith

Rodney L. Grandy

Larry R. Chewning, Jr., DMD

RECEIVED
MAY 0 4 20
Bureau of Underground
Storage Tank Management

## WATER MONITORING ASSESSMENT & PROTECTION DIVISION

Injection Well Construction Permit
for
Class II, III, and V.A. Injection Well(s)

Permit #505

Date Issued: May 3, 2000
Date Expired: May 3, 2001

For (Operator):Harold Crawford

In accordance with provisions of Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended, permission is granted for construction of one (1) Class V.A.-I injection well located at the Crawford's Country Store, Site Id #12335, Abbeville County, SC with the following provisions:

1) The operator shall submit completed SCDHEC well record forms to the Department's Water Monitoring, Assessment & Protection Division after completion of the injection wells.

2) Upon completion of construction, injection activities shall not commence prior to receiving approval from the Department to operate the injection wells.

3) When the injection wells are no longer in use, or upon request by the Department, within sixty (60) days all injection wells must be permanently abandoned in accordance with the South Carolina Well Standards and Regulations (R.61-71.10).

4) Injection wells must be installed and grouted in accordance with the South Carolina Well Standards and Regulations (R.61-71.10).

Todd Adams, Hydrologist
GroundWater Management Section
Bureau of Water

May 3, 2000
Date

DHEC 2104 (6/88)

# STATEMENT OF BASIS - UIC DRAFT PERMIT #505

In accordance with the South Carolina Underground Injection Control Regulations, Section R61-87.12,J., this "Statement of Basis" has been prepared for the Crawford Country Store Underground Injection Control permit application addendum received May 1, 2000.

Ownership of the proposed injection wells is Harold Crawford, 5870 HWY 28 North, Abbeville, SC 29620. The permit (UIC #505) is for the construction of one (1) injection well for remedial corrective action at the Crawford's Country Store, Site Id #12335. The intent of the injection wells are to facilitate enhanced remediation by injection of ambient air as described in UIC application into the subsurface. The draft permit for the underground injection proposal has been prepared based on staff review and the application of the Pollution Control Act of South Carolina and the Underground Injection Control Regulations of South Carolina.

Conditions of the permit issuance include the submittal of well records for all injection wells installed and the inspection of well construction by the Department prior to injection.

H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

**BUREAU OF**
**UNDERGROUND STORAGE TANK MANAGEMENT**
**Phone (800) 826-5435 Fax (803) 898-4330**

[redacted] 2000

H2O Environmental, Inc.
Attn: Richard Gillespie, P.G.
130 Centrum Drive, Suite 3B
Irmo, SC 29063

Re: Crawford's Country Store
**UST Permit #12335**
**Purchase Order #224318, CP #10156:P**
Bid Number: SB-9570-12/02/99-TC
Public Notice posted through April 7, 2000
Abbeville County

Dear Mr. Gillespie:

The Bureau of Underground Storage Tank Management has reviewed the Corrective Action Plan. The Bureau of Water has issued a permit to construct injection wells and the Bureau of Air Quality has issued conditional approval to operate the soil vapor extraction system (see enclosure). A permit to operate the Underground Injection Control system will be issued after the Bureau of Water has completed a system inspection. Upon receipt, operation of the treatment system should commence immediately. There were no comments received from the referenced public notice. A copy of the Permission Form is enclosed.

The Bureau grants preapproval for transportation of drums of virgin petroleum contaminated soil and/or drums of groundwater from the referenced site to a permitted treatment facility. The contaminated soil and/or groundwater must be properly stored in labeled 55 gallon drums or equivalent containers. The contaminated soil and/or groundwater must be accepted by the approved treatment facility. There can be no spillage or leakage in transport. A copy of the disposal manifest from the receiving facility that clearly designates the quantity received must be included in the monitoring report.

All future invoices and/or other rehabilitation activities must comply with current SUPERB criteria per Section 44-2-20(2) and the referenced bid special conditions. Please reference **Cost Proposal Number 10156** on all pay-for-performance invoices. Please note, per Section 44-2-40 of the SUPERB Statute, an invoice for site rehabilitation activities must be submitted on or before May 10, 2000, (four months from Statement of Award) or the Cost Proposal will be uncommitted.

An initial monitoring report documenting CoC concentrations in all wells (see Specification 2) and potentiometric conditions prior to start-up is expected within 30 days from the date of this correspondence. On all correspondence regarding this site, please reference the UST Permit Number. On the invoice, please reference the UST Permit Number and Cost Proposal Number. If you have questions concerning this correspondence, feel free to contact me at (803) 898-4360 or (800) 826-5435 (within SC only).

Sincerely,

H. Reed Corley, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division
Bureau of Underground Storage Tank Management

Hrc/12335cap.doc

enc: SCDHEC Permission Form
Bureau of Air Quality Control Memorandum

cc: Todd Adams, Groundwater Management Section, Bureau of Water (w/out enc.)
Henry Wigfall, Bureau of Business Management (w/out enc.)
Frank Crawford, 5870 Hwy. 28 N., Abbeville, SC 29620 (w/out enc.)
[redacted] Read File (w/out enc.)

DHEC/UST/041100

# NOTICE

State of South Carolina
The Department of Health and Environmental Control
Columbia, South Carolina

**Public Notice #: 12335-01** **Date: March 23, 2000**

## NOTICE OF PROPOSED CORRECTIVE ACTION

**Section 280.67 of the S.C. Underground Storage Tank Control Regulations (R.61-92) requires that any Corrective Action Plan prepared to meet the requirements of 280.66 must be placed on notice for public comment. The following applicant has submitted a Corrective Action Plan for the rehabilitation of ground water contaminated by petroleum constituents released from the former underground storage tanks located at the Crawford's Country Store Facility, 5870 Hwy. 28 North, Abbeville, SC**

**Applicant: Frank Crawford**

**Corrective action will consist of bailing free product, the injection of ambient air to enhance biodegradation, and soil vapor extraction to achieve Site-Specific Target Levels followed by natural attenuation to EPA established maximum contaminant levels.**

**A copy of the Corrective Action Plan is available for review at the Freedom of Information Office (898-3882) SCDHEC 2600 Bull Street in Columbia, SC.**

Persons wishing to comment upon or object to Corrective Action approval are invited to submit same in writing within fifteen (15) days of the date of this notice to South Carolina Department of Health and Environmental Control, Bureau of Underground Storage Tank Management, 2600 Bull Street, Columbia, S.C. 29201 or call at (800) 826-5435 (within SC only) or 898-4350. The public notice # should be placed at the top of the first page of comments. Where there is a significant degree of public interest, the SCDHEC will hold a public hearing.

Please bring the foregoing to the attention of persons who you know will be interested in this matter.

DHEC/UST/032000

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

**BUREAU OF**
**UNDERGROUND STORAGE TANK MANAGEMENT**
**Phone: (803) 898-4350 Fax: (803) 898-4330**

MAR 22 2000

CERTIFIED MAIL
Return Receipt Requested
Z 390 403 108

Amanda Patterson
Route 2
Iva, SC 29655

Re: Crawford's Country Store (5870 Hwy. 28 North, Abbeville, SC)
UST Permit #12335
Abbeville County

Ms. Patterson:

As you may be aware, petroleum products have been identified in the ground water at the referenced facility. To prevent the release from becoming an unacceptable risk, $H_2O$ Environmental, Inc., has been retained to initiate corrective action of the impacted ground water via the injection of ambient air, removal of free product via manual bailing, and soil vapor extraction (to remove petroleum vapors from the subsurface), followed by natural attenuation. A copy of the proposed corrective action plan is available for your review at the SCDHEC Freedom of Information Office, 2600 Bull Street, Columbia, South Carolina. Please call the Freedom of Information Office at (803) 898-3882 for an appointment if you would like to review this corrective action plan.

Section 280.67 of the South Carolina Underground Storage Tank Regulations requires the SCDHEC to provide notice to those members of the public that may be affected by a planned corrective action. No impact or construction activity on your property is anticipated. Your continued cooperation is appreciated. A copy of the public notice is enclosed for your information.

If you have any questions or comments regarding the proposed corrective action, please call or write H. Reed Corley at (803) 898-4360. All comments should be submitted with fifteen (15) days of the date of the enclosed Public Notice.

Sincerely,

H. Reed Corley, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division
Bureau of Underground Storage Tank Management

Hrc/12335pn.doc

Enc: Public Notice (copy)

Cc: [redacted] (w/o enclosure)

DHEC/UST/032000

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

**BUREAU OF**
**UNDERGROUND STORAGE TANK MANAGEMENT**
**Phone: (803) 898-4350 Fax: (803) 898-4330**

MAR 22 2000

CERTIFIED MAIL
Return Receipt Requested
Z 390 403 109

H. Franklin Crawford
31 Turtle Point
Abbeville, SC 29620

Re: Crawford's Country Store (5870 Hwy. 28 North, Abbeville, SC)
UST Permit #12335
Tax Map #'s 3-4W-144R, 4-4W-144R, and 42-4W-144R
Abbeville County

Mr. Crawford:

As you may be aware, petroleum products have been identified in the ground water at the referenced facility. To prevent the release from becoming an unacceptable risk, $H_2O$ Environmental, Inc., has been retained to initiate corrective action of the impacted ground water via the injection of ambient air, removal of free product via manual bailing, and soil vapor extraction (to remove petroleum vapors from the subsurface), followed by natural attenuation. A copy of the proposed corrective action plan is enclosed.

Section 280.67 of the South Carolina Underground Storage Tank Regulations requires the SCDHEC to provide notice to those members of the public that may be affected by a planned corrective action. The installation of injection points is proposed on Tax Map #42-4W-144R. No impact or construction activity on Tax Map #'s 3-4W-144R and 4-4W-144R are anticipated. Your continued cooperation is appreciated. A copy of the public notice is enclosed for your information.

If you have any questions or comments regarding the proposed corrective action, please call or write H. Reed Corley at (803) 898-4360. All comments should be submitted with fifteen (15) days of the date of the enclosed Public Notice.

Sincerely,

H. Reed Corley, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division
Bureau of Underground Storage Tank Management

Hrc/12335pn2.doc

Enc: Corrective Action Plan
Public Notice (copy)

Cc: Kurt Gildemeister, H2O Environmental, 130 Centrum Drive, Suite 3B, Irmo, SC 29063 (w/out enc.)
[redacted] w/o enc.)

DHEC/UST/032000

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

**BUREAU OF**
**UNDERGROUND STORAGE TANK MANAGEMENT**
**Phone: (803) 898-4350 Fax: (803) 898-4330**

MAR 22 2000

CERTIFIED MAIL
Return Receipt Requested
Z 390 403 110

Sally Hughes
PO Box 124
Abbeville, SC 29620

Re: Crawford's Country Store (5870 Hwy. 28 North, Abbeville, SC)
UST Permit #12335
Abbeville County

Ms. Hughes:

As you may be aware, petroleum products have been identified in the ground water at the referenced facility. To prevent the release from becoming an unacceptable risk, $H_2O$ Environmental, Inc., has been retained to initiate corrective action of the impacted ground water via the injection of ambient air, removal of free product via manual bailing, and soil vapor extraction (to remove petroleum vapors from the subsurface), followed by natural attenuation. A copy of the proposed corrective action plan is available for your review at the SCDHEC Freedom of Information Office, 2600 Bull Street, Columbia, South Carolina. Please call the Freedom of Information Office at (803) 898-3882 for an appointment if you would like to review this corrective action plan.

Section 280.67 of the South Carolina Underground Storage Tank Regulations requires the SCDHEC to provide notice to those members of the public that may be affected by a planned corrective action. No impact or construction activity on your property is anticipated. Your continued cooperation is appreciated. A copy of the public notice is enclosed for your information.

If you have any questions or comments regarding the proposed corrective action, please call or write H. Reed Corley at (803) 898-4360. All comments should be submitted with fifteen (15) days of the date of the enclosed Public Notice.

Sincerely,

H. Reed Corley, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division
Bureau of Underground Storage Tank Management

Hrc/12335pn3.doc

Enc: Public Notice (copy)

Cc: [redacted] (w/o enclosure)

DHEC/UST/032000

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

COMMISSIONER:
Douglas E. Bryant

BOARD:
John H. Burriss
Chairman

William M. Hull, Jr., MD
Vice Chairman

Roger Leaks, Jr.
Secretary

Mark B. Kent

Cyndi C. Mosteller

Brian K. Smith

Rodney L. Grandy

RECEIVED
MAR 22 2000
Bureau of Underground
Storage Tank Management

MEMORANDUM

DATE: 21 March 2000

TO: Reed Corley
Bureau of Underground Storage Tank Management

FROM: Kevin J. Clark KC
Air Modeling Section
Bureau of Air Quality

SUBJECT: Crawford's Country Store, GWPD 12335

The Bureau of Air Quality has reviewed the information for the soil vapor extraction system to be located at the above location. It is the understanding of the Bureau of Air Quality that the Bureau of Underground Storage Tank Management no longer compensates companies for pilot tests. As a result, no air emission data will be available until after start up of the systems. The Bureau therefore grants conditional approval based on emission rate information being provided to the Bureau shortly after the first sampling event. If the emission rate information indicates the 1000 lb per month VOC limit will be exceeded, the system will be shut down, and an Air Permit will be obtained from the Bureau of Air Quality before operation may continue. This is in accordance with Section II, Part F, Paragraph G of the SC Dept. of Health and Environmental Control Air Pollution Control Regulation No. 62.1.

cc: Engineering File

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

COMMISSIONER:
Douglas E. Bryant

BOARD:
John H. Burriss
Chairman

William M. Hull, Jr., MD
Vice Chairman

Roger Leaks, Jr.
Secretary

Mark B. Kent

Cyndi C. Mosteller

Brian K. Smith

Rodney L. Grandy

March 21, 2000

Harold Crawford
5870 Highway 28 North
Abbeville, SC 29620

Re: Underground Injection Control Permit #505
Crawford's Country Store, Site Id #12335
Abbeville County

Dear Mr. Crawford:

Enclosed is a Permit to Construct for nine (9) Class VA-I injection wells at the Crawford's Country Store, Site Id #12335 as requested in the UIC application received March 20, 2000. An inspection of the UIC System must be conducted prior to issuance of Approval to Operate. After completion of the inspection, Approval to Operate #505 will be issued.

If you have any questions, please feel free to call me at (803) 898-3549.

Sincerely,

Todd Adams

Todd Adams, Hydrogeologist
Groundwater Management Section
Water Monitoring, Assessment & Protection Division
Bureau of Water

cc: H. Reed Corley, DUSTM
Scott Johnston, $H_2O$ Environmental, Inc.

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

COMMISSIONER:
Douglas E. Bryant

BOARD:
John H. Burriss
Chairman

William M. Hull, Jr., MD
Vice Chairman

Roger Leaks, Jr.
Secretary

Mark B. Kent

Cyndi C. Mosteller

Brian K. Smith

Rodney L. Grandy

## WATER MONITORING ASSESSMENT & PROTECTION DIVISION

Injection Well Construction Permit
for
Class II, III, and V.A. Injection Well(s)

Permit #505

Date Issued: March 21, 2000
Date Expired: March 21, 2001

For (Operator):Harold Crawford

In accordance with provisions of Title 48, Chapter 1, South Carolina Code of Laws, 1976, as amended, permission is granted for construction of nine (9) Class V.A.-I injection wells located at the Crawford's Country Store, Site Id #12335, Abbeville County, SC with the following provisions:

1) The operator shall submit completed SCDHEC well record forms to the Department's Water Monitoring, Assessment & Protection Division after completion of the injection wells.

2) Upon completion of construction, injection activities shall not commence prior to receiving approval from the Department to operate the injection wells.

3) When the injection wells are no longer in use, or upon request by the Department, within sixty (60) days all injection wells must be permanently abandoned in accordance with the South Carolina Well Standards and Regulations (R.61-71.10).

4) Injection wells must be installed and grouted in accordance with the South Carolina Well Standards and Regulations (R.61-71.10).

Todd Adams, Hydrologist
GroundWater Management Section
Bureau of Water

March 21, 2000
Date

DHEC 2104 (6/88)

# STATEMENT OF BASIS - UIC DRAFT PERMIT #505

In accordance with the South Carolina Underground Injection Control Regulations, Section R61-87.12,J., this "Statement of Basis" has been prepared for the Crawford Country Store Underground Injection Control permit application received March 20, 2000.

Ownership of the proposed injection wells is Harold Crawford, 5870 HWY 28 North, Abbeville, SC 29620. The permit (UIC #505) is for the construction of nine (9) injection wells for remedial corrective action at the Crawford's Country Store, Site Id #12335. The intent of the injection wells are to facilitate enhanced remediation by injection of ambient air as described in UIC application into the subsurface. The draft permit for the underground injection proposal has been prepared based on staff review and the application of the Pollution Control Act of South Carolina and the Underground Injection Control Regulations of South Carolina.

Conditions of the permit issuance include the submittal of well records for all injection wells installed and the inspection of well construction by the Department prior to injection.

D H E C

PROMOTE PROTECT PROSPER

South Carolina Department of Health and Environmental Control

RECEIVED

FEB 07 2000

Bureau of Underground Storage Tank Management

# Purchase Order

| PURCHASE ORDER NO. | REVISION | PAGE |
|---|---|---|
| 230000 | 0 | 1 OF 21 |

THIS PURCHASE ORDER NO. MUST APPEAR ON ALL INVOICES, PACKING LISTS, CARTONS AND CORRESPONDENCE RELATED TO THIS ORDER.

SHIP TO:
UST MANAGEMENT
SC DHEC
2600 BULL STREET
COLUMBIA, SC 29201-1708
United States

(SAME AS BELOW UNLESS OTHERWISE INDICATED)

BILL TO:
UST MANAGEMENT
SC DHEC
2600 BULL STREET
COLUMBIA, SC 29201-1708
United States

VENDOR:
H2O ENVIRØNMENTAL INC
SUITE 3-B
130 CENTRUM DRIVE
IRMO, SC 29063

| CUSTOMER ACCOUNT NO. | VENDOR NO. | DATE OF ORDER/BUYER | REVISED DATE / BUYER |
|---|---|---|---|
| | 14547 | 04-FEB-00 CLARK, H | |
| PAYMENT TERMS | SHIP VIA | F.O.B. | |
| NET 30 | | Destination | |
| FREIGHT TERMS | REQUESTOR/DELIVER TO | CONFIRM TO / TELEPHONE | |
| Prepaid | JONES, Mr. JAMES C | (803) 749-4080 | |

| ITEM | PART NUMBER / DESCRIPTION | DELIVERY DATE | QUANTITY | UNIT | UNIT PRICE | EXTENSION | |
|---|---|---|---|---|---|---|---|
| | BUYER: TRIPP CLARK, (803) 898-3501 | | | | | | |
| | SCOPE OF WORK AND TERMS AND CONDITIONS OF SB-9570-12/02/99-TC APPLY. | | | | | | |
| | DHEC PROJECT MANAGER: REED CORLEY, (803) 898-4360<br>VENDOR CONTACT: SCOTT JOHNSTON, (800) 251-4374 | | | | | | |
| | PRICE PER ABOVE REFERENCED SOLICITATION SIGNED BY SCOTT JOHNSTON ON 12/14/99 | | | | | | |
| | EFFECTIVE DATES: 07-FEB-00 UNTIL THE CORRECTIVE ACTION AS DESCRIBED IN THE SOLICITATION HAS BEEN COMPLETED. | | | | | | |
| | Planned Purchase Order<br>Effective From: 07-FEB-00 To: | | | | | | |
| 1 | 918.43<br>SITE ID#12335, CONTRACT TO PERFORM CORRECTIVE ACTION OF A PETROLEUM RELEASE FROM A REGULATED UNDERGROUND STORAGE TANK SITE AT CRAWFORDS COUNTRY STORE, 5870 HWY 28 N, ABBEVILLE, SC.<br>TOTAL AMOUNT OF PURCHASE ORDER: $117,000.00 | | 58,500.00 | US D | 1 | 58,500.00 | N |
| | Payments through cost proposal method of expenses incurred in remediation of release from underground storage tanks as provided under Section 44-2-130 SC Code of Laws (SUPERB Act). | | | | | | |

Continued

Total

AUTHORIZED SIGNATURE

Purchase Order

DHEC 0109 (12/1997)

D H E C

PROMOTE PROTECT PROSPER

South Carolina Department of Health and Environmental Control

# Purchase Order

| PURCHASE ORDER NO. | REVISION | PAGE |
|---|---|---|
| 230000 | 0 | 2 OF 2 |

THIS PURCHASE ORDER NO. MUST APPEAR ON ALL INVOICES, PACKING LISTS, CARTONS AND CORRESPONDENCE RELATED TO THIS ORDER.

SHIP TO:
UST MANAGEMENT
SC DHEC
2600 BULL STREET
COLUMBIA, SC 29201-1708
United States

(SHIP TO ADDRESS BELOW UNLESS OTHERWISE INDICATED)

BILL TO:
UST MANAGEMENT
SC DHEC
2600 BULL STREET
COLUMBIA, SC 29201-1708
United States

VENDOR:
H2O ENVIRONMENTAL INC
SUITE 3-B
130 CENTRUM DRIVE
IRMO, SC 29063

| CUSTOMER ACCOUNT NO. | VENDOR NO. | DATE OF ORDER/BUYER | REVISED DATE / BUYER |
|---|---|---|---|
| | 14547 | 04-FEB-00 CLARK, H | |
| PAYMENT TERMS | SHIP VIA | F.O.B. | |
| NET 30 | | Destination | |
| FREIGHT TERMS | REQUESTOR/DELIVER TO | CONFIRM TO / TELEPHONE | |
| Prepaid | JONES, Mr. JAMES C | (803) 749-4080 | |

| ITEM | PART NUMBER / DESCRIPTION | DELIVERY DATE | QUANTITY | UNIT | UNIT PRICE | EXTENSION | |
|---|---|---|---|---|---|---|---|
| | THIS CONTRACT WILL CONTINUE UNTIL THE SITE REHABILITATION ACTIVITY AS DESCRIBED IN THE SOLICITATION HAS BEEN COMPLETED; PROVIDED, HOWEVER, THAT COMMITTED FUNDS FOR SITE REHABILITATION ACTIVITY UNDER THIS CONTRACT REVERT TO UNCOMMITTED STATUS AFTER FOUR MONTHS OF THE DATE OF THIS CONTRACT AWARD IF NO INVOICES FOR THE SITE REHABILITATION ACTIVITIES HAVE BEEN RECEIVED BY THE DEPARTMENT, PURSUANT TO SC CODE 44-2-40(B)(1976), AS AMENDED. IF THE FUNDS REVERT TO UNCOMMITTED STATUS, ANY SUBSEQUENT INVOICE WILL NOT BE PROCESSED FOR PAYMENT UNTIL ALL OTHER COMMITTED FUNDS ARE PAID OR MONEY BECOMES AVAILABLE. | | | | | | |
| o | SHIP TO:<br>MAIL & SUPPLY ROOM 173<br>SC DHEC<br>2600 BULL STREET<br>COLUMBIA, SC 29201-1708<br>United States | | 58,500.00 | US D | | | N |

Purchase Order

Total 58,500.00

AUTHORIZED SIGNATURE

DHEC 0109 (12/1997)

D H E C
PROMOTE PROTECT PROSPER
South Carolina Department of Health
and Environmental Control

**DIVISION OF**
**UNDERGROUND STORAGE TANK MANAGEMEN**
2600 Bull Street
Columbia, SC 29201
Telephone (803) 898-4350

MEMORANDUM

**Date:** JAN 07 2000

**To:** Tripp Clark
Bureau of Business Management

**From:** Christopher S. Doll, P.G., Manager
State Lead & Field Services Section
Assessment and Corrective Action Branch

John Merritt, C.P.A., Manager
Financial Section

**Subject:** Bid Award, SB-9570-12/02/99-TC
Crawfords Country Store (UST Permit #12335)

The Division has reviewed the submittals received December 14, 1999, for the referenced Bid. The low bid was submitted by $H_2O$ Environmental. Therefore, this Division recommends immediate award of the contract to $H_2O$ Environmental.

AIMS Purchase Requisition #9570 has been amended to reflect the full bid price of $117,000.00. However, the purchase order should be generated for one half of the accepted bid award amount of $58,500.00. Please note, the full amount of the bid award should be noted in the body of the generated purchase order. Please provide **H. Reed Corley** a copy of the purchase order.

cc: H. Reed Corley, Division of UST Management
Jim Jones, Division of UST Management

D H E
PROMOTE PROTECT PROSPER
South Carolina Department of Health
and Environmental Control

BUREA OF
BUSINESS MANAGEMENT
DIVISION OF PROCUREMENT SERVICES
2600 Bull Street
Columbia, SC 29201-1708
Telephone (803) 898-3501 Fax (803) 898-3505

#12335



November 29, 1999

**AMENDMENT**

BID#: SB-9570-12/02/99-TC

OPENING DATE: 09-Dec-99

AMENDMENT #: One

OPENING TIME: 2:30 p.m.

PURPOSE: To answer questions about the solicitation and extend the opening of the solicitation

PROCUREMENT OFFICER: Tripp Clark

TELEPHONE # (803) 898-3501

1. The opening date and time will be 09-Dec-99 at 2:30 p.m.
2. Attached are the questions and answers about the solicitation

Offerors/Bidders must acknowledge receipt of this amendment by signing and returning this form prior to the official bid opening date and time or include this signed form with bid response. Failure to acknowledge receipt of this amendment may result in rejection of your offer.

| | |
|---|---|
| Company Name | Name of firm's representative |
| Telephone No. | Title of representative |
| Date | Signature (manual) |

*j:amendmen.doc 9/15/96*

**Question:** If results of groundwater analysis from verification wells indicate concentrations above SSTLs, will the installation of additional verification wells be required for project closure, or will the original verification wells simply be resampled to justify closure?

**Answer:** *No, the number of verification wells listed in the Bid are the only ones required. If additional verification wells in excess of the number specified are needed, the awarded contractor is not responsible for the associated installation or sampling costs.*

**Question:** Why are some SSTLs set below state RBSLs and Drinking Water MCLs?

**Answer:** *If the concentration reported back less than the established SSTL for that particular CoC and associated well, the laboratory value reported was utilized as the SSTL. The ground-water quality must not be further compromised by remobilization of contaminants.*

**Question:** Why was there no assessment of the contaminant plume south-east of MW-12?

**Answer:** *Based on the potentiometric data provided in the Rapid Report, the ground-water flow direction was deemed south-southeast of MW-12. Therefore, monitoring wells were installed hydraulically downgradient (MW-13) and crossgradient (MW-11 and MW-14) of MW-12 for horizontal delineation purposes.*

**Question:** Why is there no inorganic data (Nitrate, sulfate, ferrous iron, DO) included in the bid package?

**Answer:** *The inclusion of bioparameters was not deemed necessary as the goal of the Bid is to actively reduce CoC to established SSTLs. The Bid requires the sampling of the bioparameters during the six month verification phase of monitoring.*

**Question:** Referring to 11.B. What constitutes return to ambient conditions? (length of time?, well development?, or other?)

**Answer:** *Ambient conditions are reached once sufficient time has elapsed that formation waters from outside of the radius of influence of the treatment system or injectate have entered the well. This will be a function of the ground-water flow direction and velocity and re-establishment of any flow regimes that may have been disrupted by the injection process. Based on the average ground-water velocity of 58 feet per year, a return to ambient conditions could take up to six months or more assuming an influence radius of 30 feet.*

**Question:** If a contractor was to complete 50% of site cleanup, receive their payments, and cease work at the site, what actions would SCDHEC take to achieve site cleanup? What, if any, actions would be taken against the contractor?

**Answer:** *If corrective action was prematurely stopped, DHEC would again solicit bids for cleanup through South Carolina Business Opportunity. If work is stopped based on any condition other than unforeseen geologic circumstances or the encroachment of another release source, the remaining balance of the performance bond would be collected and paid to the SUPERB fund. A notation to the contractor's certification file may be rendered dependent upon the nature of work cessation.*

**Question:** What are the total depths of the Drinking Water wells?

**Answer:** *Based on well inspections and contacts made with the water well owners, the approximate total depth of the Crawford Store Well was deemed 230 feet. The total depths of the other water well identified in the Rapid Report are unknown.*

**Question:** Why was there no plan view map of the contaminant plume with contoured concentrations submitted in the bid package?

**Answer:** *Copies of CoC maps from the Rapid Report are attached; however, the relative concentrations have changed at each well.*

**Question:** How were SSTLs chosen for this site?

**Answer:** *As the site is currently being utilized as a source of drinking water, the exposure point was established at the source area; therefore, the resulting SSTLs were established at or below the RBSLs.*

**Question:** Is there a dry ditch or storm water sewer inlet, or a sanitary sewer suitable for accepting clean water nearby the site?

**Answer:** *A storm water drop inlet was identified during the Rapid Assessment investigation (see attached map). Its suitability for accepting clean water is unknown.*

**Question:** Is CP-WW a drinking water well? And having been last sampled in December, 1997 might it need to be replaced? Would the cost of that option be considered an extra to the base bid?

**Answer:** *Yes, CP-WW is a private drinking water well. Even though the water well has shown contaminant concentration levels in excess of established Drinking Water Standards, DHEC is not requiring the replacement of the well. A granular activated carbon unit has been installed on the well and is currently operating satisfactorily. The goal of the Bid is to reduce the contaminated water regime to established Drinking Water Standards.*

D H E C
PROMOTE PROTECT PROSPER
South Carolina Department of Health
and Environmental Control

BUREAU OF
BUSINESS MANAGEMENT
DIVISION OF PROCUREMENT SERVICES
2600 Bull Street
Columbia, SC 29201-1708
Telephone (803) 898-3501 Fax (803) 898-3505



November 29, 1999

#12335

**AMENDMENT**

BID#: SB-9570-12/02/99-TC

OPENING DATE: 14-Dec-99

AMENDMENT #: One

OPENING TIME: 2:30 p.m.

PURPOSE: To answer questions about the solicitation and extend the opening of the solicitation

PROCUREMENT OFFICER: Tripp Clark

TELEPHONE # (803) 898-3501

1. The opening date and time will be 14-Dec-99 at 2:30 p.m.
2. Attached are the questions and answers about the solicitation

Offerors/Bidders must acknowledge receipt of this amendment by signing and returning this form prior to the official bid opening date and time or include this signed form with bid response. Failure to acknowledge receipt of this amendment may result in rejection of your offer.

| | |
|---|---|
| Company Name | Name of firm's representative |
| Telephone No. | Title of representative |
| Date | Signature (manual) |

*j:amendmen.doc 9/15/96*

**Question:** If results of groundwater analysis from verification wells indicate concentrations above SSTLs, will the installation of additional verification wells be required for project closure, or will the original verification wells simply be resampled to justify closure?

**Answer:** *No, the number of verification wells listed in the Bid are the only ones required. If additional verification wells in excess of the number specified are needed, the awarded contractor is not responsible for the associated installation or sampling costs.*

**Question:** Why are some SSTLs set below state RBSLs and Drinking Water MCLs?

**Answer:** *If the concentration reported back less than the established SSTL for that particular CoC and associated well, the laboratory value reported was utilized as the SSTL. The ground-water quality must not be further compromised by remobilization of contaminants.*

**Question:** Why was there no assessment of the contaminant plume south-east of MW-12?

**Answer:** *Based on the potentiometric data provided in the Rapid Report, the ground-water flow direction was deemed south-southeast of MW-12. Therefore, monitoring wells were installed hydraulically downgradient (MW-13) and crossgradient (MW-11 and MW-14) of MW-12 for horizontal delineation purposes.*

**Question:** Why is there no inorganic data (Nitrate, sulfate, ferrous iron, DO) included in the bid package?

**Answer:** *The inclusion of bioparameters was not deemed necessary as the goal of the Bid is to actively reduce CoC to established SSTLs. The Bid requires the sampling of the bioparameters during the six month verification phase of monitoring.*

**Question:** Referring to 11.B. What constitutes return to ambient conditions? (length of time?, well development?, or other?)

**Answer:** *Ambient conditions are reached once sufficient time has elapsed that formation waters from outside of the radius of influence of the treatment system or injectate have entered the well. This will be a function of the ground-water flow direction and velocity and re-establishment of any flow regimes that may have been disrupted by the injection process. Based on the average ground-water velocity of 58 feet per year, a return to ambient conditions could take up to six months or more assuming an influence radius of 30 feet.*

**Question:** If a contractor was to complete 50% of site cleanup, receive their payments, and cease work at the site, what actions would SCDHEC take to achieve site cleanup? What, if any, actions would be taken against the contractor?

**Answer:** *If corrective action was prematurely stopped, DHEC would again solicit bids for cleanup through South Carolina Business Opportunity. If work is stopped based on any condition other than unforeseen geologic circumstances or the encroachment of another release source, the remaining balance of the performance bond would be collected and paid to the SUPERB fund. A notation to the contractor's certification file may be rendered dependent upon the nature of work cessation.*

**Question:** What are the total depths of the Drinking Water wells?

**Answer:** *Based on well inspections and contacts made with the water well owners, the approximate total depth of the Crawford Store Well was deemed 230 feet. The total depths of the other water well identified in the Rapid Report are unknown.*

**Question:** Why was there no plan view map of the contaminant plume with contoured concentrations submitted in the bid package?

**Answer:** *Copies of CoC maps from the Rapid Report are attached; however, the relative concentrations have changed at each well.*

**Question:** How were SSTLs chosen for this site?

**Answer:** *As the site is currently being utilized as a source of drinking water, the exposure point was established at the source area; therefore, the resulting SSTLs were established at or below the RBSLs.*

**Question:** Is there a dry ditch or storm water sewer inlet, or a sanitary sewer suitable for accepting clean water nearby the site?

**Answer:** *A storm water drop inlet was identified during the Rapid Assessment investigation (see attached map). Its suitability for accepting clean water is unknown.*

**Question:** Is CP-WW a drinking water well? And having been last sampled in December, 1997 might it need to be replaced? Would the cost of that option be considered an extra to the base bid?

**Answer:** *Yes, CP-WW is a private drinking water well. Even though the water well has shown contaminant concentration levels in excess of established Drinking Water Standards, DHEC is not requiring the replacement of the well. A granular activated carbon unit has been installed on the well and is currently operating satisfactorily. The goal of the Bid is to reduce the contaminated water regime to established Drinking Water Standards.*

D H E C
PROMOTE PROTECT PROSPER
South Carolina Department of Health
and Environmental Control

**DIVISION OF**
**UNDERGROUND STORAGE TANK MANAGEMENT**
2600 Bull Street
Columbia, SC 29201
Telephone (803) 898-4350

# MEMORANDUM

Date: OCT 01 1999

To: John Merritt, C. P. A., Manager
Financial Section

From: Christopher S. Doll, P.G., Manager
State Lead & Field Services Section
Assessment and Corrective Action Branch

Subject: Bid Request

Attached is a hard copy of the bid specifications for corrective action at UST Permit #12335. This bid package should be sent out in SCBO. The information is also on the enclosed disk under file name #12335BID.

Please assign a Purchase Requisition Number and forward the bid package to the attention of Mary Sims in the Bureau of Business Management as soon as funds are available. The associated cost will be paid from the SUPERB Account. If you have any questions, please contact me at 8-4366.

RANK = 1D

cc: H. Reed Corley, State Lead and Field Services Section
Technical File

SCDHEC/UST/092499

# FAX · FAX · FAX · FAX

## TestAmerica, Inc.

Reed

**Orlando Division**

***Formerly Bionomics Laboratory***

***DATE:*** 11-2-98 ***TIME:***

***TO:*** JAN COOKE ***FAX NO:*** 803-734-3604

***COMPANY:*** SCDHEC ***# OF PAGES:*** 4 *(incl. this one)*

***SUBJECT:***

***COMMENTS:***

RECEIVED
NOV 0 4 1998
DIVISION OF UNDERGROUND
STORAGE TANK MGMT.

#12335

***If you do not receive all pages, please call us immediately. Thank You.***

***FROM:*** DARRYL L. JERDINE

***TestAmerica***
***4310 East Anderson Road***
***Orlando, Florida 32812***
***Phone: (407) 851-2560***
***Fax: (407) 856-0886***

**The information contained in this facsimile message is legally privileged and confidential information intended only for the use of the individual or entity named above. IF THE READER OF THIS MESSAGE IS NOT THE INTENDED RECIPIENT, HE/SHE IS HEREBY NOTIFIED THAT ANY DISSEMINATION, DISTRIBUTION OR COPYING OF THIS COMMUNICATION IS STRICTLY PROHIBITED. If you have received this communication in error, please immediately notify us by Telephone. Thank You.**

TestAmerica
INCORPORATED
4310 East Anderson Road / Orlando, FL 32812 / 407-851-2560 / Fax: 407-856-0886
FL DEP CXAP # 870223G • FL DHRS DW # 83331, E83012 • NC DEM ENV # 327
NC DEHNR DW 12708 • SC DHEC # 96012 • VA DCLS DW # 00042

TESTAMERICA, INC.
I-85 S BLDG. 2848
CHARLOTTE, NC 28208

Attn: CHARLES CABANISS

Purchase Order: 1831
Invoice Number:

Order #: B8-10-645
Date: 11/02/98 17:05
Work ID: SCDHEC FID #12335
Date Received: 10/30/98
Date Completed: 11/02/98

Client Code: TAM_CHAR

SAMPLE IDENTIFICATION

| Sample Number | Sample Description | Sample Number | Sample Description |
|---|---|---|---|
| 01 | POST GAC | | |

Certified By
MARK RUSLER, CHEMIST

Order # B8-10-645
11/02/98 17:05

## TEST RESULTS BY SAMPLE

Sample Description: POST GAC
Test Description: PURGEABLE AROMATICS
Collected: 10/29/98 12:00

Lab No: 01A
Method: EPA 8260B Test Code: SC826W

| PARAMETER | RESULT | PQL | Q |
|---|---|---|---|
| Benzene<br>108-95-2 | BDL | 1 | U |
| Toluene<br>95-57-8 | BDL | 1 | U |
| Ethylbenzene<br>88-75-5 | BDL | 1 | U |
| Methyl tert-butyl ether (MTBE)<br>1634-04-4 | 2.8 | 1 | |
| Total Xylenes<br>105-67-9 | BDL | 1 | U |
| Naphthalene<br>91-20-3 | BDL | 5 | U |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| 4-BFB<br>367-12-4 | 84 | 60 - 150 |

Notes and Definitions for this Report:

DATE RUN 11/02/98
ANALYST CH
INSTRUMENT 5971A
DIL. FACTOR 1
UNITS ug/L
COLUMN DB624

# HYDROLOGIC, INC.

*Chain of Custody Record*

Page 1 of 1

☐ Asheville, NC (828) 254-5169 ☐ Norcross, GA (770) 368-0636 ☐ Charlotte, NC (704) 392-1164 ☐ Frankfort KY (502) 223-0251 ☐ Morrisville, NC (919) 380-9699
☐ Lumberton, NC (910) 738-6190 ☐ Lexington, SC (803) 796-8989 ☐ Brighton, CO (303) 659-0497 ☐ Macon, GA (912) 757-0811 ☐ Orlando, FL (407) 851-2560

Client: SC DHEC
Report Address: 2600 Bull St. Col., S.C. 29201
Attn: Jim T. Cooke
Phone No.: 803-734-5331
Fax No.: 803 734-3604

Project No.: FID No. 12335
Invoice Address: Asheville
Crawford's Groc.
Attn: Bob. Fallen
Sampled By: B. Fallen
P.O. No: 1831
State Samples Collected: S.C.

TURNAROUND TIME
☐ 24 Hours ☒ 48 Hours
☐ 5 Days ☐ 10 Days
Date Needed: 11/2 by 5:00pm

REQUESTED PARAMETERS

SC 8260 BTEX & MTBE & Naph

Rush TAT

LAB CODE I.D.
A = Asheville, NC
C = Charlotte, NC
D = Denver, CO
E = Lexington, SC
G = Macon, GA
K = Frankfort, KY
L = Lumberton, NC
M = Morrisville, NC
N = Norcross, GA
O = Orlando, FL
S = Subcontracted

| Sample ID | Date | Time | Comp/ Grab | Matrix | Containers | ← Preserv. | REMARKS |
|---|---|---|---|---|---|---|---|
| Post GAC | 10/29/98 | 1200 | G | GW | 2 | X | Notified Daryl on 10/29 @ 1530 |

Lab Use Only: Custody Seal ☐ Yes ☐ No ☐ N/A | Init Lab Temp | Rec. Lab Temp

COMMENTS: * Please FAX Results

| Relinquished By: | Date | Time | Received By: | Date | Time | Lab Use Only |
|---|---|---|---|---|---|---|
| Relinquished By: | | | Received By: | | | |
| Relinquished By: | | | Received By: | | | |
| Relinquished By: | | | Received By: | | | |

11/02/98 MON 17:09 FAX 4078567886 BIONOMICS LAB 004

ACA 1/98

RECEIVED
OCT 20 1998
DIVISION OF UNDERGROUND STORAGE TANK MGMT.

**UNDERGROUND STORAGE TANK AND PROPERTY OWNER**

PERMISSION FORM - FACILITY ID #12335

**If you are the owner of the former or existing underground storage tanks and the property owner, please complete this form.**

I, Harold Franklin Crawford, certify that I am the legal owner of the underground storage tanks and property located at the facility identified below or serve as the authorized representative for the owner. I grant permission to the South Carolina Department of Health and Environmental Control (SCDHEC) to secure on my behalf contractor services to conduct assessment and corrective action activities as required, and authorize SCDHEC, or a contractor selected by SCDHEC, to enter this property at reasonable times only to accomplish these site rehabilitation tasks. The contractor(s) will be designated as my contractor for only the required site rehabilitation activities. Compensation to the contractor(s) will be from the SUPERB Account and I will have no obligation to pay the contractor(s). I understand that SCDHEC will be responsible for notifying me of all activities that are necessary prior to their initiation and will promptly provide to me a copy of each environmental report. I understand that I may choose to select my own contractor at the completion of any phase of work by notifying the Division of Underground Storage Tank Management in writing.

Name of Facility Crawford County Store Inc Phone # 864-348-7442

Street Address of Facility 5870 Hwy 28 North

Town, City, District, Suburb Abbeville, SC 29620

Name of nearest intersecting street, road, highway, alley Hwy 184

Is this facility within the city limits? (yes or no) NO

Is this facility serviced by a public water or sewer utility? (yes or no) NO, if no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines FRANK CRAWFORD, phone number 864-446-2000

Were underground storage tanks previously removed from the ground at this facility? (yes or no) YES, if yes, please provide the name of a person we can contact that can assist in the location of the former underground storage tank excavation FRANK CRAWFORD, Phone number 864-446-2000

Is the property currently leased or rented to someone? (yes or no) NO, if yes, please provide their name _____ and phone number _____ and let them know about the pending assessment activities. If vehicles or other mobile structures are parked over the former or existing underground storage tanks, they should be moved before SCDHEC's contractor gets to the site.

NAME of UST/property owner (Please Print): HAROLD FRANKLIN CRAWFORD

Phone Number (home) 864-446-2000 (work) 864-348-7442

Signature of ~~UST~~/property Owner: Harold Franklin Crawford

Witness: [signature]

Date: 10-13-98 Month _____ Day _____ Year

South Carolina DHEC
Department of Health and Environmental Control

MW-2

# Water Well Record
## Ground Water Protection Division
2600 Bull Street, Columbia, SC 29201, (803) 734-5331

1. LOCATION OF WELL:
County: ABBEVILLE
System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location:
Sketch Map: N, Hwy 184, Hwy 28, CRAWFORDS STORE

RECEIVED
MAR 20 1998
Groundwater Management Section

2. CUTTING SAMPLES: ☒ Yes ☐ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth To Bottom of Stratum |
|---|---|---|
| CLAY, SANDY, BROWN WITH GRAY MOTTLING | 4 | 4 |
| BLK STREAKS, FINE DRY | | |
| AS ABOVE, MOIST | 4 | 8 |
| | | |
| CLAY, SANDY, REDDISH BROWN W/ GRAY | 4 | 12 |
| YELLOW MOTTLING CALLITEROCK FRAG | | |
| CLAY, SANDY, RED. BROWN W/YELLOW MOTTLING | 4 | 16 |
| MICACEOUS, FIRM, MOIST | | |
| CLAY, SANDY, RED. BROWN FINE GRAIN, MOIST | 4 | 20 |
| | | |
| CLAY, SANDY, RED. BROWN W/WHITE MOTTLING, FINE TO MED. LOOSE, SATURATED | 5 | 25 |
| | | |
| | | |

* Indicate Water Bearing Zones
(Use a 2nd sheet if needed)

3. REMARKS:

4. OWNER OF WELL: HAROLD CRAWFORD
Address: 5870 HWY 28 NORTH ABBEVILLE, S.C. 29620
Telephone No.:

Engineer: MARSHALL MILLER + ASSOCIATES
Address: P.O. BOX 848 BLUEFIELD, VA 24605-0848
Telephone No.: 540-322-5467

5. WELL DEPTH (completed) 25 ft. Date Started: 11-19-97 Date Completed: 11-19-97

6. ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug
☒ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply-Permit No. ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☒ Monitor Well ☐

8. CASING: ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
2 in. to 5 ft. depth
in. to ft. depth
Height: Above/Below Surface ft.
Weight lbs./ft.
Drive Shoe? ☐ Yes ☐ No

9. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 20'
Set Between: 5 ft. and 25 ft. NOTE: MULTIPLE SCREENS
ft. and ft. USE SECOND SHEET
Si Analysis ☐ Yes (please enclose) ☒ No

10. IC WATER LEVEL 17.43 ft. below TOC after 24 hours

11. PING LEVEL Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

12. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

13. ARTIFICIAL FILTER (gravel pack) ☐ Yes ☐ No
Installed from 3 ft. to 25 ft.
Effective size MEDIUM Uniformity Coefficient

14. WELL GROUTED? ☒ Yes ☐ No
Neat Cement ☒ S. ment ☐ Concrete ☐ Other ☐
Depth: From .75 ft. to 2 ft.

15. NEAREST SOURCE OSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☐ No Amount:

16. PUMP: Date installed: Not installed ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: AMERICAN ENVIRONMENTAL DRILLING SERVICES Date: 1-6-98
Address: P.O BOX 4195, PINEHURST, NC 28374
Signed: Michael C. Ransom Cert. No.: 1152
Authorized Representative

DHEC 1903 (7/93) COPY 1 MAIL TO: S. C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

South Carolina DHEC
Department of Health and Environmental Control

MW-3

# Water Well Record
## Ground Water Protection Division
2600 Bull Street, Columbia, SC 29201, (803) 734-5331

1. LOCATION OF WELL:
County: ABBEVILLE System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location:
Sketch Map: N, Hwy 184, Hwy 28, CRAWFORDS STORE

RECEIVED
MAR 20 1998
Groundwater Management Section

2. CUTTING SAMPLES: ☒ Yes ☐ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth To Bottom of Stratum |
|---|---|---|
| CLAY, SANDY, BROWN W/ GRAY MOTTLING | 4 | 4 |
| FINE, CONSOLIDATED DRY | | |
| AS ABOVE, MOIST | 4 | 8 |
| | | |
| CLAY, SANDY, RED. BROWN W/ GRAY YELLOW MOTTLING | 4 | 12 |
| FINE, LARGE CALCITE ROCK FRAGS, MOIST | | |
| CLAY, SANDY, RED, BROWN W/ YELLOW MOTTLING | 4 | 16 |
| FINE, MICACEOUS, MOIST | | |
| CLAY, SANDY, RED BROWN W/ YELLOW MOTTLING | 4 | 20 |
| MICACEOUS, FIRM, MOIST | | |
| CLAY, SANDY, RED BROWN W/ WHITE MOTTLING | 5 | 25 |
| SATURATED, FINE TO MEDIUM | | |
| | | |
| * Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

3. REMARKS:

4. OWNER OF WELL: HAROLD CRAWFORD
Address: 5870 HWY 28 NORTH ABBEVILLE, S.C. 29620
Telephone No.:
Engineer: MARSHALL MILLER + ASSOCIATES
Address: P.O. BOX 848 BLUEFIELD, VA 24605-0848
Telephone No.: 540-322-5467

5. WELL DEPTH (completed) 25 ft. Date Started: 11-19-97 Date Completed: 11-19-97

6. ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug
☒ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply-Permit No. ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☒ Monitor Well ☐

8. CASING: ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
2 in. to 5 ft. depth
in. to ft. depth
Height: Above/Below Surface ft.
Weight lbs./ft.
Drive Shoe? ☐ Yes ☐ No

9. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 20'
Set Between: 5 ft. and 25 ft. NOTE: MULTIPLE SCREENS
ft. and ft. USE SECOND SHEET
Si Analysis ☐ Yes (please enclose) ☒ No

10. IC WATER LEVEL
17.0 TOC ft. below land surface after 24 hours

11. PING LEVEL Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

12. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

13. ARTIFICIAL FILTER (gravel pack) ☐ Yes ☐ No
Installed from 3 ft. to 25 ft.
Effective size MEDIUM Uniformity Coefficient

14. WELL GROUTED? ☒ Yes ☐ No
Neat Cement ☒ S: ment ☐ Concrete ☐ Other ☐
Depth: From .75 ft. to 2 ft.

15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☐ No Amount

16. PUMP: Date installed: Not installed ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: AMERICAN ENVIRONMENTAL DRILLING SERVICES Date: 1-6-98
Address: P.O. BOX 4195, PINEHURST, NC 28374
Signed: Michael C. Ramaris Cert. No.: 1152
Authorized Representative

DHEC 1903 (7/93) COPY 1 MAIL TO: S. C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

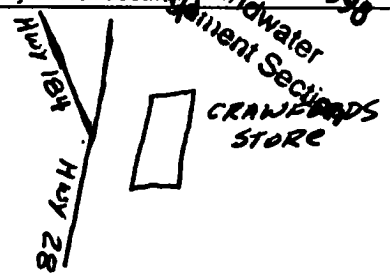
South Carolina DHEC
Department of Health and Environmental Control

MW-4

# Water We cord
## Ground Water Protection Division
2600 Bull Street, Columbia, SC 29201, (803) 734-5331

RECEIVED
MAR 20 1998
Groundwater Contamination Section

1. LOCATION OF WELL:
County: ABBEVILLE
System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location:
Sketch Map:




4. OWNER OF WELL: HAROLD CRAWFORD
Address: 5870 HWY 28 NORTH ABBEVILLE, S.C. 29620
Telephone No.:

Engineer: MARSHALL MILLER + ASSOCIATES
Address: P.O. BOX 848 BLUEFIELD, VA 24605-0848
Telephone No.: 540-322-5467

5. WELL DEPTH (completed) 25 ft. Date Started: 11-19-97 Date Completed: 11-19-97

6. ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug
☒ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply-Permit No. ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☒ Monitor Well ☐

8. CASING: ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
2 in. to 5 ft. depth
in. to ft. depth
Height: Above/Below Surface ft.
Weight lbs./ft.
Drive Shoe? ☐ Yes ☐ No

2. CUTTING SAMPLES: ☒ Yes ☐ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth To Bottom of Stratum |
|---|---|---|
| CLAY, RED, BROWN W/ SMALL CALCITE | 4 | 4 |
| ROCK FRAGMENTS FINE TO MED., MOIST | | |
| CLAY, RED, BROWN W/ WHITE MOTTLING | 4 | 8 |
| ROCK FRAGMENTS MED. TO LARGE | | |
| GRAIN, MOIST | | |
| SANDY CLAY, TAN W/ CALCITE ROCK FRAG. | 4 | 12 |
| LOOSE, MOIST | | |
| AS ABOVE | 4 | 16 |
| | | |
| CLAY, SANDY TAN WITH W/ MOTTLING | 4 | 20 |
| FINE TO MED., MOIST | | |
| CLAY, SANDY TAN FINE TO MED., | 5 | 25 |
| SATURATED. | | |
| * Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

9. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 20'
Set Between: 5 ft. and 25 ft. NOTE: MULTIPLE SCREENS
ft. and ft. USE SECOND SHEET
Si Analysis ☐ Yes (please enclose) ☒ No

10. IC WATER LEVEL 17.6 TOC ft. below ~~land surface~~ after 24 hours

11. PING LEVEL Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

12. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

13. ARTIFICIAL FILTER (gravel pack) ☐ Yes ☐ No
Installed from 3 ft. to 25 ft.
Effective size MEDIUM Uniformity Coefficient

14. WELL GROUTED? ☒ Yes ☐ No
Neat Cement ☒ S: ment ☐ Concrete ☐ Other ☐
Depth: From .75 ft. to 2 ft.

15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☐ No Amount:

16. PUMP: Date installed: Not installed ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

3. REMARKS:

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: AMERICAN ENVIRONMENTAL DRILLING SERVICES Date: 1-6-98
Address: P.O. BOX 4195, PINEHURST, NC 28374
Signed: Michael C. Ranson Cert. No.: 1152
Authorized Representative

DHEC 1903 (7/93) COPY 1 MAIL TO: S. C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

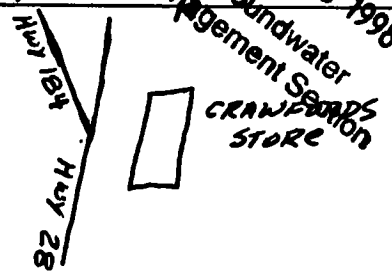
South Carolina DHEC
Department of Health and Environmental Control

...W-5

# Water We ...cord
## Ground Water Pro...ction Division
2600 Bull Street, Columbia, SC 29201, (803) 734-5331

RECEIVED
MAR 20 1998
Groundwater Management Section

1. LOCATION OF WELL:
County: ABBEVILLE
System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location:
Sketch Map:




4. OWNER OF WELL: HAROLD CRAWFORD
Address: 5870 HWY 28 NORTH
ABBEVILLE, S.C. 29620
Telephone No.:

Engineer: MARSHALL MILLER + ASSOCIATES
Address: P.O. BOX 848
BLUEFIELD, VA 24605-0848
Telephone No.: 540-322-5467

5. WELL DEPTH (completed) 25 ft. Date Started: 11-19-97
Date Completed: 11-19-97

6. ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug
☒ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply-Permit No. ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☒ Monitor Well ☐

8. CASING: ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
2 in. to 5 ft. depth
in. to ft. depth
Height: Above/Below Surface ft.
Weight lbs./ft.
Drive Shoe? ☐ Yes ☐ No

2. CUTTING SAMPLES: ☒ Yes ☐ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth To Bottom of Stratum |
|---|---|---|
| CLAY, SANDY, BROWN W/ GRAY MOTTLING | 4 | 4 |
| BLK, STREAKING, FINE FIRM, DRY | | |
| AS ABOVE, MOIST | 4 | 8 |
| | | |
| CLAY, SANDY, REDDISH BROWN W/ GRAY | 4 | 12 |
| YELLOW MOTTLING, FINE LARGE CALCITE ROCK FRAG MOIST, FIRM | | |
| CLAY, SANDY, RED. BROWN W/YELLOW MOTTLING, | 4 | 16 |
| FINE, MICACEOUS, FIRM MOIST | | |
| CLAY, SANDY, RED. BROWN FINE, MICACEOUS, SOFT MOIST | 4 | 20 |
| | | |
| CLAY, SANDY, REDDISH BROWN W/ WHITE MOTTLING, FINE TO MED. GRAIN, LOOSE, SATURATED | 5 | 25 |
| * Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

9. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 20'
Set Between: 5 ft. and 25 ft. NOTE: MULTIPLE SCREENS
ft. and ft. USE SECOND SHEET
Si Analysis ☐ Yes (please enclose) ☒ No

10. IC WATER LEVEL 15.64 TOC ft. below land surface after 24 hours

11. PING LEVEL Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

12. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

13. ARTIFICIAL FILTER (gravel pack) ☐ Yes ☐ No
Installed from 3 ft. to 25 ft.
Effective size MEDIUM Uniformity Coefficient

14. WELL GROUTED? ☒ Yes ☐ No
Neat Cement ☒ S: ment ☐ Concrete ☐ Other ☐
Depth: From .75 ft. to 2 ft.

15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type Well disinfected ☐ Yes Type:
upon completion ☐ No Amount:

16. PUMP: Date installed: Not installed ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

3. REMARKS:

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: AMERICAN ENVIRONMENTAL DRILLING SERVICES Date: 1-6-98
Address: P.O. BOX 4195, PINEHURST, NC 28374
Signed: Michael C. Ransier Cert. No.: 1152
Authorized Representative

DHEC 1903 (7/93) COPY 1 MAIL TO: S. C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

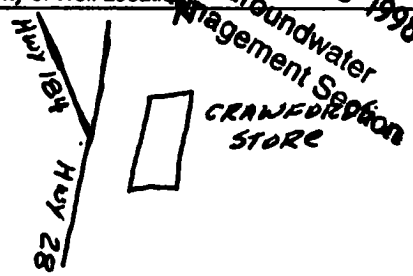
South Carolina DHEC
Department of Health and Environmental Control

1-W-6

# Water Well Record
## Ground Water Protection Division
2600 Bull Street, Columbia, SC 29201, (803) 734-5331

RECEIVED
MAR 20 1998
Groundwater Management Section

1. LOCATION OF WELL:
County: ABBEVILLE
System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location:
Sketch Map:




4. OWNER OF WELL: HAROLD CRAWFORD
Address: 5870 HWY 28 NORTH ABBEVILLE, S.C. 29620
Telephone No.:

Engineer: MARSHALL MILLER + ASSOCIATES
Address: P.O. BOX 848 BLUEFIELD, VA 24605-0848
Telephone No.: 540-322-5467

5. WELL DEPTH (completed) 25 ft. Date Started: 11-19-97 Date Completed: 11-19-97

6. ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug
☒ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply-Permit No. ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☒ Monitor Well ☐

8. CASING: ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
2 in. to 5 ft. depth
in. to ft. depth
Height: Above/Below Surface ft.
Weight lbs./ft.
Drive Shoe? ☐ Yes ☐ No

2. CUTTING SAMPLES: ☒ Yes ☐ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth To Bottom of Stratum |
|---|---|---|
| CLAY, SANDY, BROWN W/ GRAY MOTTLING | 4 | 4 |
| BLK STREAKING, FIRM, DRY | | |
| AS ABOVE, MOIST | 4 | 8 |
| | | |
| CLAY, SANDY, RED. BROWN W/ GRAY-YELLOW MOTTLING | 4 | 12 |
| FINE, CALLITE ROCK FRAGMENTS, FIRM, MOIST | | |
| CLAY, SANDY, REDDISH BROWN W/ YELLOW MOTTLING, FINE GRAIN, FIRM, MOIST | 4 | 16 |
| SANDY, CLAY, FINE TO MED. GRAIN, REDDISH BROWN, MOIST | 4 | 20 |
| AS ABOVE, SATURATED | 5 | 25 |
| | | |
| | | |

* Indicate Water Bearing Zones
(Use a 2nd sheet if needed)

9. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 20'
Set Between: 5 ft. and 25 ft. NOTE: MULTIPLE SCREENS
ft. and ft. USE SECOND SHEET
Si Analysis ☐ Yes (please enclose) ☒ No

10. IC WATER LEVEL 14.37 TOC ft. below land surface after 24 hours

11. PING LEVEL Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

12. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

13. ARTIFICIAL FILTER (gravel pack) ☐ Yes ☐ No
Installed from 3 ft. to 25 ft.
Effective size MEDIUM Uniformity Coefficient

14. WELL GROUTED? ☒ Yes ☐ No
Neat Cement ☒ S: ment ☐ Concrete ☐ Other ☐
Depth: From .75 ft. to 2 ft.

15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☐ No Amount:

16. PUMP: Date installed: Not installed ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

3. REMARKS:

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: AMERICAN ENVIRONMENTAL DRILLING SERVICES Date: 1-6-98
Address: P.O. BOX 4195, PINEHURST, NC 28374
Signed: Michael C. Ransier Cert. No.: 1152
Authorized Representative

DHEC 1903 (7/93) COPY 1 MAIL TO: S. C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

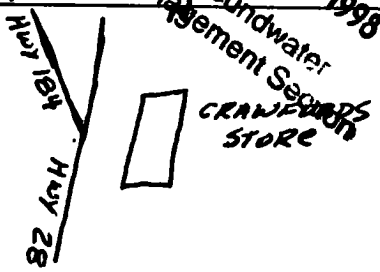
South Carolina DHEC
Department of Health and Environmental Control

MW-7

# Water Well Record
## Ground Water Protection Division
2600 Bull Street, Columbia, SC 29201, (803) 734-5331

RECEIVED
MAR 20 1998
Groundwater Management Section

1. LOCATION OF WELL:
County: ABBEVILLE
System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location:
Sketch Map:




4. OWNER OF WELL: HAROLD CRAWFORD
Address: 5870 HWY 28 NORTH
ABBEVILLE, S.C. 29620
Telephone No.:

Engineer: MARSHALL MILLER + ASSOCIATES
Address: P.O. BOX 848
BLUEFIELD, VA 24605-0848
Telephone No.: 540-322-5467

WELL DEPTH (completed) 25 ft. Date Started: 11-19-97
Date Completed: 11-19-97

6. ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug
☒ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply-Permit No. ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☒ Monitor Well ☐

8. CASING: ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
2 in. to 5 ft. depth
in. to ft. depth
Height: Above/Below Surface ft.
Weight lbs./ft.
Drive Shoe? ☐ Yes ☐ No

2. CUTTING SAMPLES: ☒ Yes ☐ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth To Bottom of Stratum |
|---|---|---|
| CLAY, RED. BROWN W/ SMALL CALCITE ROCK FRAGMENTS | 4 | 4 |
| FINE TO MED. GRAIN FIRM, MOIST | | |
| CLAY, SANDY, REDDISH BROWN W/ GRAY MOT- | 4 | 8 |
| TLING, BIOTITE, FINE GRAIN FIRM, MOIST | | |
| CLAY, SANDY, REDDISH | 4 | 12 |
| BROWN W/ GRAY MOT- | | |
| TLING, FIRM, MOIST | | |
| SANDY, CLAY, TAN W/ | 4 | 16 |
| CALCITE ROCK FRAG- | | |
| MENTS, LARGE GRAIN | | |
| LOOSE, MOIST | | |
| CLAY, SANDY TAN W/ | 4 | 20 |
| CALCITE, MEDIUM | | |
| GRAIN, MOIST | | |
| AS ABOVE, SATURATED | 5 | 25 |
| | | |

* Indicate Water Bearing Zones
(Use a 2nd sheet if needed)

9. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 20'
Set Between: 5 ft. and 25 ft. NOTE: MULTIPLE SCREENS
ft. and ft. USE SECOND SHEET
Si Analysis ☐ Yes (please enclose) ☒ No

10. IC WATER LEVEL 13.96 TOC ft. below ~~land surface~~ after 24 hours

11. PING LEVEL Below Land Surface.
ft. after hrs Pumping G.P.M.
Pumping Test: ☐ ~~Yes (please enclose)~~ ☐ No
Yield:

12. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

13. ARTIFICIAL FILTER (gravel pack) ☐ Yes ☐ No
Installed from 3 ft. to 25 ft.
Effective size MEDIUM Uniformity Coefficient

14. WELL GROUTED? ☒ Yes ☐ No
Neat Cement ☒ S: ment ☐ Concrete ☐ Other ☐
Depth: From .75 ft. to 2 ft.

15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well ~~disinfected~~ ☐ Yes Type:
upon completion ☐ No Amount:

16. ~~PUMP~~: Date installed: ~~Not installed~~ ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

3. REMARKS:

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: AMERICAN ENVIRONMENTAL DRILLING SERVICES Date: 1-6-98
Address: P.O. BOX 4195, PINEHURST, NC 28374
Signed: Michael C. Ransier Cert. No.: 1152
Authorized Representative

DHEC 1903 (7/93) COPY 1 MAIL TO: S. C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

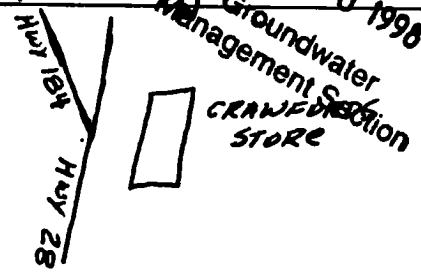
South Carolina DHEC
Department of Health and Environmental Control

1W-8

# Water Well Record
## Ground Water Protection Division
2600 Bull Street, Columbia, SC 29201, (803) 734-5331

RECEIVED
MAR 20 1998
Groundwater Management Section

1. LOCATION OF WELL:
County: ABBEVILLE
System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location:
Sketch Map:




4. OWNER OF WELL: HAROLD CRAWFORD
Address: 5870 HWY 28 NORTH ABBEVILLE, S.C. 29620
Telephone No.:

Engineer: MARSHALL MILLER + ASSOCIATES
Address: P.O. BOX 848 BLUEFIELD, VA 24605-0848
Telephone No.: 540-322-5467

5. WELL DEPTH (completed) 25 ft. Date Started: 11-19-97 Date Completed: 11-19-97

6. ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug
☒ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply-Permit No. ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☒ Monitor Well ☐

8. CASING: ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
2 in. to 5 ft. depth
in. to ft. depth
Height: Above/Below Surface ft.
Weight lbs./ft.
Drive Shoe? ☐ Yes ☐ No

2. CUTTING SAMPLES: ☒ Yes ☐ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth To Bottom of Stratum |
|---|---|---|
| CLAY, SANDY, BROWN W/ GRAY MOTTLING, BLK | 4 | 4 |
| STREAKING, FINE GRAIN FIRM, DRY | | |
| AS ABOVE, MOIST | 4 | 8 |
| | | |
| CLAY, SANDY, REDDISH BROWN W/ GRAY YELLOW | 4 | 12 |
| MOTTLING, CALCITE FRAG., FIRM, MOIST | | |
| CLAY, SANDY, REDDISH | 4 | 16 |
| BROWN W/ YELLOW MOTTLING, FINE, MICACEOUS | | |
| FIRM, MOIST | | |
| AS ABOVE, SOFT | 4 | 20 |
| | | |
| SANDY CLAY, REDDISH BROWN, FINE TO MED. | 5 | 25 |
| SOFT, SATURATED | | |

* Indicate Water Bearing Zones
(Use a 2nd sheet if needed)

9. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 20'
Set Between: 5 ft. and 25 ft. NOTE: MULTIPLE SCREENS
ft. and ft. USE SECOND SHEET
Si Analysis ☐ Yes (please enclose) ☒ No

10. IC WATER LEVEL 12.53 TOC ft. below ~~land surface~~ after 24 hours

11. PING LEVEL Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

12. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

13. ARTIFICIAL FILTER (gravel pack) ☐ Yes ☐ No
Installed from 3 ft. to 25 ft.
Effective size MEDIUM Uniformity Coefficient

14. WELL GROUTED? ☒ Yes ☐ No
Neat Cement ☒ S: ment ☐ Concrete ☐ Other ☐
Depth: From .75 ft. to 2 ft.

15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☐ No Amount:

16. PUMP: Date installed: Not installed ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

3. REMARKS:

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: AMERICAN ENVIRONMENTAL DRILLING SERVICES Date: 1-6-98
Address: P.O. BOX 4195, PINEHURST, NC 28374
Signed: Michael C. Ramsier Cert. No.: 1152
Authorized Representative

DHEC 1903 (7/93) COPY 1 MAIL TO: S. C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

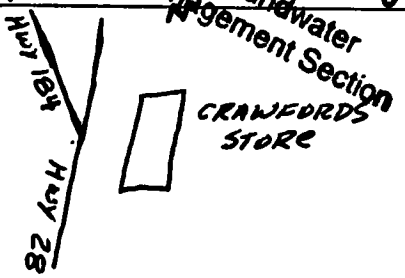
South Carolina DHEC
Department of Health and Environmental Control

MW-9

# Water Well Record
## Ground Water Protection Division
2600 Bull Street, Columbia, SC 29201, (803) 734-5331

RECEIVED
MAR 20 1998
Groundwater Management Section

1. LOCATION OF WELL:
County: ABBEVILLE
System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location:
Sketch Map:




4. OWNER OF WELL: HAROLD CRAWFORD
Address: 5870 HWY 28 NORTH
ABBEVILLE, S.C. 29620
Telephone No.:

Engineer: MARSHALL MILLER + ASSOCIATES
Address: P.O. BOX 848
BLUEFIELD, VA 24605-0848
Telephone No.: 540-322-5467

5. WELL DEPTH (completed) 25 ft. Date Started: 11-20-97 Date Completed: 11-20-97

6. ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug
☒ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply-Permit No. ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☒ Monitor Well ☐

8. CASING: ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
2 in. to 5 ft. depth
in. to ft. depth
Height: Above/Below Surface ft.
Weight lbs./ft.
Drive Shoe? ☐ Yes ☐ No

2. CUTTING SAMPLES: ☒ Yes ☐ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth To Bottom of Stratum |
|---|---|---|
| CLAY, SANDY, BROWN W/GRAY MOTTLING, BLACK STREAKS, FINE GRAIN, FIRM, ~~MOIST~~ DRY | 4 | 4 |
| AS ABOVE, MOIST | 4 | 8 |
| | | |
| CLAY, SANDY, REDDISH BROWN W/GRAY YELLOW MOTTLING, FINE GRAIN LARGE CALCITE ROCK FRAGS FIRM, MOIST | 4 | 12 |
| CLAY, SANDY, REDDISH BROWN W/ YELLOW MOTTLING FINE, MICACEOUS, FIRM, MOIST | 4 | 16 |
| SANDY, CLAY, RED BROWN FINE TO MED GRAIN MOIST, MICACEOUS | 4 | 20 |
| CLAY, SANDY, RED BROWN MICACEOUS, MEDIUM SATURATED | 5 | 25 |
| | | |

* Indicate Water Bearing Zones
(Use a 2nd sheet if needed)

9. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 20'
Set Between: 5 ft. and 25 ft. NOTE: MULTIPLE SCREENS
ft. and ft. USE SECOND SHEET
Si Analysis ☐ Yes (please enclose) ☒ No

10. IC WATER LEVEL 12.53 ft. below ~~land surface~~ TOC after 24 hours

11. PING LEVEL Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ ~~Yes (please enclose)~~ ☐ No
Yield:

12. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

13. ARTIFICIAL FILTER (gravel pack) ☐ Yes ☐ No
Installed from 3 ft. to 25 ft.
Effective size MEDIUM Uniformity Coefficient

14. WELL GROUTED? ☒ Yes ☐ No
Neat Cement ☒ S: ment ☐ Concrete ☐ Other ☐
Depth: From 75 ft. to 2 ft.

15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☐ No Amount

16. PUMP: Date installed: ~~Not installed ☐~~
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

3. REMARKS:

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Registered Business Name: AMERICAN ENVIRONMENTAL DRILLING SERVICES Date: 1-6-98
Address: P.O. BOX 4195, PINEHURST, NC 28374
Signed: Michael C. Ramsier Cert. No.: 1152
Authorized Representative

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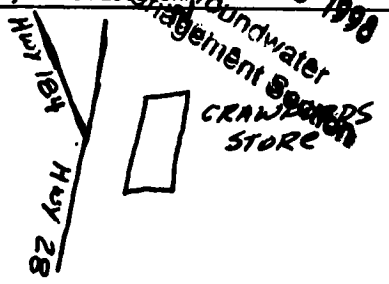
South Carolina DHEC
Department of Health and Environmental Control

M...-10

# Water Well Record
## Ground Water Protection Division
2600 Bull Street, Columbia, SC 29201, (803) 734-5331

RECEIVED
MAR 20 1998
Groundwater Management Section

1. LOCATION OF WELL:
County: ABBEVILLE
System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location:
Sketch Map:




4. OWNER OF WELL: HAROLD CRAWFORD
Address: 5870 HWY 28 NORTH
ABBEVILLE, S.C. 29620
Telephone No.:

Engineer: MARSHALL MILLER + ASSOCIATES
Address: P.O. BOX 848
BLUEFIELD, VA 24605-0848
Telephone No.: 540-322-5467

5. WELL DEPTH (completed) 25 ft. Date Started: 11-20-97
Date Completed: 11-20-97

6. ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug
☒ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply-Permit No. ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☒ Monitor Well ☐

8. CASING: ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
2 in. to 5 ft. depth
in. to ft. depth
Height: Above/Below Surface ft.
Weight lbs./ft.
Drive Shoe? ☐ Yes ☐ No

2. CUTTING SAMPLES: ☒ Yes ☐ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth To Bottom of Stratum |
|---|---|---|
| SANDY CLAY, FINE GRAIN RED BROWN W/ GRAY STREAKING, DRY | 4 | 4 |
| AS ABOVE, MOIST | 4 | 8 |
| SANDY CLAY, RED BROWN WITH GRAY STREAKING MEDIUM GRAIN, MOIST | 4 | 12 |
| CLAY, SANDY, RED BROWN WITH GRAY-YELLOW MOTTLING, MED. GRAIN MOIST | 4 | 16 |
| SANDY, CLAY, RED BROWN FINE TO MED. GRAIN MICACEOUS, MOIST | 4 | 20 |
| SANDY, CLAY, RED BROWN, MEDIUM GRAIN, MICACEOUS SATURATED | 5 | 25 |
| | | |
| * Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

9. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 20'
Set Between: 5 ft. and 25 ft. NOTE: MULTIPLE SCREENS
ft. and ft. USE SECOND SHEET
Si Analysis ☐ Yes (please enclose) ☒ No

10. IC WATER LEVEL 17.4 TOC ft. below ~~land surface~~ after 24 hours

11. PING LEVEL Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ ~~Yes (please enclose)~~ ☐ No
Yield:

12. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

13. ARTIFICIAL FILTER (gravel pack) ☐ Yes ☐ No
Installed from 3 ft. to 25 ft.
Effective size MEDIUM Uniformity Coefficient

14. WELL GROUTED? ☒ Yes ☐ No
Neat Cement ☒ S: ment ☐ Concrete ☐ Other ☐
Depth: From .75 ft. to 2 ft.

15. NEAREST SOURCE POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☐ No Amount:

16. PUMP: Date installed: Not installed ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

3. REMARKS:

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: AMERICAN ENVIRONMENTAL DRILLING SERVICES Date: 1-6-98
Address: P.O. BOX 4195, PINEHURST, NC 28374
Signed: Michael C. Ransies Cert. No.: 1152
Authorized Representative

DHEC 1903 (7/93) COPY 1 MAIL TO: S. C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

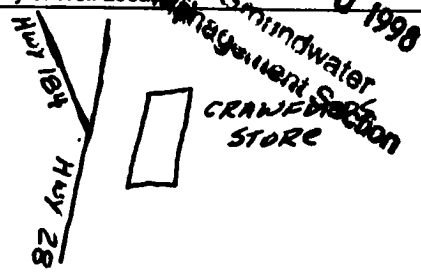
South Carolina DHEC
Department of Health and Environmental Control

MW-11

# Water Well Record
## Ground Water Protection Division
2600 Bull Street, Columbia, SC 29201, (803) 734-5331

RECEIVED
MAR 20 1998
Groundwater Management Section

1. LOCATION OF WELL:
County: ABBEVILLE
System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location: Groundwater Management Section
Sketch Map:




4. OWNER OF WELL: HAROLD CRAWFORD
Address: 5870 HWY 28 NORTH
ABBEVILLE, S.C. 29620
Telephone No.:

Engineer: MARSHALL MILLER + ASSOCIATES
Address: P.O. BOX 848
BLUEFIELD, VA 24605-0848
Telephone No.: 540-322-5467

5. WELL DEPTH (completed) 25 ft. Date Started: 11-20-97
Date Completed: 11-20-97

6. ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug
☒ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply-Permit No. ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☒ Monitor Well ☐

8. CASING: ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
2 in. to 5 ft. depth
in. to ft. depth
Height: Above/Below Surface ft.
Weight lbs./ft.
Drive Shoe? ☐ Yes ☐ No

2. CUTTING SAMPLES: ☒ Yes ☐ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth To Bottom of Stratum |
|---|---|---|
| CLAY, SANDY, BROWN W/GRAY MOTTLING, BLACK STREAKS FINE, FIRM, DRY | 4 | 4 |
| AS ABOVE, MOIST | 4 | 8 |
| | | |
| CLAY, SANDY, RED BROWN W/ GRAY/YELLOW MOTTLING, FINE GRAIN, LARGE CALCITE ROCK FRAGMENTS, FIRM, MOIST | 4 | 12 |
| CLAY, SANDY, RED BROWN W/ YELLOW MOTTLING | 4 | 16 |
| FINE GRAIN, MICACEOUS FIRM, MOIST | | |
| CLAY, SANDY, RED BROWN FINE GRAIN, MICACEOUS SOFT, MOIST | 4 | 20 |
| CLAY, SANDY, RED BROWN, MED. GRAIN, MICACEOUS SOFT, MOIST | 5 | 25 |
| | | |
| | | |

* Indicate Water Bearing Zones
(Use a 2nd sheet if needed)

3. REMARKS:

9. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 20'
Set Between: 5 ft. and 25 ft. NOTE: MULTIPLE SCREENS
ft. and ft. USE SECOND SHEET
Si Analysis ☐ Yes (please enclose) ☒ No

10. IC WATER LEVEL 15.74 ft. below TOC after 24 hours

11. PING LEVEL Below Land Surface.
ft. after hrs Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

12. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

13. ARTIFICIAL FILTER (gravel pack) ☐ Yes ☐ No
Installed from 3 ft. to 25 ft.
Effective size MEDIUM Uniformity Coefficient

14. WELL GROUTED? ☒ Yes ☐ No
Neat Cement ☒ S: ment ☐ Concrete ☐ Other ☐
Depth: From .75 ft. to 2 ft.

15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected upon completion ☐ Yes ☐ No Type: Amount:

16. PUMP: Date installed: Not installed ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: AMERICAN ENVIRONMENTAL DRILLING SERVICES Date: 1-6-98
Address: P.O. BOX 4195, PINEHURST, NC 28374
Signed: Michael C. Ransier Cert. No.: 1152
Authorized Representative

DHEC 1903 (7/93) COPY 1 MAIL TO: S. C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

South Carolina DHEC
Department of Health and Environmental Control

1.W-12

# Water Well Record
## Ground Water Protection Division
2600 Bull Street, Columbia, SC 29201, (803) 734-5331

**1. LOCATION OF WELL:**

County: ABBEVILLE

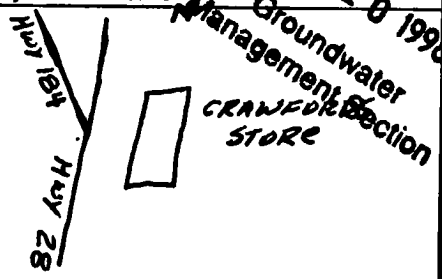
System Name:

Latitude: Longitude:

Distance and Direction from Road Intersections:

Street Address & City of Well Location:

Sketch Map:




RECEIVED
MAR 20 1998
Groundwater Management Section

**4. OWNER OF WELL:** HAROLD CRAWFORD
Address: 5870 HWY 28 NORTH
ABBEVILLE, S.C. 29620
Telephone No.:

Engineer: MARSHALL MILLER + ASSOCIATES
Address: P.O. BOX 848
BLUEFIELD, VA 24605-0848
Telephone No.: 540-322-5467

**5.** WELL DEPTH (completed) 25 ft. Date Started: 11-20-97 Date Completed: 11-20-97

**6.** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug
☒ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. USE:**
☐ Domestic ☐ Public Supply-Permit No. ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☒ Monitor Well ☐

**8. CASING:** ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
2 in. to 5 ft. depth
in. to ft. depth
Height: Above/Below Surface ft.
Weight lbs./ft.
Drive Shoe? ☐ Yes ☐ No

**2. CUTTING SAMPLES:** ☒ Yes ☐ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth To Bottom of Stratum |
|---|---|---|
| CLAY, RED BROWN W/ SMALL CALCITE ROCK FRAGMENTS, | 4 | 4 |
| FINE TO MED. GRAIN FIRM, DRY | | |
| AS ABOVE, MOIST | 4 | 8 |
| TAN | | |
| SANDY CLAY, W/ CALCITE ROCK FRAGMENTS, LARGE | 4 | 12 |
| GRAIN, LOOSE PACK, MOIST | | |
| SANDY CLAY, TAN, W/ CALCITE ROCK FRAG- | 4 | 16 |
| MENTS, LARGE GRAIN LOOSE PACK, MOIST | | |
| | | |
| SANDY CLAY, TAN, W/ CALCITE ROCK FRAG- | 4 | 20 |
| MENTS, MED. TO LARGE GRAIN, MOIST | | |
| SANDY, CLAY, TAN, W/ CALCITE ROCK FRAGMENTS | 4 | 24 |
| MEDIUM GRAIN, SATURATED | | |
| * Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**9. SCREEN:**
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 20'
Set Between: 5 ft. and 25 ft. NOTE: MULTIPLE SCREENS
ft. and ft. USE SECOND SHEET
Si Analysis ☐ Yes (please enclose) ☒ No

**10.** IC WATER LEVEL 17.03 ft. below ~~land surface~~ TOC after 24 hours

**11.** PING LEVEL Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ ~~Yes (please enclose)~~ ☐ No
Yield:

**12. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**13. ARTIFICIAL FILTER** (gravel pack) ☐ Yes ☐ No
Installed from 3 ft. to 25 ft.
Effective size MEDIUM Uniformity Coefficient

**14. WELL GROUTED?** ☒ Yes ☐ No
Neat Cement ☒ S: ment ☐ Concrete ☐ Other ☐
Depth: From .75 ft. to 2 ft.

**15.** NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☐ No Amount:

**16. PUMP:** Date installed: ~~Not installed~~ ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**3. REMARKS:**

**17. WATER WELL CONTRACTOR'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: AMERICAN ENVIRONMENTAL DRILLING SERVICES Date: 1-6-98
Address: P.O. BOX 4195, PINEHURST, NC 28374
Signed: Michael C. Ransier Cert. No.: 1152
Authorized Representative

DHEC 1903 (7/93) COPY 1 MAIL TO: S. C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

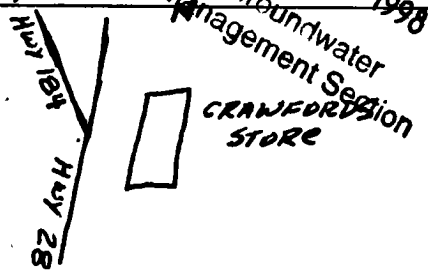
South Carolina DHEC
Department of Health and Environmental Control

, 1-13

# Water Well Record
## Ground Water Protection Division
2600 Bull Street, Columbia, SC 29201, (803) 734-5331

RECEIVED
MAR 20 1998
Groundwater Management Section

1. LOCATION OF WELL:
County: ABBEVILLE
System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location:
Sketch Map:




4. OWNER OF WELL: HAROLD CRAWFORD
Address: 5870 HWY 28 NORTH
ABBEVILLE, S.C. 29620
Telephone No.:

Engineer: MARSHALL MILLER + ASSOCIATES
Address: P.O. BOX 848
BLUEFIELD, VA 24605-0848
Telephone No.: 540-322-5467

5. WELL DEPTH (completed) 25 ft. Date Started: 11-20-97
Date Completed: 11-20-97

6. ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug
☒ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply-Permit No. ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☒ Monitor Well ☐

8. CASING: ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
2 in. to 5 ft. depth
in. to ft. depth
Height: Above/Below Surface ft.
Weight lbs./ft.
Drive Shoe? ☐ Yes ☐ No

2. CUTTING SAMPLES: ☒ Yes ☐ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth To Bottom of Stratum |
|---|---|---|
| CLAY, SANDY, BROWN W/ GRAY MOTTLING, BLACK STREAKING, FINE GRAIN FIRM, DRY | 4 | 4 |
| AS ABOVE, MOIST | 4 | 8 |
| | | |
| CLAY, SANDY, RED BROWN W/ GRAY/YELLOW MOTTLING | 4 | 12 |
| FINE GRAIN, LARGE CALCITE ROCK FRAGMENTS, FIRM, MOIST | | |
| CLAY, SANDY, RED BROWN W/ YELLOW MOTTLING | 4 | 16 |
| FINE GRAIN, MICACEOUS FIRM, MOIST | | |
| CLAY, SANDY, RED BROWN FINE GRAIN, MICACEOUS SOFT, MOIST | 4 | 20 |
| CLAY, SANDY, REDDISH BROWN W/ WHITE MOTTLING, LOOSE, MOIST | 5 | 25 |
| | | |
| | | |
| * Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

9. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 20'
Set Between: 5 ft. and 25 ft. NOTE: MULTIPLE SCREENS
ft. and ft. USE SECOND SHEET
Si Analysis ☐ Yes (please enclose) ☒ No

10. IC WATER LEVEL 21.05 ft. below ~~land surface~~ TOC after 24 hours

11. PING LEVEL Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ ~~Yes (please enclose)~~ ☐ No
~~Yield:~~

12. ~~WATER QUALITY~~
Chemical Analysis ☐ Yes ☐ No ~~Bacterial Analysis~~ ☐ Yes ☐ No
~~Please enclose lab results.~~

13. ARTIFICIAL FILTER (gravel pack) ☐ Yes ☐ No
Installed from 3 ft. to 25 ft.
Effective size MEDIUM Uniformity Coefficient

14. WELL GROUTED? ☒ Yes ☐ No
Neat Cement ☒ S: ment ☐ Concrete ☐ Other ☐
Depth: From .75 ft. to 2 ft.

15. ~~NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction~~
~~Type well disinfected~~ ☐ Yes Type:
~~upon completion~~ ☐ No Amount:

16. ~~PUMP~~: Date installed: ~~Not installed~~ ☐
Mfr. Name: Model No.:
H.P. Volts ~~Length of drop pipe~~ ft. Capacity gpm
TYPE: ☐ ~~Submersible~~ ☐ Jet (shallow) ☐ ~~Turbine~~
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

3. REMARKS:

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: AMERICAN ENVIRONMENTAL DRILLING SERVICES Date: 1-6-98
Address: P.O. BOX 4195, PINEHURST, NC 28374
Signed: Michael C. Ramsey Cert. No.: 1152
Authorized Representative

DHEC 1903 (7/93) COPY 1 MAIL TO: S. C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

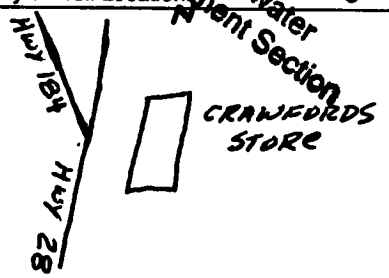
South Carolina DHEC
Department of Health and Environmental Control

...)-14

# Water Wel cord
## Ground Water Pro tion Division
2600 Bull Street, Columbia, SC 29201, (803) 734-5331

RECEIVED
MAR 20 1998
Groundwater Management Section

1. LOCATION OF WELL:
County: ABBEVILLE
System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location:
Sketch Map:




4. OWNER OF WELL: HAROLD CRAWFORD
Address: 5870 HWY 28 NORTH ABBEVILLE, S.C. 29620
Telephone No.:

Engineer: MARSHALL MILLER + ASSOCIATES
Address: P.O. BOX 848 BLUEFIELD, VA 24605-0848
Telephone No.: 540-322-5467

5. WELL DEPTH (completed) 25 ft. Date Started: 11-20-97 Date Completed: 11-20-97

6. ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug
☒ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply-Permit No. ____ ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☒ Monitor Well ☐ ____

8. CASING: ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
2 in. to 5 ft. depth
____ in. to ____ ft. depth
Height: Above/Below Surface ____ ft.
Weight ____ lbs./ft.
Drive Shoe? ☐ Yes ☐ No

2. CUTTING SAMPLES: ☒ Yes ☐ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth To Bottom of Stratum |
|---|---|---|
| CLAY, SANDY, BROWN W/ SMALL ROCK FRAGMENTS, FINE GRAIN, FIRM, MOIST | 4 | 4 |
| CLAY, SANDY, BROWN W/ LARGE CALCITE ROCK FRAGMENTS, MICACEOUS FINE GRAIN, FIRM, MOIST | 4 | 8 |
| CLAY, SANDY, BROWN W/ LARGE CALCITE ROCK FRAGMENTS, GRAY MOTTLING FINE GRAIN, FIRM, MOIST | 4 | 12 |
| CLAY, SANDY, BROWN W/ LARGE CALCITE ROCK FRAGMENTS, GRAY MOTTLING MED TO LARGE GRAIN, FIRM, MOIST | 4 | 16 |
| CLAY, SANDY, BROWN W/ CALCITE FINE TO MED, GRAIN, FIRM, MOIST | 4 | 20 |
| CLAY, SANDY, BROWN W/ CALCITE ROCK FRAGMENTS, MEDIUM, FIRM, MOIST | 5 | 25 |
| * Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

3. REMARKS:

9. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 20'
Set Between: 5 ft. and 25 ft. NOTE: MULTIPLE SCREENS
____ ft. and ____ ft. USE SECOND SHEET
Si Analysis ☐ Yes (please enclose) ☒ No

10. IC WATER LEVEL 7.27 TOC ft. below ~~land surface~~ after 24 hours

11. PING LEVEL Below Land Surface.
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

12. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

13. ARTIFICIAL FILTER (gravel pack) ☐ Yes ☐ No
Installed from 3 ft. to 25 ft.
Effective size MEDIUM Uniformity Coefficient ____

14. WELL GROUTED? ☒ Yes ☐ No
Neat Cement ☒ S: ment ☐ Concrete ☐ Other ☐ ____
Depth: From .75 ft. to 2 ft.

15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ____ ft. ____ direction
____ Type well disinfected ☐ Yes Type: ____
upon completion ☐ No Amount: ____

16. PUMP: Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: AMERICAN ENVIRONMENTAL DRILLING SERVICES Date: 1-6-98
Address: P.O. BOX 4195, PINEHURST, NC 28374
Signed: Michael C. Ransier Cert. No.: 1152
Authorized Representative

DHEC 1903 (7/93) COPY 1 MAIL TO: S. C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

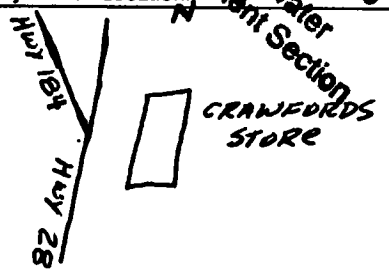
South Carolina DHEC
Department of Health and Environmental Control

1.0-15

# Water Well Record
## Ground Water Protection Division
2600 Bull Street, Columbia, SC 29201, (803) 734-5331

RECEIVED
MAR 20 1998
Groundwater Management Section

1. LOCATION OF WELL:
County: ABBEVILLE
System Name:
Latitude: Longitude:
Distance and Direction from Road Intersection:
Street Address & City of Well Location:
Sketch Map:




4. OWNER OF WELL: HAROLD CRAWFORD
Address: 5870 HWY 28 NORTH
ABBEVILLE, S.C. 29620
Telephone No.:

Engineer: MARSHALL MILLER + ASSOCIATES
Address: P.O. BOX 848
BLUEFIELD, VA 24605-0848
Telephone No.: 540-322-5467

5. WELL DEPTH (completed): 25 ft. Date Started: 11-20-97
Date Completed: 11-20-97

6. ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug
☒ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply-Permit No. ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☒ Monitor Well ☐

8. CASING: ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
2 in. to 5 ft. depth
in. to ft. depth
Height: Above/Below Surface ft.
Weight lbs./ft.
Drive Shoe? ☐ Yes ☐ No

2. CUTTING SAMPLES: ☒ Yes ☐ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth To Bottom of Stratum |
|---|---|---|
| CLAY, RED BROWN W/SMALL CALCITE ROCK FRAGS, FINE GRAIN, FIRM, MOIST | 4 | 4 |
| CLAY, RED BROWN, W/ WHITE MOTTLING, MEDIUM CALCITE ROCK FRAGMENTS, MED. TO LARGE GRAIN, FIRM MOIST | 4 | 8 |
| | | |
| SANDY CLAY, TAN W/CALCITE ROCK FRAGMENTS, LARGE GRAIN, LOOSE, MOIST | 4 | 12 |
| SANDY CLAY, TAN W/ CALCITE ROCK FRAGMENTS LOOSE, MOIST, LARGE GRAIN | 4 | 16 |
| SANDY CLAY, TAN W/ CALCITE ROCK FRAGMENTS, MEDIUM GRAIN, LOOSE SATURATED | 4 | 20 |
| SANDY CLAY, TAN, W/CALCITE ROCK FRAGMENTS MEDIUM GRAIN, LOOSE SATURATED | 5 | 25 |
| * Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

9. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 20'
Set Between: 5 ft. and 25 ft. NOTE: MULTIPLE SCREENS
ft. and ft. USE SECOND SHEET
Si Analysis ☐ Yes (please enclose) ☒ No

10. IC WATER LEVEL
6.1 ft. below ~~land surface~~ TOC after 24 hours

11. PING LEVEL Below Land Surface.
ft. after hrs Pumping G.P.M.
Pumping Test: ☐ ~~Yes (please enclose)~~ ☐ No
Yield:

12. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

13. ARTIFICIAL FILTER (gravel pack) ☐ Yes ☐ No
Installed from 3 ft. to 25 ft.
Effective size MEDIUM Uniformity Coefficient

14. WELL GROUTED? ☒ Yes ☐ No
Neat Cement ☒ S: ment ☐ Concrete ☐ Other ☐
Depth: From .75 ft. to 2 ft.

15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☐ No Amount:

16. PUMP: Date installed: Not installed ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

3. REMARKS:

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: AMERICAN ENVIRONMENTAL DRILLING SERVICES Date: 1-6-98
Address: P.O. BOX 4195, PINEHURST, NC 28374
Signed: Michael C. Ransies Cert. No.: 1152
Authorized Representative

DHEC 1903 (7/93) COPY 1 MAIL TO: S. C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

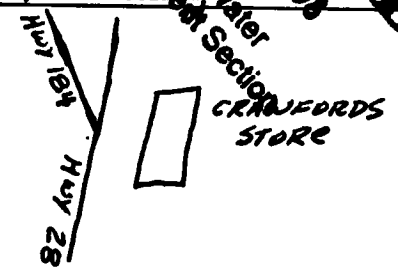
South Carolina DHEC
Department of Health and Environmental Control

W-16

# Water Well Record
## Ground Water Protection Division
2600 Bull Street, Columbia, SC 29201, (803) 734-5331

RECEIVED
MAR 20 1998
Groundwater Management Section

**1. LOCATION OF WELL:**
County: ABBEVILLE
System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location:
Sketch Map:




**2. CUTTING SAMPLES:** ☒ Yes ☐ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth To Bottom of Stratum |
|---|---|---|
| CLAY, RED BROWN W/SMALL CALCITE ROCK FRAGMENTS, | 4 | 4 |
| FINE TO MED. GRAIN, FIRM, MOIST | | |
| CLAY, SANDY, RED BROWN W/ GRAY MOTTLING, | 4 | 8 |
| BIOTITE, FINE GRAIN FIRM, MOIST | | |
| AS ABOVE | 4 | 12 |
| | | |
| SANDY CLAY, TAN W/CALCITE ROCK FRAGMENTS | 4 | 16 |
| LARGE GRAIN, LOOSE, MOIST | | |
| SANDY CLAY, TAN W/ CALCITE ROCK FRAGMENTS | 4 | 20 |
| MED TO LARGE GRAIN, LOOSE, SATURATED | | |
| SANDY CLAY, TAN W/ | 5 | 25 |
| CALCITE ROCK FRAGMENTS, MEDIUM GRAIN, | | |
| LOOSE, SATURATED | | |
| * Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**3. REMARKS:**

**4. OWNER OF WELL:** HAROLD CRAWFORD
Address: 5870 HWY 28 NORTH ABBEVILLE, S.C. 29620
Telephone No.:
Engineer: MARSHALL MILLER + ASSOCIATES
Address: P.O. BOX 848 BLUEFIELD, VA 24605-0848
Telephone No.: 540-322-5467

**5. WELL DEPTH (completed)** 25 ft. Date Started: 11-20-97 Date Completed: 11-20-97

**6.** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☒ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. USE:**
☐ Domestic ☐ Public Supply-Permit No. ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☒ Monitor Well ☐

**8. CASING:** ☒ Threaded ☐ Welded
Diam.: 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
2 in. to 5 ft. depth
in. to ft. depth
Height: Above/Below Surface ft.
Weight lbs./ft.
Drive Shoe? ☐ Yes ☐ No

**9. SCREEN:**
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 20'
Set Between: 5 ft. and 25 ft.
ft. and ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Si Analysis ☐ Yes (please enclose) ☒ No

**10.** IC WATER LEVEL 9.69 TOC ft. below land surface after 24 hours

**11.** PING LEVEL Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

**12. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**13. ARTIFICIAL FILTER** (gravel pack) ☐ Yes ☐ No
Installed from 3 ft. to 25 ft.
Effective size MEDIUM Uniformity Coefficient

**14. WELL GROUTED?** ☒ Yes ☐ No
Neat Cement ☒ S: ment ☐ Concrete ☐ Other ☐
Depth: From .75 ft. to 2 ft.

**15.** NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☐ No Amount:

**16. PUMP:** Date installed: Not installed ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**17. WATER WELL CONTRACTOR'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: AMERICAN ENVIRONMENTAL DRILLING SERVICES Date: 1-6-98
Address: P.O. BOX 4195, PINEHURST, NC 28374
Signed: Michael C. Ramsey Cert. No.: 1152
Authorized Representative

DHEC 1903 (7/93) COPY 1 MAIL TO: S. C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

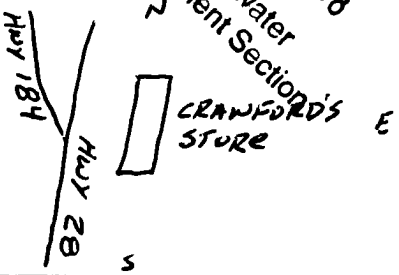
South Carolina DHEC
Department of Health and Environmental Control

D W-17

# Water Well Record
## Ground Water Protection Division
2600 Bull Street, Columbia, SC 29201, (803) 734-5331

RECEIVED
MAR 20 1998
Groundwater Management Section

1. LOCATION OF WELL:
County: ABBEVILLE
System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location:
Sketch Map:




2. CUTTING SAMPLES: ☒ Yes ☐ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth To Bottom of Stratum |
|---|---|---|
| SANDY CLAY, FINE GRAIN, REDDISH BROWN | 8 | 8 |
| SANDY CLAY, FINE GRN. REDDISH BROWN, MICACIOUS, MOIST | 12 | 20 |
| SANDY CLAY, FINE TO MEDIUM GRAIN, LOOSE PACK, REDDISH BROWN SATURATED @ 24' | 10 | 30 |
| SANDY CLAY, DARK BROWN W/ CALCITE ROCK FRAGMENTS, MICACIOUS, FINE GRAIN | 35 | 65 |
| COMPETENT SANDSTONE W/ CALCITE ROCK FRAGMENTS | 65 | 75 |

* Indicate Water Bearing Zones
(Use a 2nd sheet if needed)

3. REMARKS:

4. OWNER OF WELL: HAROLD CRAWFORD
Address: 5870 HWY 28 NORTH ABBEVILLE, S.C. 29620
Telephone No.:

Engineer: MARSHALL MILLER + ASSOCIATES
Address: P.O. BOX 848 BLUEFIELD, VA 24605-0848
Telephone No.: 540-322-5467

5. WELL DEPTH (completed) 25 ft. Date Started: 11-19-97 Date Completed: 11-20-97

6. ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug
☒ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply-Permit No. ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☒ Monitor Well ☐

8. CASING: ☒ Threaded ☐ Welded
Diam.: 6"/2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
6 in. to 65 ft. depth
2 in. to 70 ft. depth
Height: Above/Below Surface ft.
Weight lbs./ft.
Drive Shoe? ☐ Yes ☒ No

9. SCREEN:
Type: PVC Diam.: 2"
Slot/Gauge: .010 Length: 5
Set Between: 70 ft. and 75 ft.
ft. and ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Si Analysis ☐ Yes (please enclose) ☐ No

10. IC WATER LEVEL 15.53 TOC ft. below ~~land surface~~ after 24 hours

11. PING LEVEL Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

12. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

13. ARTIFICIAL FILTER (gravel pack) ☐ Yes ☐ No
Installed from 68 ft. to 75 ft.
Effective size MEDIUM Uniformity Coefficient

14. WELL GROUTED? ☒ Yes ☐ No
Neat Cement ☒ S. ment ☐ Concrete ☐ Other ☐
Depth: From 85 ft. to 66 ft.

15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☐ No Amount:

16. PUMP: Date installed: Not installed ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: AMERICAN ENVIRONMENTAL DRILLING SERVICES Date: 1-6-98
Address: P.O. BOX 4195, PINEHURST, NC 28374
Signed: Michael C. Ramsier Cert. No.: 1152
Authorized Representative

DHEC 1903 (7/93) COPY 1 MAIL TO: S. C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

# FAX TRANSMITTAL

MARSHALL MILLER & ASSOCIATES

P.O. Box 848
Bluefield, Virginia 24605-0848
(540) 322-5467 phone
(540) 322-1510 fax

From: Chuck Cline February 25, 1998

To: Reed Corley

Fax: ()

Total Pages: 10
including cover

COMMENTS:

The TOC sample was collected from FS-16. The FSs were renumbered from the field to be consecutive with the SBs numbers since ground water was screened from SBs (i.e. SBs are also FSs). The field note is attached which relate the original FS numbering with the new FS numbering as depicted on the report's map.

Also included is the sieve analysis. Please let me know if I should drop a copy in the mail or if this fax will suffice.

With regards to the placement of MW-3 and MW-2, my copy of the approved field-screening map also, has these wells moved out. I will discuss this with the on site engineer as soon as possible. However, the current placement of MW-3 and MW-2 provide very good resolution for the free product plume.

Also, as we discussed, I will discuss the seemingly high PID results of 60-ppm calibration gas equivalents from SB-9, relative to the low BTEX concentrations observed in MW-14 with the site engineer in hopes to increase the accuracy of the field screening method. Overall I have been very happy with our field screening results and we will continue to look for methods to improve consistency.

RECEIVED
FEB 25 1998
Bureau of Underground
Storage Tank Management

# 16335

A89128

| | # | T.D | Sample | PID | |
|---|---|---|---|---|---|
| ✓ | SB-1 | 24' | 8' | 150 | |
| ✓ | SB-2 | 16' | 12' | 414.8 | |
| ✓ | SB-3 | 16' | 12' | 41.6 | |
| ✓ | SB-4 | 16' | 12' | 96 | |
| ✓ | SB-5 | 24' | 8' | 215 | |
| ✗ | SB-6 | 24' | — | 23 | |
| ✓ | SB-7 | 24 | 8' | 120 | |
| | SB-8 | 20 | 8' | 160 | 17" Fmtn Product measured |
| 184 | ✓ SB-9 | 16' | 12' | 60 | |
| | HA-1 | 9' | | 3.2 | |
| 198 | HA-2 | 9' | | 41.1 | |
| 11-11-97 | ✓ SB-10 | 16' | 8' | 20 | |
| | ✓ SB-11 | 16' | 12' | 13.9 | |
| 246 | ✓ SB-12 | 16' | 12' | 22 | |
| | F/S-13 | 28' | | 20 | F/S-14 (incomplete) |
| | F/S-214 | 24' | | 50 | |
| | F/S-315 | 28' | | 48 | |
| NC | F/S-416 | 28' | | 1,9 | |
| | F/S-517 | 28' | | 2.8 | |
| | F/S-618 | 28' | | 1.9 | |
| HA - | F/S-719 | 9' | (moist soil) | 2.7 | |
| HA - | F/S-820 | 9' | " | 3.0 | |
| HA - | F/S-921 | 9' | " | 3.9 | |
| | F/S-1022 | 28' | | 20 | |
| | F/S-1123 | 28' | | 6.7 | |
| | F/S-1224 | 28' | | 28 | |
| | F/S-1325 | 28' | | 1.4 | |

246 + 10 F/S = 486 T.S. - 120 F/S = 366

246
303
549
429

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FEB 25 1998
Bureau of Underground
Storage Tank Management

DHEC #12335

T-552 P.03/10 Job-672
+5403221510
FEB-25-98 10:56 From:MARSHALL MILLER

# MARSHALL MILLER AND ASSOCIATES

Geology, Engineering, and Geophysics
P. O. Box 848
Bluefield, VA 24605

## HYDROMETER ANALYSIS

### SIEVE ANALYSIS OF COURSE FRACTION

| | |
|---|---|
| Mass of total air-dry sample | 243.6 |
| Mass of soil retained on #10 sieve (oven-dry) | 9.4 |
| Percent retained on the #10 sieve | 4.7 |
| Percent passing the #10 sieve | 61.1 |

| Sieve Size | Mass Retained | Cumulative Mass Retained | Percent Retained | Percent Passed |
|---|---|---|---|---|
| 3 in | | 0.0 | 0.0 | 100.0 |
| 2 in | | 0.0 | 0.0 | 100.0 |
| 1 1/2 in | | 0.0 | 0.0 | 100.0 |
| 1 in | | 0.0 | 0.0 | 100.0 |
| 3/4 in | | 0.0 | 0.0 | 100.0 |
| 3/8 in | | 0.0 | 0.0 | 100.0 |
| #4 | 1.6 | 1.6 | 0.8 | 99.2 |
| #10 | 7.8 | 9.4 | 3.9 | 96.1 |

CLIENT: SCDHEC/ Crawford
SAMPLE: SB-2@12'
PROJECT NO.: A89128

DATE: 12/9/97

### HYGROSCOPIC MOISTURE CORRECTION FACTOR

| Container # | AIR | OVEN |
|---|---|---|
| Mass of container + wet soil | 17.32 | 17.60 |
| Mass of container + dry soil | 16.63 | 16.87 |
| Mass of container | 11.86 | 11.47 |
| Mass of water | 0.69 | 0.73 |
| Mass dry soil | 4.77 | 5.40 |
| Percent Moisture | 14.5% | 13.5% |
| Hygroscopic moisture content | 0.9% | |
| Hygroscopic moisture correction factor | 0.8833 | |

FEB-25-98 10:56 From:MARSHALL MILLER +5403221510 T-552 P.04/10 Job-672

## SIEVE ANALYSIS OF FINE FRACTION

| | |
|---|---|
| Container # | A1 |
| Mass of container + air-dry soil (for hydrometer analysis) | 187.7 |
| Mass of container | 55.0 |
| Mass of air-dry soil (for hydrometer analysis) | 132.7 |
| Hygroscopic moisture correction factor | 0.8833 |
| Mass of oven-dry sample (for hydrometer analysis) | 117.2 |
| Calculated mass of total hydrometer sample | 191.8 |

| Sieve Size | Mass Retained | Cumulative Mass Retained | Percent Retained | Percent Passed |
|---|---|---|---|---|
| #10 | 7.8 | 9.4 | 5.4 | 94.6 |
| #40 | 55.6 | 65.0 | 37.1 | 62.9 |
| #100 | 30.4 | 95.4 | 54.5 | 45.5 |
| #200 | 15.5 | 110.9 | 63.4 | 36.6 |

T-552 P.05/10 Job-672
+5403221510
FEB-25-98 10:56 From:MARSHALL MILLER

## HYDROMETER ANALYSIS

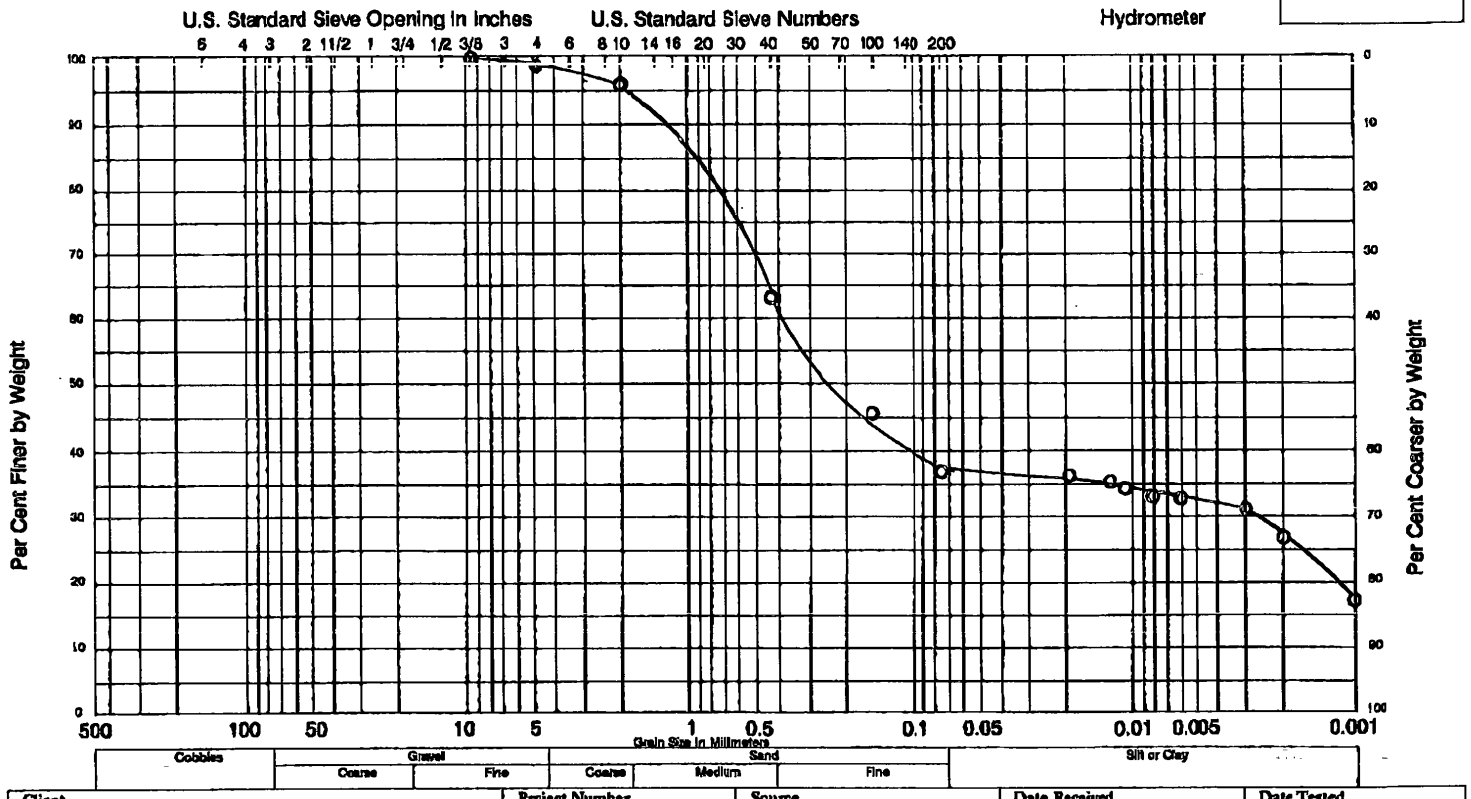
| | |
|---|---|
| Type of hydrometer | 151H |
| Specific gravity of soil | 2.51 |
| Mass of soil used for hydrometer analysis | 117.2 |
| Calculated mass of total hydrometer sample | 191.8 |

| Date | Time | Elapsed Time (min) | Composite Correction | Hydrometer Reading | Reading With Correction | Temperature (°C) | Effective Depth of Hydrometer (cm) | Value of K | Diameter of Particle (mm) | Percent of Soil Finer (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 9-Dec | 10:51 AM | 2 | 0.002 | 1.0440 | 1.0420 | 19.0 | 5.2 | 0.01382 | 0.022 | 36.4 |
| | 10:54 AM | 5 | 0.002 | 1.0430 | 1.0410 | 19.0 | 5.4 | 0.01382 | 0.014 | 35.5 |
| | 10:57 AM | 8 | 0.002 | 1.0420 | 1.0400 | 19.0 | 5.8 | 0.01382 | 0.012 | 34.7 |
| | 11:05 AM | 16 | 0.002 | 1.0410 | 1.0390 | 19.0 | 6.0 | 0.01382 | 0.008 | 33.8 |
| | 11:19 AM | 30 | 0.002 | 1.0400 | 1.0380 | 19.0 | 6.1 | 0.01382 | 0.006 | 32.9 |
| | 1:10 PM | 139 | 0.002 | 1.0380 | 1.0360 | 19.0 | 6.2 | 0.01382 | 0.003 | 31.2 |
| | 2:19 PM | 356 | 0.002 | 1.0370 | 1.0350 | 19.0 | 6.5 | 0.01382 | 0.002 | 30.3 |
| | 3:29 PM | 436 | 0.002 | 1.0330 | 1.0310 | 19.0 | 8.1 | 0.01382 | 0.002 | 26.9 |
| | 5:11 PM | 538 | 0.002 | 1.0310 | 1.0290 | 19.0 | 8.6 | 0.01382 | 0.002 | 25.1 |
| 10-Dec | 7:47 AM | 1251 | 0.002 | 1.0280 | 1.0260 | 19.0 | 9.4 | 0.01382 | 0.001 | 22.5 |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

FEB-25-98 10:56 From:MARSHALL MILLER +5403221510 T-552 P.06/10 Job-672

# Gradation Curve - ASTM D422-63

Test Number




| Client | Project Number | Source | Date Received | Date Tested |
|---|---|---|---|---|
| SCDHEC | A89128 | | | 12/9/97 |

| Project | Soil Description |
|---|---|
| CRAWFORD | |

| Sample Number | Boring Number | Depth |
|---|---|---|
| SB-2 | | 12' |

Location

MARSHALL MILLER & ASSOCIATES
P. O. Box 848 • Bluefield, Virginia 24605-0848
703/322-5457, FAX 703/322-5460

| Sample | Classification | Nat. W.% | LL | PL | PI | Dry Density | Opt. Moisture |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |

DHEC # 12335

T-552 P.07/10 Job-672
+5403221510
FEB-25-98 10:57 From:MARSHALL MILLER

# MARSHALL MILLER AND ASSOCIATES

Geology, Engineering, and Geophysics
P. O. Box 848
Bluefield, VA 24605

## HYDROMETER ANALYSIS

### SIEVE ANALYSIS OF COURSE FRACTION

| | |
|---|---|
| Mass of total air-dry sample | 180.8 |
| Mass of soil retained on #10 sieve (oven-dry) | 5.3 |
| Percent retained on the #10 sieve | 2.9 |
| Percent passing the #10 sieve | 97.1 |

| Sieve Size | Mass Retained | Cumulative Mass Retained | Percent Retained | Percent Passed |
|---|---|---|---|---|
| 3 in | | 0.0 | 0.0 | 100.0 |
| 2 in | | 0.0 | 0.0 | 100.0 |
| 1 1/2 in | | 0.0 | 0.0 | 100.0 |
| 1 in | | 0.0 | 0.0 | 100.0 |
| 3/4 in | | 0.0 | 0.0 | 100.0 |
| 3/8 in | | 0.0 | 0.0 | 100.0 |
| #4 | 2.0 | 2.0 | 1.1 | 98.9 |
| #10 | 3.3 | 5.3 | 2.9 | 97.1 |

CLIENT: SCDHEC/ Crawford
SAMPLE: SB-1@24'
PROJECT NO.: A89128

DATE: 12/9/97

### HYGROSCOPIC MOISTURE CORRECTION FACTOR

| Container # | AIR | OVEN |
|---|---|---|
| Mass of container + wet soil | 17.47 | 17.62 |
| Mass of container + dry soil | 16.04 | 15.86 |
| Mass of container | 11.42 | 10.97 |
| Mass of water | 1.43 | 1.76 |
| Mass dry soil | 4.62 | 4.89 |
| Percent Moisture | 31.0% | 36.0% |
| Hygroscopic moisture content | 5.0% | |
| Hygroscopic moisture correction factor | 0.9448 | |

FEB-25-98 10:57 From:MARSHALL MILLER +5403221510 T-552 P.08/10 Job-672

## SIEVE ANALYSIS OF FINE FRACTION

| | |
|---|---|
| Container # | A1 |
| Mass of container + air-dry soil (for hydrometer analysis) | 205.5 |
| Mass of container | 54.5 |
| Mass of air-dry soil (for hydrometer analysis) | 151.0 |
| Hygroscopic moisture correction factor | 0.9448 |
| Mass of oven-dry sample (for hydrometer analysis) | 142.7 |
| Calculated mass of total hydrometer sample | 146.9 |

| Sieve Size | Mass Retained | Cumulative Mass Retained | Percent Retained | Percent Passed |
|---|---|---|---|---|
| #10 | 3.3 | 3.3 | 1.9 | 98.1 |
| #40 | 24.5 | 27.8 | 15.9 | 84.1 |
| #100 | 37.0 | 64.8 | 37.0 | 63.0 |
| #200 | 21.3 | 86.1 | 49.2 | 50.8 |

T-552 P.08/10 Job-672
+5403221510
FEB-25-98 10:57 From:MARSHALL MILLER

## HYDROMETER ANALYSIS

| | |
|---|---|
| Type of hydrometer | 151H |
| Specific gravity of soil | 2.37 |
| Mass of soil used for hydrometer analysis | 142.7 |
| Calculated mass of total hydrometer sample | 146.9 |

| Date | Time | Elapsed Time (min) | Composite Correction | Hydrometer Reading | Reading With Correction | Temperature (°C) | Effective Depth of Hydrometer (cm) | Value of K | Diameter of Particle (mm) | Percent of Soil Finer (%) |
|---|---|---|---|---|---|---|---|---|---|---|
| 8-Dec | 1:41 PM | 2 | 0.002 | 1.0440 | 1.0420 | 19.0 | 5.8 | 0.01456 | 0.025 | 49.5 |
| | 1:44 PM | 5 | 0.002 | 1.0410 | 1.0390 | 19.0 | 6.0 | 0.01456 | 0.016 | 47.3 |
| | 1:47 PM | 8 | 0.002 | 1.0390 | 1.0370 | 19.0 | 6.5 | 0.01456 | 0.013 | 44.9 |
| | 1:55 PM | 16 | 0.002 | 1.0350 | 1.0330 | 19.0 | 7.6 | 0.01456 | 0.010 | 40.0 |
| | 2:09 PM | 30 | 0.002 | 1.0320 | 1.0300 | 19.0 | 8.4 | 0.01456 | 0.008 | 36.4 |
| | 2:39 PM | 60 | 0.002 | 1.0290 | 1.0270 | 20.0 | 9.2 | 0.01438 | 0.006 | 32.7 |
| | 3:29 PM | 110 | 0.002 | 1.0250 | 1.0230 | 20.0 | 10.2 | 0.01438 | 0.004 | 27.9 |
| | 5:11 PM | 211 | 0.002 | 1.0220 | 1.0200 | 20.0 | 11.0 | 0.01438 | 0.003 | 24.3 |
| 9-Dec | 7:47 AM | 1088 | 0.002 | 1.0160 | 1.0140 | 20.0 | 12.6 | 0.01438 | 0.002 | 17.0 |
| | | | | | | | | | | |
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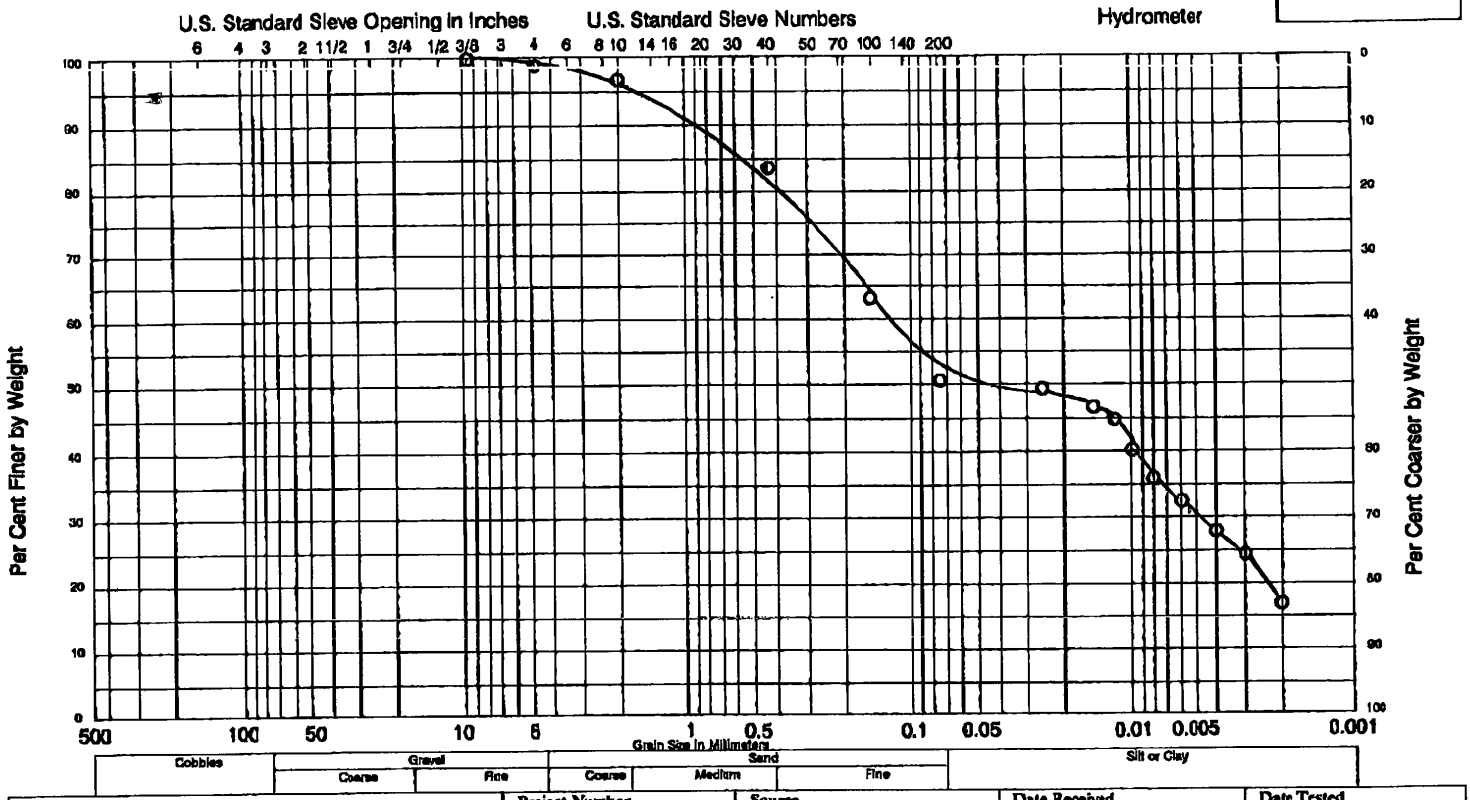
# Gradation Curve - ASTM D422-63

Test Number




| Client | Project Number | Source | Date Received | Date Tested |
|---|---|---|---|---|
| SCDHEC | A89128 | | | 12/9/97 |

| Project | Soil Description | |
|---|---|---|
| CRAWFORD | | |
| **Sample Number** | **Boring Number** | **Depth** |
| SB-1 | | 24' |
| **Location** | | |

MARSHALL MILLER & ASSOCIATES
P. O. Box 848 • Bluefield, Virginia 24605-0848
703/322-5467, FAX 703/322-5460

| Sample | Classification | Nat. W.% | LL | PL | PI | Dry Density | Opt. Moisture |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |

# FAX TRANSMITTAL

MARSHALL MILLER & ASSOCIATES

P.O. Box 848
Bluefield, Virginia 24605-0848
(540) 322-5467 phone
(540) 322-1510 fax

From: Chuck Cline February 25, 1998

To: Reed Corley

Reed, I am refaxing the FS numbering sheet. Thought it might be to light originally

Fax: 0

Total Pages: 10
including cover

COMMENTS:

Re: Requested information on Crawford's #~~12334~~ #12335, Abbeville, SC

The TOC sample was collected from FS-16. The FSs were renumbered from the field to be consecutive with the SBs numbers since ground water was screened from SBs (i.e. SBs are also FSs). The field note is attached which relate the original FS numbering with the new FS numbering as depicted on the report's map.

Also included is the sieve analysis. Please let me know if I should drop a copy in the mail or if this fax will suffice.

With regards to the placement of MW-3 and MW-2, my copy of the approved field-screening map also, has these wells moved out. I will discuss this with the on site engineer as soon as possible. However, the current placement of MW-3 and MW-2 provide very good resolution for the free product plume.

Also, as we discussed, I will discuss the seemingly high PID results of 60-ppm calibration gas equivalents from SB-9, relative to the low BTEX concentrations observed in MW-14 with the site engineer in hopes to increase the accuracy of the field screening method. Overall I have been very happy with our field screening results and we will continue to look for methods to improve consistency.

RECEIVED
FEB 2 5 1998
Bureau of Underground
Storage Tank Management

A89128

| | # | T.D | Sample | PID | |
|---|---|---|---|---|---|
| ✓ | SB-1 | 24' | 8' | 150 | |
| ✓ | SB-2 | 16' | 12' | 44.8 | |
| ✓ | SB-3 | 16' | 12' | 41.6 | |
| ✓ | SB-4 | 16' | 12' | 96 | |
| ✓ | SB-5 | 24' | 8' | 245 | |
| ✗ | SB-6 | 24' | — | 23 | |
| ✓ | SB-7 | 24 | 8' | 120 | |
| | SB-8 | 20 | 8' | 160 | 17" Free Product measured |
| 184 | ✓ SB-9 | 16' | 12' | 60 | |
| | HA-1 | 9' | — | 3.2 | |
| 1985 | HA-2 | 9' | — | 41.1 | |
| 11-11-97 | ✓ SB-10 | 16' | 8' | 20 | |
| | ✓ SB-11 | 16' | 12' | 13.9 | |
| 246 | ✓ SB-12 | 16' | 12' | 22 | |

| | | | | |
|---|---|---|---|---|
| | F/S-13 | 28' | 20 | F/S-14 (incomplete) |
| | F/S-214 | 24' | 50 | |
| | F/S-315 | 28' | 48 | |
| TBC | F/S-416 | 28' | 1,9 | |
| | F/S-517 | 28' | 2.8 | |
| | F/S-618 | 28' | 1.9 | |
| HA - | F/S-719 | 9' (most soil) | 2.7 | |
| HA - | F/S-820 | 9' " | 3.0 | |
| HA - | F/S-921 | 9' " | 3.9 | |
| | F/S-1022 | 28' | 20 | |
| | F/S-1123 | 28' | 6.7 | |
| | F/S-1224 | 28' | 28 | |
| | F/S-1325 | 28' | 1.4 | |

T 13 F/S
48's T.S.
- ND FIELD
366

246
103
549
429

RECEIVED
FEB 25 1998
Bureau of Underground
Storage Tank Management

South Carolina
DHEC
Department of Health and Environmental Control
2600 Bull Street, Columbia, SC 29201
803-734-5000

# MEMO

Re: Facility ID# 12335
Crawford's Country Store
Telephone conv. w/ store clerk

Date: 10/15/98

Left word with the store clerk to notify the o/o (Mr. Crawford) that I'm sending a copy of the RAR to his attention. The report was sent to the store's address. Mr. Crawford was offered the options (state lead vs o/o) to proceed. A response is expected within 10 days.

JPC

1A-442 (2/93)

# Bionomics Laboratory

**A DIVISION OF HYDROLOGIC, INC.**

4310 E. ANDERSON ROAD, ORLANDO, FLORIDA 32812 (407) 851-2560 FAX (407) 856-0886

EPA ICRFL034 • DE DW #FL066 • FL CQAP #870223G • FL DW #83331 • FL ENV #E83012 • GA DW #901
MD DW #193 • NC DW #12708 • NC ENV #327 • SC #96012 • TN DW #02983 • VA DW #00042


*BIONOMICS LABORATORY, INC.*
*SOUTH CAROLINA DIVISION*
*200 RICH LEX DR.*
*LEXINGTON, SC 29072*
*Attn: GRADY SATCHER / SHERRI BAKER*
*Invoice Number:*

*Order #: B8-01-078* P
*Date: 01/08/98 09:47*
*Work ID: SCDHEC 12335 RUSH*
*Date Received: 01/07/98*
*Date Completed: 01/07/98*
*Client Code: BIONOMICS_SC*

JAN 2 9 1998
Bureau of Underground Storage Tank Management

*REVISED REPORT*

*SAMPLE IDENTIFICATION*

| Sample Number | Sample Description | Sample Number | Sample Description |
|---|---|---|---|
| 01 | 12335 Crawford | | |

*Certified By*
*MARK RUSLER, CHEMIST*

*TEST RESULTS BY SAMPLE*

**Sample: 01B 12335 Crawfords** **Collected: 01/06/98** **Category: WATER**

| Test Description | Result | Limit | Units | Analyzed | By |
|---|---|---|---|---|---|
| LEAD - EPA 239.2 | 0.163 | 0.003 | mg/L | 01/07/98 | KS |

## TEST RESULTS BY SAMPLE

Sample Description: **12335 Crawfords** Lab No: **01A**
Test Description: **PURGEABLE AROMATICS - 8020** Method: **EPA 8020** Test Code: **SC802W**
Collected: **01/06/98 10:45** Category: **WATER**

| PARAMETER | RESULT | PQL | Q |
|---|---|---|---|
| Benzene | 164 | 10 | |
| 108-95-2 | | | |
| Toluene | BDL | 1 | U |
| 95-57-8 | | | |
| Ethylbenzene | BDL | 1 | U |
| 88-75-5 | | | |
| Methyl tert-butyl ether (MTBE) | 46.1 | 1 | |
| 1634-04-4 | | | |
| Total Xylenes | 22.6 | 3 | |
| 105-67-9 | | | |
| Naphthalene | 9.4 | 5 | |
| 91-20-3 | | | |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| 4-BFB | 103 | 60 - 150 |
| 367-12-4 | | |

Notes and Definitions for this Report:

DATE RUN 01/07/98
ANALYST CH
INSTRUMENT 5890
DIL. FACTOR 1
UNITS µg/L

*Chain of Custody Record* ROUTT

# HYDROLOGIC, INC.

*Page* ___ *of* ___

❒ Asheville, NC (704) 254-5169 ❒ Norcross, GA (770) 368-0636 ❒ Frankfort KY (502) 223-0251 ❒ Lumberton, NC (910) 738-6190 ❒ Charlotte, NC (704) 392-1164 ❒ Morrisville, NC (919) 380-9699
❒ Brighton, CO (303) 659-0497 ❒ Orlando, FL (407) 851-2560 ❒ Lexington, SC (803) 796-8989 ❒ Richmond, VA (804) 358-3145 ❒ Burlington, NC (910) 570-4661 ❒ Macon, GA (912) 757-0811

Client: SCDHEC
Report Address: 2600 Bull St. Colu., S.C. 29201
Attn: K. Wilson
Phone No.: 734-5331
Fax No.: 734-3604

Project No.: 12335
Invoice Address: Crawford's Co. Store Asheville Co.
Attn: R. Corley (pm)
Sampled By: B. Faller
P.O. No: 1831
State Samples Collected: S.C.

TURNAROUND TIME
☒ 24 Hours ❒ 48 Hours
❒ 5 Days ❒ 10 Days
Date Needed: 1/7

**REQUESTED PARAMETERS**

B-TEX, Naph, MTBE
pb

**LAB CODE I.D.**
A = Asheville, NC
B = Burlington, NC
C = Charlotte, NC
D = Denver, CO
E = Lexington, SC
G = Macon, GA
K = Frankfort, KY
L = Lumberton, NC
M = Morrisville, NC
N = Norcross, GA
O = Orlando, FL
R = Richmond, VA
S = Subcontracted

| Sample ID | Date | Time | Comp/ Grab | Matrix | Containers | ← Preserv. | REMARKS |
|---|---|---|---|---|---|---|---|
| Crawfords | 1/6/97 | 1045 | G | GW | 3 | X X | 24 hrs Turnaround |
| | | | | | | | More Like 6 hours |

Lab Use Only — Custody Seal: ❒ Yes ❒ No ❒ N/A — Init Lab Temp: Onice — Rec. Lab Temp

C-Billing

COMMENTS: Shipped to Hydro/Flavia Fed Ex# 801745848000

| | Date | Time | | Date | Time | Lab Use Only: |
|---|---|---|---|---|---|---|
| Relinquished By: Robert Faller | 1/6/97 | 1445 | Received By: Karen Moore | 1/6 | 1440 | 1 - 250 Hrs 7 Hr |
| Relinquished By: Karen Moore Fed Ex | 1/6 | | Received By: Fed Ex | | | 2 - 40 ml Hg Hr |
| Relinquished By: | 1/7/97 | 0930 | Received By: | 1/7/97 | 0935 | |
| Relinquished By: | Date | Time | Received By: | Date | Time | |

MARSHALL MILLER & ASSOCIATES

GEOLOGY
ENGINEERING
GEOPHYSICS

January 15, 1998

H. Reed Corley, Hydrogeologist
State Lead and Field Services Section
Assessment and Corrective Action Division
Bureau of Underground Storage Tank Management
**South Carolina Department of Health and Environment Control**
2600 Bull Street
Columbia, South Carolina

RECEIVED
JAN 19 1998
Bureau of Underground Storage Tank Management

*Re: Crawford's Country Store #12335,*
*Potential Receptor; Jerry McCullough Water Well*
*Abbeville County, South Carolina*

Dear Mr. Corley;

Enclosed please find the ground water analytical results for the Jerry McCullough water well. The McCullough water well is located south-southwest, slightly farther then the 1,000 feet receptor survey. However, due to an impacted water well (the Crawford Property water well; CPWW) located upgradient, I felt it was prudent to sample the McCullough well.

Analytical parameters included BTEX, MTBE, Naphthalene, EDB, and Lead. Results for all parameters were below screening levels and detection levels with the exception of lead at a concentration of 110 ug/L. The high concentration of lead is an order of magnitude above the highest concentrations observed on site, which may suggest that it is not related to the petroleum release at the Crawford Store.

If you have any questions or require additional information please do not hesitate to call.

Sincerely,

***Marshall Miller & Associates***

Charles E. Cline
*Senior Project Hydrogeologist*

lhr

MARSHALL MILLER & ASSOCIATES

# HYDROLOGIC, INC.

January 15, 1998

**REPORTING:**

MARSHAL MILLER & ASSOC.
P.O. BOX 848
BLUEFIELD, VA 24605

**INVOICING:**

MARSHAL MILLER & ASSOC.
P.O. BOX 848
BLUEFIELD, VA 24605

**PROJECT NUMBER:** K9800344

**DATE COMPLETED:** January 15, 1998
**DATE RECEIVED:** January 9, 1998

**PROJECT DESCRIPTION:**

A89128--1 water sample was received and analyzed for 602 + MIBE + Naphthalene and EDB.

Enclosed is the laboratory report for the project described above. If you have any questions or if we can be of further assistance, please feel free to contact Jack Hale, Jr. at 1-800-728-2251. We appreciate your business and look forward to serving you again soon.

Respectfully,

Walter Hogg
Laboratory Director

| Post-it® Fax Note 7671 | Date 1/15 | # of pages ▶ 5 |
|---|---|---|
| To Jim Query | From Charles | |
| Co./Dept. | Co. | |
| Phone # | Phone # | |
| Fax # | Fax # | |

# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9800344
HYDROLOGIC SAMPLE NUMBER: 9800344
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: McC-WW
DATE SAMPLED: 01/07/98
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 01/12/98

METHOD 602+MTBE+NAPHTHALENE

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| Benzene | 71-43-2 | 1.0 | BDL |
| Toluene | 108-88-3 | 1.0 | BDL |
| Ethylbenzene | 100-41-4 | 1.0 | BDL |
| Xylenes (Total) | 1330-20-7 | 1.0 | BDL |
| MTBE | | 5.0 | BDL |
| Naphthalene | 91-20-3 | 1.0 | BDL |
| Surrogate Recovery: BFB | | | 105% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS:

# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9800344
HYDROLOGIC SAMPLE NUMBER: 9800344
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: McC-WW
DATE SAMPLED: 01/07/98
DATE EXTRACTED: 01/14/98
DATE/TIME ANALYZED: 01/14/98

METHOD 504

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS:

# HYDROLOGIC, INC.

## FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
1-85 S BLDG 2848 SUITE E
CHARLOTTE, NC 28208-
Attn: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 01/14/98

SAMPLE NUMBER- 114833 SAMPLE ID- A89128 McC-WW
DATE SAMPLED- 01/07/98
DATE RECEIVED- 01/08/98 SAMPLER- JIM OWREY
TIME RECEIVED- 0950 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 1315
RECEIVED BY- DHT



| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| LEAD, TOTAL | 6010 | 01/09/98 | LJP | 01/13/98 | LJP | 0.110 | mg/l | 0.010 |

LABORATORY DIRECTOR

hain of Custody Record

# HYDROLOGIC, INC.

Page ___ of ___

☐ Asheville, NC (704) 254-5169 ☐ Norcross, GA (770) 368-0636 ☐ Frankfort KY (502) 223-0251 ☐ Lumberton, NC (910) 738-6190 ☐ Charlotte, NC (704) 392-1164 ☐ Morrisville, NC (919) 380-9699
☐ Brighton, CO (303) 659-0497 ☐ Orlando, FL (407) 851-2560 ☐ Lexington, SC (803) 796-8989 ☐ Richmond, VA (804) 358-3145 ☐ Burlington, NC (910) 570-4661 ☐ Macon, GA (912) 757-0811

Client: Marshall-Miller

Project No.: 9-89128

Report Address:

Invoice Address:

Attn:

Attn:

Phone No.:

Sampled By: Jim Currey

Fax No.:

P.O. No:

State Samples Collected

TURNAROUND TIME

☐ 24 Hours ☐ 48 Hours
☐ 5 Days ☐ 10 Days

Date Needed:

REQUESTED PARAMETERS: 602/MTBE/Naphth. | EDB-Conn. | Total Pb

| Sample ID | Date | Time | Comp/Grab | Matrix | Containers | HCl | → | HNO3 | | | | | | | | ← Preserv. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| McC-GW | 1-7-98 | 1:15 | | | | ✓ | ✓ | ✓ | | | | | | | | | |
| | | | | | | | | | | | | | | | | | |
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LAB CODE I.D.
A = Asheville, NC
B = Burlington, NC
C = Charlotte, NC
D = Denver, CO
E = Lexington, SC
G = Macon, GA
K = Frankfort, KY
L = Lumberton, NC
M = Morrisville, NC
N = Norcross, GA
O = Orlando, FL
R = Richmond, VA
S = Subcontracted

COMMENTS: Crawford Country Store

| Relinquished By: | Date | Time | Received By: | Date | Time |
|---|---|---|---|---|---|
| Barry Mullins | 1/7 | 1519 | T. Kennedy | 1/7 | 1519 |
| T. Kennedy | 1/7 | 1520 | [illegible signature] | 1-9-98 | 1000 |
| | | | | | |
| | | | | | |

•••• TRANSMISSION RESULT REPORT •••• (JAN 09 '98 04:22AM)

GR ATER PROTECT

(AUTO)

THE FOLLOWING FILE(S) ERASED

| FILE | FILE TYPE | OPTION | TEL NO. | PAGE | RESULT |
|---|---|---|---|---|---|
| 009 | TRANSMISSION | | 97390294 | 02 | OK |

Scott

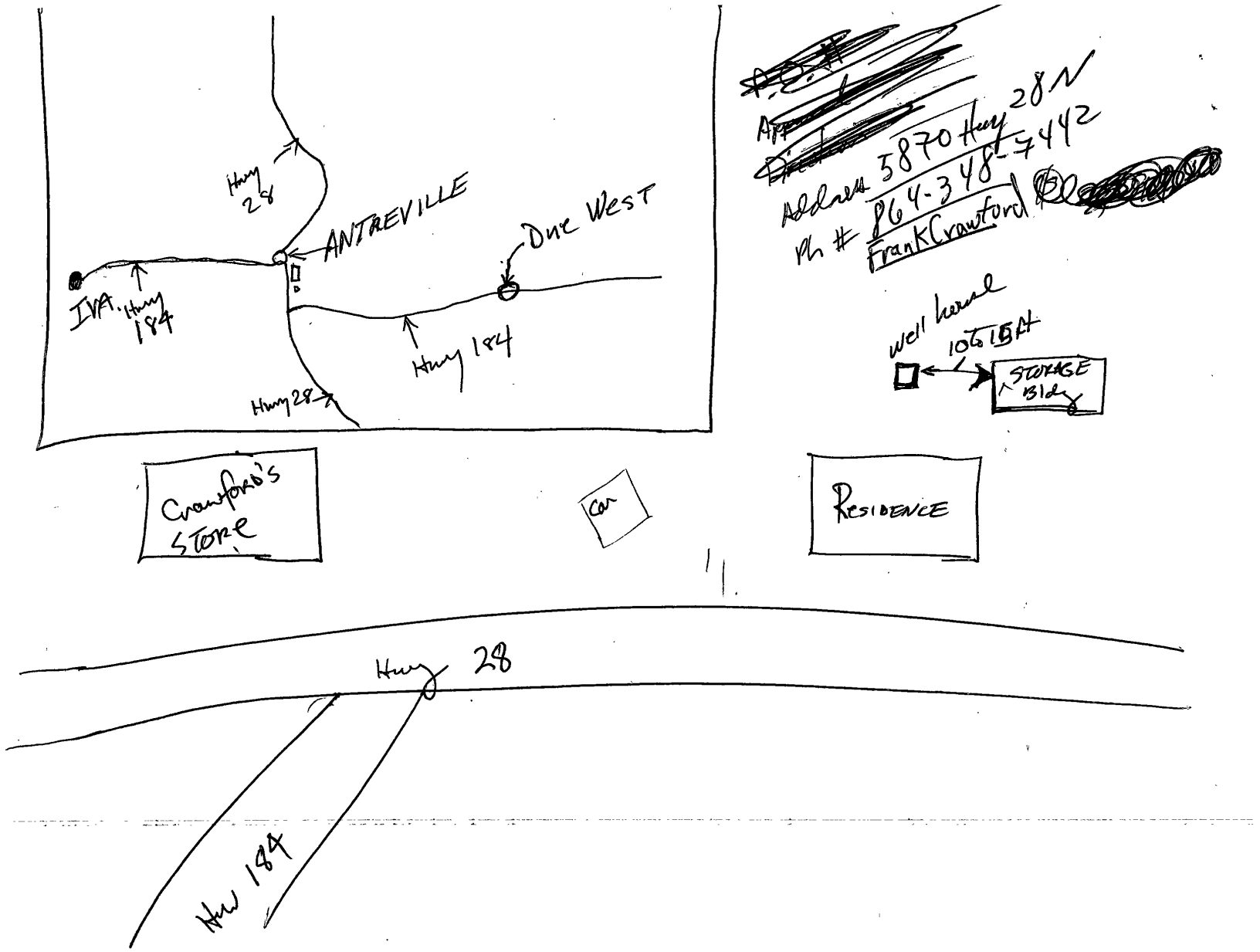
12335

Post-it® Fax Note 7671

| | |
|---|---|
| Date 1-8-97 | # of pages ▶ 2 |
| To James Parker | From Scott McInnis |
| Co./Dept. Bristol Smyth | Co. SCDHEC |
| Phone # 796-1802 | Phone # 734-5615 |
| Fax # 739-0294 | Fax # |

ERRORS

1) HANG UP OR LINE FAIL 2) BUSY 3) NO ANSWER 4) NO FACSIMILE CONNECTION


Hwy 28
ANTREVILLE
Due West
IVA
Hwy 184
Hwy 184
Hwy 28
Address 3870 Hwy 28 N
Ph # 864-348-7442
Frank Crawford
well house
10 GAL
STORAGE BLD
Crawford's STORE
car
RESIDENCE
Hwy 28
Hwy 184

MARSHALL MILLER & ASSOCIATES

GEOLOGY
ENGINEERING
GEOPHYSICS

RECEIVED
JAN 09 1998
Bureau of Underground Storage Tank Management

January 6, 1998

Mr. Scott McInnis, III, P.G.
**South Carolina Department of Health and Environmental Control**
2600 Bull Street
Columbia, South Carolina 29201

*Re: State-Lead Rapid Assessment Report*
*Crawford's Country Store, Site ID# 12335*
*Abbeville County, South Carolina*

Dear Mr. McInnis:

Please find enclosed the State-Lead Rapid Assessment Report for the Crawford's Country Store, Site ID #12337. MM&A appreciates the opportunity to work with DHEC. If you have any questions, please feel free to contact us.

Sincerely,
***Marshall Miller & Associates***

Gregory E. Tieman
*Vice President*

Ronald H. Mullennex, C.P.G., C.G.W.P.
*Senior Vice President*
*South Carolina Registered*
*Professional Geologist No. 381*

Charles E. Cline
*Senior Project Hydrogeologist*

wpm

Bluefield Virginia Industrial Park / P.O. Box 848 / Bluefield, VA 24605 / Tel 540.322.5467 / Fax 540.322.5460

**From:** W. "Scott" McInnis
**To:** wilsonka
**Date:** 1/8/98 4:15pm
**Subject:** crawfords country store - site # 12335

i have faxed p.o. to best of everything. ~~please~~ check with james barker at 796-1802 or 256-8263 to make sure they went to install GAC on friday as they said they would. thanks.

Will be on site around 10!

~~Fritz was installed~~

P.O # 46211

CP # 04195:P

Per James Barker on 1/12/98, the GAC was installed on 1/9/98. jm

# Bionomics Laboratory

## A DIVISION OF HYDROLOGIC, INC.

4310 E. ANDERSON ROAD, ORLANDO, FLORIDA 32812 (407) 851-2560 FAX (407) 856-0886
EPA ICRFL034 • DE DW #FL066 • FL CQAP #870223G • FL DW #83331 • FL ENV #E83012 • GA DW #901
MD DW #193 • NC DW #12708 • NC ENV #327 • SC #96012 • TN DW #02983 • VA DW #00042

BIONOMICS LABORATORY, INC.
SOUTH CAROLINA DIVISION
200 RICH LEX DR.
LEXINGTON, SC 29072
Attn: GRADY SATCHER / SHERRI BAKER
Invoice Number:

Order #: B8-01-078
Date: 01/08/98 09:47
Work ID: SCDHEC 12335 RUSH
Date Received: 01/07/98
Date Completed: 01/07/98
Client Code: BIONOMICS_SC

REVISED REPORT

SAMPLE IDENTIFICATION

| Sample Number | Sample Description | Sample Number | Sample Description |
|---|---|---|---|
| 01 | 12335 Crawfords | | |

Certified By
MARK RUSLER, CHEMIST

**Order # B8-01-078**
**01/08/98 09:47**

## TEST RESULTS BY SAMPLE



Sample Description: 12335 Crawfords Lab No: 01A
Test Description: PURGEABLE AROMATICS - 8020 Method: EPA 8020 Test Code: SCB02W
Collected: 01/06/98 10:45 Category: WATER

| PARAMETER | RESULT | PQL | Q |
|---|---|---|---|
| Benzene<br>108-95-2 | 164 | 10 | |
| Toluene<br>95-57-8 | BDL | 1 | U |
| Ethylbenzene<br>88-75-5 | BDL | 1 | U |
| Methyl tert-butyl ether (MTBE)<br>1634-04-4 | 46.1 | 1 | |
| Total Xylenes<br>105-67-9 | 22.6 | 1 | |
| Naphthalene<br>91-20-3 | 9.4 | 5 | |

| SURROGATE | %RECOVERY | LIMITS |
|---|---|---|
| 4-BFB<br>367-12-4 | 103 | 60 - 150 |

Notes and Definitions for this Report:

DATE RUN 01/07/98
ANALYST CH
INSTRUMENT 5890
DIL. FACTOR 1
UNITS UG/L

Order # B8-01-078
01/08/98 09:47

TEST RESULTS BY SAMPLE



Sample: 01B 12335 Crawfords Collected: 01/06/98 Category: WATER

| Test Description | | Result | Limit | Units | Analyzed | By |
|---|---|---|---|---|---|---|
| LEAD - | EPA 239.2 | 0.163 | 0.003 | mg/L | 01/07/98 | KS |

RUSH

# HYDROLOGIC, INC.

B801078

*Chain of Custody Record* *Page ___ of ___*

☐ Asheville, NC (704) 254-5169 ☐ Norcross, GA (770) 368-0636 ☐ Frankfort KY (502) 223-0251 ☐ Lumberton, NC (910) 738-6190 ☐ Charlotte, NC (704) 392-1164 ☐ Morrisville, NC (919) 380-9699
☐ Brighton, CO (303) 659-0497 ☐ Orlando, FL (407) 851-2560 ☐ Lexington, SC (803) 796-8989 ☐ Richmond, VA (804) 358-3145 ☐ Burlington, NC (910) 570-4661 ☐ Macon, GA (912) 757-0811

Client: SCDHEC
Report Address: 2600 Bull St. Colum., S.C. 29201
Attn: K. Wilson
Phone No.: 734-5331
Fax No.: 734-3604

Project No.: 12335
Invoice Address: Crawford's Store Asheville Co.
Attn: R. Corley (pm)
Sampled By: B. Faller
P.O. No: 1831
State Samples Collected: S.C.

TURNAROUND TIME
☒ 24 Hours ☐ 48 Hours ☐ 5 Days ☐ 10 Days
Date Needed: 1/7

**REQUESTED PARAMETERS**

8020 BTEX, Naph. MTBE
Pb

**LAB CODE I.D.**
A = Asheville, NC
B = Burlington, NC
C = Charlotte, NC
D = Denver, CO
E = Lexington, SC
G = Macon, GA
K = Frankfort, KY
L = Lumberton, NC
M = Morrisville, NC
N = Norcross, GA
O = Orlando, FL
R = Richmond, VA
S = Subcontracted

| Sample ID | Date | Time | Comp/ Grab | Matrix | Containers | ← Preserv. | | REMARKS |
|---|---|---|---|---|---|---|---|---|
| Crawford's | 1/6/97 | 1045 | G | GW | 3 | X | X | 24 hrs Turnaround More Like 6 hours |

COMMENTS: Shipped to Hydro/FIA via Fed Ex # 801745848000

| | | | | | |
|---|---|---|---|---|---|
| Relinquished By: B. Faller | 1/6/97 | 1445 | Received By: Karen Moore | 1/6/97 | 1445 |
| Relinquished By: Karen Moore | 1/6 | | Received By: Fed Ex | | |
| Relinquished By: Fed Ex | 1/7/97 | 0930 | Received By: | 1/7/97 | 0930 |
| Relinquished By: | Date | Time | Received By: | Date | Time |

TOTAL P.04

# FAX

FRO Chuck Cline

MARSHALL MILLER & ASSOCIATES
(MMSA)
P.O. Box 843
Bluefield, Virginia 24605-0843
Phone: 540.322.5467 Fax: 540.322.1510

MARSHALL MILLER & ASSOCIATES

Number of Pages:

Including Cover

TO: Michael Bishop

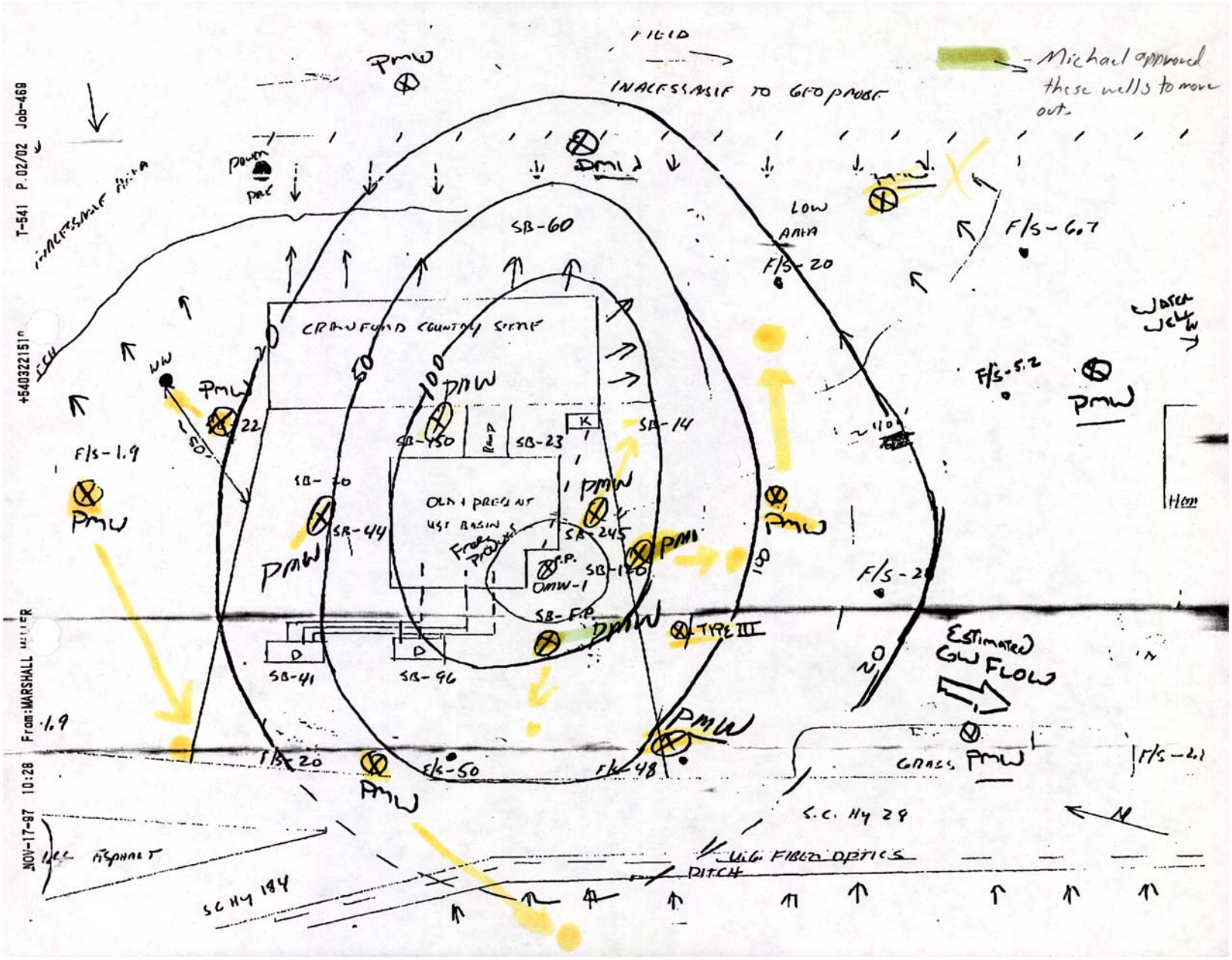
Date: 11-17-97

Field screening / Proposed monitoring well locations for Crawfords Country Store, Abbeville # 12335

Drilling scheduled for Wed. 11-19-97

Thanks for your help!

RECEIVED
NOV 17 1997
Bureau of Underground Storage Tank Management


- Michael approved these wells to move out.
INACCESSIBLE TO GEOPROBE
INACCESSIBLE AREA
LOW AREA
CRAWFORD COUNTY SHERIFF
OLD + PRESENT UST BASIN
SB-60
SB-14
SB-23
SB-44
SB-41
SB-96
SB-48
SB-50
SB-20
SB-22
OMW-1
F/S-1.9
F/S-20
F/S-6.7
F/S-5.2
F/S-2.1
TYPE III
ESTIMATED GW FLOW
GRASS
S.C. HY 29
SC HY 184
ASPHALT
DITCH
POWER POLE
From:MARSHALL MILLER
NOV-17-97 10:28
T-541 P.02/02 Job-468

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

# BUREAU OF UNDERGROUND STORAGE TANK MANAGEMENT

Phone (803) 734-5331 Fax (803) 734-3604

OCT 22 1997

Marshall Miller & Associates
Attn: Mr. Charles E. Cline, P.G.
PO Box 848
Bluefied, Virginia 24605

**Re: Crawford's Country Store**
**Site ID #12335, CA # 03906:P, P.O. #2129**
**Rapid Assessment Plan & Cost Proposal received September 16, 1997**
**SCDHEC Contract # SB-76499-08/29/96/mjn awarded September 26, 1996**
**Abbeville County**

Dear Mr. Cline,

The Bureau of Underground Storage Tank Management has reviewed the Rapid Assessment Plan and associated Cost Proposal for the referenced site. Assessment activities at the site, as outlined in the referenced plan and as revised in this letter, should begin immediately upon receipt of this letter to define the vertical and horizontal extent of soil and ground-water chemicals of concern, all receptors and potential exposure pathways, and conduct tier II modeling for each chemical of concern above the Risk-Based Screening Level.

Cost proposal **# 03906:P** has been approved in the amount of **$31,832.16** and will be kept on file so that compensation can begin. Please note, the following adjustments were made:

- **Item 4B** - $300.00 more for personnel mobs.
- **Item 5** - $3,375.00 less for hand augered soil borings. The reasonable footage for this component is 150 feet.
- **Item 8** - $600.00 more for abandonment for a total of 525 feet of temporary boring/wells.
- **Item 14A** - $150.00 more for mathematical model costs. This model should be preformed as part of the Rapid Assessment.
- **Item 14B** - $2,000.00 less for computer model costs. Two models have been approved, however, one model per transport medium is allowed.
- **Item 19** - $85.84 less for report/project management.

A copy of the approved assessment cost proposal is enclosed for your information. Future invoices and/or other criteria included therein must comply with current SUPERB criteria per Section 44-2-20(2). Please reference **Cost Proposal number 03906:P** on all pertinent invoices and correspondence. Please note that Sections 44-2-110(4) and 44-2-130(B) of the SUPERB Statute state that no costs will be allowed (considered for payment) unless prior approval from the Department is obtained. If for any reason there is a change in this cost proposal, any associated changes to this cost proposal must be pre-approved by this Department in order for Marshall Miller & Associates to seek future cost compensation.

DHEC/UST/101697

Per the referenced contract, one assessment component invoice will be submitted with the Rapid Assessment Report. **Any item(s) not clearly or completely addressed in the report (SC certified driller's number, disposal manifest for soil borings, disposal manifests for generated ground water, modeling input data, etc.) WILL NOT be compensated by the SUPERB Account. The SCDHEC reserves the authority to pay only for work properly performed and/or technically justified and will only pay rates in accordance with bid number SB-76499-08/29/96MJN.** Further, SCDHEC reserves the right to question and/or reject costs if deemed unreasonable. The SCDHEC reserves the right to audit project records at any time during the project or after completion of the work. **In accordance with the referenced contract, two copies of The Rapid Assessment Report are due within 60 days from the date of this letter**. As agreed to in the referenced contract, the Owner/Operator of the referenced site will not be responsible for any costs associated with this assessment.

Monitoring well approval for 375 feet of temporary monitoring wells (geoprobe), fifteen (15) shallow monitoring wells, and one (1) deep pit cased monitoring well has been issued. A copy is enclosed for your records. Please note that all applicable South Carolina certification requirements regarding laboratory analyses, well installation, and report preparation must be met.

On all correspondence regarding this site, please reference Site ID number **12335**. On the component invoice please reference the Site number and Cost Agreement number **03906:P.** If you have questions concerning this correspondence, or would like to submit additional information, feel free to contact Michael A. Bishop , the site project manager, at (803) 734-0890 or Scott McInnis, the contract coordinator, at (803) 734-5615.

Sincerely,

State Lead & Field Services Section
Assessment & Corrective Action Division
Bureau of Underground Storage Tank Management

Michael A. Bishop, Hydrogeologist

Christopher S. Doll, P.G., Manager

enc: Approved Assessment Component Cost Proposal
Monitoring Well Approval

cc: Upper Savannah District EQC (w/ copy of Monitoring Well Approval)
Financial Section (with copy of Approved Assessment Component Cost Proposal)
Mr. H.F. Crawford, Route 4, Box 205, Abbeville, SC 29620 (w/enc)
Scott McInnis, Rapid Assessment Coordinator (w/enc)
Technical File (w/enc.)
DHEC/UST/101697

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

OCT 22 1997

# Monitoring Well Installation Approval Form

Date of Issue: 10/16/97

Approval No.: 8852

Approval is hereby granted to: Marshall Miller & Associates

Site ID #: 12335
County: Abbeville

This approval is for the construction of 375 feet of temporary, 15 shallow permanent and 1 deep permanent monitoring wells designated in accordance with the construction plans and technical specifications outlined in the Rapid Assessment Guidance Document dated June 1995 and Bid Specification dated August 29, 1996. The wells are to be constructed within the surficial aquifer for the intended purpose of monitoring ground-water quality and/or water level(s) at the referenced facility. Approval is provided with the following conditions:

1. The latitude and longitude, surveyed elevations, boring and/or geologist logs and actual (as built) construction details for each well will be submitted to Michael A. Bishop as part of the Rapid Assessment Report.

2. Each well will be labeled with an identification plate constructed of a durable material affixed to the casing or surface pad where it is readily visible. The plate will provide monitoring well I.D.#, date of construction, static water level, and driller name and state certification #. (permanent wells only)

3. Well construction and sampling derived waste including, but not necessarily limited to, drill cuttings, drilling fluids, development and purge water should be managed properly and in compliance with applicable requirements. If containerized, each vessel should be clearly labeled with regard to contents, source, and date of activity.

4. A minimum of forty-eight (48) hours prior to initiation of drilling activities, please provide notice to Michael A. Bishop at (803) 734-0890.

5. Please provide ground-water quality analytical data (chemical analysis and/or water level(s)) and associated measurements (i.e., in-situ field measurements) to Michael A. Bishop as part of the Rapid Assessment Report.

6. Permanent monitoring wells will be installed by a licensed well driller certified by the State of South Carolina. Temporary monitoring wells shall also be installed by a well driller certified by the State of South Carolina and shall not remain in place for longer than 30 days from the date of installation.

This approval is pursuant to the provisions of Section 44-55-40 of the 1976 South Carolina Code of Laws and the Department of Health and Environmental Control Regulations R.61-71.

Approved by:

Michael A. Bishop

Michael A. Bishop, Hydrogeologist
State Lead & Field Services Section
Assessment & Corrective Action Division
Bureau of UST Management

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

October 3, 1997

Mr. W. R. Day
Resident Maintenance Engineer
South Carolina Department of Transportation (SCDOT) Abbeville
Maintenance Facility
127 McGowan Avenue
Abbeville, SC 29620

Re: Application for Encroachment Permit received October 2, 1997
Crawford's Country Store
**Site ID #12335**
Abbeville County

Dear Mr. Day:

The SCDOT Liaison has reviewed the referenced Application for Encroachment Permit submitted by Marshall Miller & Associates on behalf of the South Carolina Department of Health and Environmental Control (SCDHEC). The application requests permission to install four permanent monitoring wells in the right-of-way of SC-28 near Abbeville, SC.

The SCDHEC considers the proposed location of the monitoring wells within the right-of-way as necessary and appropriate to assess the severity and extent of ground-water contamination at the Crawford's Country Store site. This assessment is in the public interest of protecting the ground-water supply of the State of South Carolina. The Department, therefore, respectfully requests that the SCDOT approve the application as submitted. Should you require additional information regarding this site, feel free to contact me at (803) 734-5432.

Sincerely,

Joel P. Padgett, P.G., SCDOT Liaison
Assessment and Corrective Action Division
Bureau of Underground Storage Tank Management

JPP/jpp
12335.OFF

DHEC/UST/JPP/100397

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

AUG 05 1997

Marshall Miller & Associates
Attn: Chuck Cline
P.O. Box 848
Bluefield, VA 24605

Re: Rapid Assessments
Contract SB-76499-08/29/96MJN
Rapid Assessment Plan Request

Dear Mr. Cline:

The Bureau of Underground Storage Tank Management of the South Carolina Department of Health and Environmental Control (SCDHEC) is providing you with the Rights-of-Entry for Sites # 12335, 15857 and 15876.

Rapid Assessment Implementation and Report submittal shall be performed in accordance within the referenced contract.

On all correspondence regarding these sites, please reference the Site # and C.P. #. The Rapid Assessment Reports shall be submitted to the attention of Scott McInnis.

Sincerely,

State Lead and Field Services Section
Assessment and Corrective Action Division
Bureau of Underground Storage Tank Management

W. A. (Scott) McInnis III, P.G., Hydrogeologist

Christopher S. Doll, P.G., Manager

enc: Rights-of-Entry

cc: Read File
Sites # 12335, 15857 and 15876 Technical Files(w/enc.)
Rapid Assessment File (w/enc.)

wam/mrshmlra.go9

DHEC/UST/072197

**If you are the owner of the former or existing underground storage tanks and the property owner, please complete this form.**

## PERMISSION FORM - SITE ID #15857

I, Ralph Gladden, certify that I am the legal owner of the underground storage tanks and property located at the facility identified below or serve as the authorized representative for the owner. I grant permission to the South Carolina Department of Health and Environmental Control (SCDHEC) to secure on my behalf services of a contractor for **only the planning and implementation of a rapid assessment for the above referenced facility** and authorize SCDHEC, or a contractor selected by SCDHEC, to enter this property at reasonable times only to accomplish these tasks. The contractor will be designated as my contractor for only the site rehabilitation activities outlined therein. Compensation to the contractor will be from the SUPERB Account and I will have no obligation to pay the contractor. I understand that SCDHEC shall be responsible for notifying me of all activities that are necessary prior to their initiation and shall promptly provide to me a summary of the data upon request.

Name of Facility Gladden's Grocery Phone # 803-377-3434

Street Address of Facility LS #9 North 2420 Pinckney

Town, City, District, Suburb Chester

Name of nearest intersecting street, road, highway, alley
US#9 & Prospect Rd

Is this facility within the city limits? (yes or no) No

Is this facility serviced by a public water or sewer utility? (yes or no) No, if no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines Ralph Gladden, phone number 803-377-3434

Were underground storage tanks previously removed from the ground at this facility? (yes or no) NC, if yes, please provide the name of a person we can contact that can assist in the location of the former underground storage tank excavation —,
Phone number —

Is the property currently leased or rented to someone? (yes or no) NO, if yes, please provide their name _____ and phone number _____ and let them know about the pending assessment activities. If vehicles or other mobile structures are parked over the former or existing underground storage tanks, they should be moved before SCDHEC's contractor gets to the site.

NAME of UST/property owner (Please Print): Ralph Gladden's

Phone Number (home) 803-581-2913 (work) 803-377-3434

Signature of UST/property Owner: _____

Witness: _____

Date: 6-[illegible] Month 25 Day 97 Year

RECEIVED
JUN 27 1997
Bureau of Underground
Storage Tank Management

- 01

**If you are the owner of the former or existing underground storage tanks and the property owner, please complete this form.**

RECEIVED
JUL 14 1997
Bureau of Underground Storage Tank Management

**PERMISSION FORM - SITE ID #15876**

I, James R. McDonald, certify that I am the legal owner of the underground storage tanks and property located at the facility identified below or serve as the authorized representative for the owner. I grant permission to the South Carolina Department of Health and Environmental Control (SCDHEC) to secure on my behalf services of a contractor for **only the planning and implementation of a rapid assessment for the above referenced facility and authorize SCDHEC**, or a contractor selected by SCDHEC, to enter this property at reasonable times only to accomplish these tasks. The contractor will be designated as my contractor for only the site rehabilitation activities outlined therein. Compensation to the contractor will be from the SUPERB Account and I will have no obligation to pay the contractor. I understand that SCDHEC shall be responsible for notifying me of all activities that are necessary prior to their initiation and shall promptly provide to me a summary of the data upon request.

Name of Facility Horseshoe Phone # 803-286-5676

Street Address of Facility SC Highway 321

Town, City, District, Suburb Blackstock SC Chester County

Name of nearest intersecting street, road, highway, alley Hwy 321

**Is this facility within the city limits? (yes or no)** No

Is this facility serviced by a public water or sewer utility? (yes or no) yes, if no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines _____, phone number _____

Were underground storage tanks previously removed from the ground at this facility? (yes or no) yes, if yes, please provide the name of a person we can contact that can assist in the location of the former underground storage tank excavation Unknown
Phone number _____

Is the property currently leased or rented to someone? (yes or no) No, if yes, please provide their name _____ and phone number _____ and let them know about the pending assessment activities. If vehicles or other mobile structures are parked over the former or existing underground storage tanks, they should be moved before SCDHEC's contractor gets to the site.

NAME of UST property owner (Please Print) James R + Cynthia T McDonald

Phone Number (home) 803-285-7230 (work) 803-286-5676

Signature of Property Owner _____

Witness _____

Date: 7/9/97 Month _____ Day _____ Year

**If you are the owner of the former or existing underground storage tanks and the property owner, please complete this form.**

RECEIVED
JUL 16 1997
Bureau of Underground Storage Tank Management

**PERMISSION FORM - SITE ID #12335**

I, HAROLD FRANKLIN CRAWFORD, certify that I am the legal owner of the underground storage tanks and property located at the facility identified below or serve as the authorized representative for the owner. I grant permission to the South Carolina Department of Health and Environmental Control (SCDHEC) to secure on my behalf services of a contractor for **only the planning and implementation of a rapid assessment for the above referenced facility** and authorize SCDHEC, or a contractor selected by SCDHEC, to enter this property at reasonable times only to accomplish these tasks. The contractor will be designated as my contractor for only the site rehabilitation activities outlined therein. Compensation to the contractor will be from the SUPERB Account and I will have no obligation to pay the contractor. I understand that SCDHEC shall be responsible for notifying me of all activities that are necessary prior to their initiation and shall promptly provide to me a summary of the data upon request.

Name of Facility CRAWFORD'S COUNTRY STORE INC Phone # 864-348-7442

Street Address of Facility 5870 HWY 28 NORTH

Town, City, District, Suburb ABBEVILLE, SC 29620

Name of nearest intersecting street, road, highway, alley
HWY 184

Is this facility within the city limits? (yes or no) NO

Is this facility serviced by a public water or sewer utility? (yes or no) NO, if no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines FRANK CRAWFORD, phone number 864-446-2000

Were underground storage tanks previously removed from the ground at this facility? (yes or no) YES, if yes, please provide the name of a person we can contact that can assist in the location of the former underground storage tank excavation FRANK CRAWFORD, Phone number 864-446-2000

Is the property currently leased or rented to someone? (yes or no) NO, if yes, please provide their name _____ and phone number _____ and let them know about the pending assessment activities. If vehicles or other mobile structures are parked over the former or existing underground storage tanks, they should be moved before SCDHEC's contractor gets to the site.

NAME of UST/property owner (Please Print): HAROLD FRANKLIN CRAWFORD

Phone Number (home) 864-446-2000 (work) 864-348-7442

Signature of UST/property Owner: Harold Franklin Crawford

Witness: Carol Cook

Date: July Month 12 Day 1997 Year

D H E C
PROMOTE PROTECT PROSPER
2600 Bull Street
Columbia, SC 29201-1708

JUL 7 1997

Harold Franklin Crawford
Rt 4 Box 205
Abbeville, South Carolina 29620

Re: Crawford's Country Store
**Site ID #12335**
Assessment Report Received
Abbeville County

Dear Mr. Crawford:

The Bureau of Underground Storage Tank Management of the South Carolina Department of Health and Environmental Control, has reviewed the referenced assessment report by Enviro-Test Services. A copy of the report is enclosed for your information.

A receptor survey and installation of one monitoring well were conducted as part of the initial site assessment. The results of the ground-water quality analysis indicates the concentrations of **Benzene, Toluene, Ethylbenzene, Xylenes, Naphthalenes**, and **Methyl Tertiary Butyl Ether (MTBE)** were above allowable risk based screening levels (RBSL). Based on these results, the site's priority classification is **2B**. Therefore, SUPERB funds are available, or will soon be available, to implement the next necessary scope of work. The scope of work to be implemented is a **Rapid Assessment.**

As the Owner or Operator of the Underground Storage Tanks (USTs) for this site, you have two funding options for proceeding with implementation of the scope of work indicated above:

**Funding Option 1**

You or your contractor can receive direct billing from the fund at the SUPERB allowable costs. If you need assistance in finding a contractor, please let us know and we will provide you with a list of companies for you to contact. If you wish to proceed under this option and you do not require assistance, please complete and return the enclosed information sheet within 10 days. Please have your contractor complete and submit the enclosed Assessment Component Cost Proposal form and Rapid Assessment Plan forms within thirty days of the date of this letter. Every component may not be necessary to complete the above scope of work. The SUPERB allowable cost for each component is included on the Assessment Cost Proposal form.

**Funding Option 2**

The SCDHEC will directly procure the services of an environmental contractor on your behalf. All activities will be directed and coordinated by SCDHEC and you will be informed of the results. If you wish to use this option, please complete the enclosed Right-Of-Entry form(s). Completed Right-Of-Entry forms are needed from both the underground storage tank and property owners. If you own the underground storage tank but do not own the property, please provide a copy of the appropriate form to the property owner and return the completed forms **within ten days of receipt of this letter.**

On all correspondence regarding this site, please reference site ID # **12335.** Please be sure to include the requested information so that the appropriate approvals can be issued. **Note: approval from the Department must be issued before work begins.** Please call Michael A. Bishop at (803) 734 - 0890 if you have questions or need additional information.

Sincerely,

State Lead & Field Services Section
Assessment & Corrective Action Division
Bureau of Underground Storage Tank Management

Michael A. Bishop, Hydrogeologist

Christopher S. Doll, P.G., Manager

enc: Report of Investigation
Permission/Right of Entry Forms (3)
Information Sheet
Assessment Component Cost Proposal Form
Rapid Assessment Plan Form

cc: Technical File

DHEC/UST/070197

**If you are the owner of the former or existing underground storage tanks and the property owner, please complete this form.**

## PERMISSION FORM - SITE ID #12335

I, HAROLD FRANKLIN CRAWFORD, certify that I am the legal owner of the underground storage tanks and property located at the facility identified below or serve as the authorized representative for the owner. I grant permission to the South Carolina Department of Health and Environmental Control (SCDHEC) to secure on my behalf services of a contractor for only the activities outlined in the November 27, 1996 letter and authorize SCDHEC, or a contractor selected by SCDHEC, to enter this property at reasonable times only to accomplish these tasks. The contractor will be designated as my contractor for only the site rehabilitation activities outlined therein. Compensation to the contractor will be from the SUPERB Account and I will have no obligation to pay the contractor. I understand that SCDHEC shall be responsible for notifying me of all activities that are necessary prior to their initiation and shall promptly provide to me a summary of the data upon request.

Name of Facility Crawford's Country Store Phone # 864-348-7442

Street Address of Facility ROUTE # 4 BOX 205

Town, City, District, Suburb ABBEVILLE, SC 29620

Name of nearest intersecting street, road, highway, alley
INTERSECTION OF HIGHWAY 28 and 184

Is this facility within the city limits? (yes or no) NO

Is this facility serviced by a public water or sewer utility? (yes or no) NO, if no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines HAROLD FRANKLIN CRAWFORD, phone number 864-446-2000

Were underground storage tanks previously removed from the ground at this facility? (yes or no) YES, if yes, please provide the name of a person we can contact that can assist in the location of the former underground storage tank excavation HAROLD FRANKLIN CRAWFORD,
Phone number 864-446-2000

Is the property currently leased or rented to someone? (yes or no) NO, if yes, please provide their name _____ and phone number _____ and let them know about the pending assessment activities. If vehicles or other mobile structures are parked over the former or existing underground storage tanks, they should be moved before SCDHEC's contractor gets to the site.

NAME of UST/property owner (Please Print): HAROLD FRANKLIN CRAWFORD

Phone Number (home) 864-446-2000 (work) 864-348-7442

Signature of UST/property Owner: Harold Franklin Crawford

Witness: Sam W Allen

Date: 12 Month 6 Day 1996 Year

RECEIVED
DEC 09 1996
Bureau of Underground
Storage Tank Management

South Carolina
DHEC
Department of Health and Environmental Control
2600 Bull Street, Columbia, SC 29201

**Commissioner:** Douglas E. Bryant

**Board:** Richard E. Jabbour, DDS, Chairman
Robert J. Stripling, Jr., Vice Chairman
Sandra J. Molander, Secretary

William E. Applegate, III,
John H. Burriss
Tony Graham, Jr., MD
John B. Pate, MD

*Promoting Health, Protecting the Environment*

Date: OCT 01 1993

Frank Crawford
Rt. 4, P.O. Box 205
Abbeville, SC 29620

Re: GWPD Site # N-01-NO-12335 CRAWFORD'S COUNTRY STORE
Underground Storage Tank Release
Priority Ranking

Dear Underground Storage Tank Owner:

All releases from regulated underground storage tanks that have been reported to this Department have been prioritized using a ranking system that evaluates environmental and health related factors. The ranking system identifies those sites that represent the most serious threats where the Department should be allocating available SUPERB monies.

Currently, the referenced site ranks below many hundreds of other sites and no site rehabilitation activities under the direct billing method have been initiated to date. Therefore, since no site rehabilitation activities under direct billing are currently approved for this site (and due to the relative ranking), obligating financial resources for this site through the direct billing method is not possible at this time.

However, pursuant to R.61-92, § 280.65, the SCDHEC will provide expedited reviews of technical work plans should you wish to proceed with site rehabilitation activities and seek reimbursement upon completion. Please note that reimbursement typically takes a much longer period of time to process and that SUPERB monies are dispersed for reimbursement only so long as funds are available. Reimbursement requests are processed by SCDHEC in chronological order of receipt.

If you have any further questions, please contact Mr. David Baize or Mr. Chris Doll at 734-5331.

Sincerely,

Stanley L. Clark

Stanley L. Clark, P.G., Director
Ground-Water Protection Division

slc/rc-no.cp

recycled paper

# GWPD INTERNAL D-BASE UPDATE CHECKLIST

**FULL UST REGIST #** N-1--12335 SITE NAME Crawford County Store

OTHER REG # _____ OTHER REG # _____

IS THIS SITE IN REMEDIATION? **YES** **NO** PROJ HYDRO/TECH Unassigned

____ TRANSFER OF OWNER TRANSFERED ON _____

✓ UST ABANDONMENT ARE USTs REPLACED? **YES** **NO**

30 DAY NOTICE REC'D _____ ABD OK ON _____

TRANSFER of OWNERSHIP/CLOSURE ASSESSMENT REPORT RECEIVED ON 12/3/91

IS REPORT COMPLETE? **YES** **NO** (IF NO, FOLLOW UP WORK IS/MAY BE REQUIRED)

___ TANKS, PIPING & DISPENSERS SAMPLED? ___ SCALED MAPS? ___ SC LAB DATA/COC? REVIEWED BY ____

**NOTE!** ASSESSMENT GUIDELINES REVISED: 11-89, 7-90, 9-90, 12-90, 7-91, 1-92 (CHECK DATE USTs ABD)

**ALL** USTs (#_____) ABANDONED ON _____ ABD METHOD* _____

**SOME** USTs ABANDONDED (list below) (Return Notification to Active File)

| UST # | GALLONS | DATE ABD. | METHOD | UST # | GALLONS | DATE ABD. | METHOD |
|---|---|---|---|---|---|---|---|
| | 10,000 GW | 10/24/91 | RFG | | 1000 DL | 10/24/91 | RFG |
| | 8,000 GW | | | | 550 KW | | RFG |
| | 2,000 GW | | | | | | |

APPROPRIATE REGISTRATION FEES PAID? **YES** **NO** INITIAL _____

___ 1988-1989 ___ 1989-1990 ___ 1990-1991 ___ 1991-1991 ____ 1992-1993; TOTAL DUE = _____

UST DATABASE CORRECTED ON _____ BY _____

IS **ANY** FOLLOW UP WORK REQUIRED? **YES** **NO** (PLEASE INDICATE WHICH APPLY)

_____) NEED WRITTEN ABD DATE. RP INFORMED ON _____

_____) NEED NEW OWNERS SIGNATURE. RP INFORMED ON _____

_____) FEES DUE. LETTER TO RP ON _____ BY _____

_____) AR/INFO DUE. LETTER TO RP ON _____ BY _____

_____) _____ LETTER TO RP ON _____ BY _____

_____) _____ LETTER TO RP ON _____ BY _____

RETURN **NOTIFICATION** FORM TO: ✓ ACTIVE FILE ✓ ABANDONED FILE

RETURN TECHNICAL FILE TO: ALD PROJ HYDRO ____ ABANDONED FILE

**IMPORTANT DATES AND INFORMATION**

NOTIFICATION : FOR ANY REGULATED UST IN USE AFTER JAN. 1, 1974
CLOSURE ASSMT: REQ'D BY FEDERAL REGULATION AFTER DEC. 22, 1988
: REQ'D BY STATE REGULATION AFTER MARCH 23, 1990
T of O ASSMT : REQ'D BY STATE REGULATION AFTER MARCH 23, 1990
SUPERB FEES : USTs NOT ABD, A PER TANK FEE IS DUE EACH FISCAL YEAR
FISCAL YEAR : JULY 1 TO JUNE 31, SUPERB INVOICES MAILED IN JULY

*** ABD METHODS**

RFG = REMOVED FROM GROUND
FS = FILLED W/ SAND
FS = FILLED W/ INERT MATERIAL
FG = FILLED W/ GRAVEL
FC = FILLED W/ CONCRETE
FP = FILLED W/ POLY FOAM

This sheet is to ASSIST with most D-Base changes resulting from transfer of ownership (T of O) or UST abandonment. Attach this sheet to the original notification form and, if needed make a COPY for the technical file.

UPDATE 920228

South Carolina
DHEC
Department of Health and Environmental Control
2600 Bull Street, Columbia, SC 29201

**Interim Commissioner:** Thomas E. Brown, J

**Board:** John H. Burriss, Chairman
Richard E. Jabbour, DDS, Vice Chairman
Robert J. Stripling, Jr. Secretary
William E. Applegate, III,
Toney Graham, Jr., MD
Sandra J. Molander
John B. Pate, MD

*Promoting Health, Protecting the Environment*

March 1, 1993
**Expiration Date: June 1, 1993.**

Stan Warner
Soil Remediation Company
PO Box 6217
Denver, CO 80206-6217

Re: Crawford's Country Store
**GWPD Site ID# 12355**
Abbeville County

Dear Mr. Warner:

This office hereby grants approval to Soil Remediation Company for thermal treatment of approximately 700 tons of virgin petroleum contaminated soils from the referenced underground storage tank facility at the Yadkin Brick Company facility in New London, North Carolina.

The following restrictions apply to all thermally treated soils.

1. Prior approval must be obtained from the appropriate thermal treatment facility officials.
2. The waste must be compatible with the treatment facility and not adversely affect the safe and efficient operation of the unit.
3. There can be no spillage or leakage during transport.
4. The DHEC District Solid Waste Consultant (Bob Jackson, # 223-0333) must be notified of your soil disposal location 72 hours in advance.
5. Weekend or holiday disposal is prohibited without prior notification of the District Solid Waste Consultant.
6. All State and Federal Air Quality Regulations must be strictly complied with.
7. This approval will be for one time only and is invalid after June 1, 1993.
8. If reimbursement from the State Underground Environmental Response Bank (SUPERB) Account is requested, copies of all laboratory data sheets, weight tickets, and disposal manifests must be provided to this office (retain originals in your own records).
9. Approval of your request for treatment at the above referenced facility does not guarantee that all of the associated costs will be considered reasonable or reimbursable from the SUPERB Account.

Sincerely,

Bronson E. Titus
UST Regulatory Section
Ground-Water Protection Division
Bureau of Drinking Water Protection

bet\12335.thm

cc: Upper Savannah EQC
Larry Bunn, Air Quality Control
Harold Seabrook, Bureau of Solid & Hazardous Waste Management
Frank Crawford, Rt. 4 Box 205, Abbeville, SC 29620

recycled paper

South Carolina
DHEC
Department of Health and Environmental Control
2600 Bull Street, Columbia, SC 29201

**Interim Commissioner:** Thomas E. Brown, Jr.

**Board:** John H. Burriss, Chairman
Richard E. Jabbour, DDS, Vice Chairman
Robert J. Stripling, Jr. Secretary
William E. Applegate, III,
Toney Graham, Jr., MD
Sandra J. Molander
John B. Pate, MD

*Promoting Health, Protecting the Environment*

October 20, 1992

**Expiration Date: October 30, 1992.**

Blue Ridge Environmental Services, Inc.
406 Beaumaonde Avenue
Shelby, North Carolina 28150

Re: Crawford's Country Store
**GWPD Site ID# 12355**
Abbeville County

Dear Mr. Harrill:

This office hereby grants approval to Blue Ridge Environmental Environmental Services, Inc. for thermal treatment of approximately 700 tons of virgin petroleum contaminated soils from the referenced underground storage tank facility at the Yadkin Brick Company facility in New London, North Carolina.

The following restrictions apply to all thermally treated soils.

1. Prior approval must be obtained from the appropriate thermal treatment facility officials.
2. The waste must be compatible with the treatment facility and not adversely affect the safe and efficient operation of the unit.
3. There can be no spillage or leakage during transport.
4. The DHEC District Solid Waste Consultant (Bob Jackson, # 223-0333) must be notified of your soil disposal location 72 hours in advance.
5. Weekend or holiday disposal is prohibited without prior notification of the District Solid Waste Consultant.
6. All State and Federal Air Quality Regulations must be strictly complied with.
7. This approval will be for one time only and is invalid after October 30, 1992.
8. If reimbursement from the State Underground Environmental Response Bank (SUPERB) Account is requested, copies of all laboratory data sheets, weight tickets, and disposal manifests must be provided to this office (retain originals in your own records).
9. Approval of your request for treatment at the above referenced facility does not guarantee that all of the associated costs will be considered reasonable or reimburseable from the SUPERB Account.

Sincerely,

Bronson E. Titus
UST Regulatory Section
Ground-Water Protection Division
Bureau of Drinking Water Protection

bet\12335.thm
cc: Upper Savannah EQC
Larry Bunn, Air Quality Control
Harold Seabrook, Bureau of Solid & Hazardous Waste Management
Gary Eggspuehler, SRC, PO Box 6217, Denver, CO 80206
Frank Crawford, Rt. 4 Box 205, Abbeville, SC 29620

recycled paper

August 7, 1992

RECEIVED
AUG 2 0 1992
Groundwater Protection Division

Mr. Bronson Titus
Groundwater Protection Division
SCDHEC
2600 Bull Street
Columbia, South Carolina

RE: **STOCKPILED SOIL REMOVAL**
**GWPD SITE NO. 12335**
**CRAWFORDS COUNTRY STORE**

Dear Mr. Titus:

This letter is in response to your request to Blue Ridge Environmental Services, Inc. regarding the issue of environmental insurance at the above referenced site.

We do not have environmental insurance, nor did we have environmental insurance when contamination was discovered at the site.

Sincerely,

Frank Crawford

Owner

Frank Crawford

South Carolina
DHEC
Department of Health and Environmental Control
2600 Bull Street, Columbia, SC 29201

Commissioner: Michael D. Jarrett

Board: William E. Applegate, III, Chairman
John H. Burriss, Vice Chairman
Richard E. Jabbour, DDS, Secretary

Promoting Health, Protecting the Environment

Toney Graham, Jr., MD
Sandra J. Molander
John B. Pate, MD
Robert U. Stripling, Jr.

RECEIVED
JUN 19 1992
Groundwater Protection Division

Date May 25, 1992

Name Frank Crawford
Address Crawford's Country Store
Rt. 4 Box 205
Abbeville, SC 29620

GWPD Site ID# 12336
Facility Name Crawford's Country Store
Report dated 12/3/91
EQC District Upper Savannah

Dear Tank Owner:

The South Carolina Department of Health and Environmental Control has received the above referenced report of stockpiled soils. The disposal plan as submitted is **incomplete in the following checked areas** and cannot be evaluated by this office. Please review the Assessment Guidelines and submit the requested information to the person listed below on or before July 15, 1992

**PLEASE SUBMIT THE FOLLOWING INFORMATION:**

___) **The type of petroleum product released.**
___) **The volume of soil to be treated.** (CY or TONS)
___) A scaled site map with stockpile and sample locations.

___) **A description of sampling methods.**
___) **A description of analytical methods.**
✓) The analytical laboratories' Chain-of-Custody forms.
✓) An acceptance letter from the thermal facility treating the soils or the landfill accepting the soils.

**THE FOLLOWING ANALYSIS MUST BE SUBMITTED:**

✓) **Additional composite samples are required.** 15 (number)
✓) **Each composite sample must be analyzed for:** (TPH) (BTEX)
✓) A DHEC Certified ORGANIC Lab must analyze the samples.

**FOR A SUPERB FUND REQUEST TO BE EVALUATED SUBMIT THE FOLLOWING:**

___) A written request for participation in the SUPERB program.
___) 1) A copy of any environmental spill insurance policy or,
2) a written statement of a self insurance mechanism or,
3) a written statement that no such insurance policy exists.
___) Full payment of the annual UST invoices. ($_____ DUE)

On all correspondence related to this site, please reference the **GWPD Site ID Number.** Questions should be addressed to the Ground-Water Protection Division at (803) 734-5331.

**Please return requested information to:** Angela L. Dillon
GWPD, 2600 Bull St., Columbia, SC 29201 FAX (803) 734-4661

Prism Laboratories, Inc.
P.O. Box 137
10471 Asheville Highway
Inman, S.C. 29349
Lab ID #: 42002

June 5, 1992

Blue Ridge Environmental Serv.
Attn: Joe McMurray
406 Beaumonde Ave.
Shelby, NC 28150

Dear Mr. McMurray:

Below are results of analysis of 7 samples received for examination on June 1, 1992:

**Customer Code: BLUERIDG** Phone Number: (704)482-2111/fax (704)482-4335
**LAB I.D. AA00360** Prism ID Number 2018A7 Prism Customer Number 5-6771
Collection Date: 06/01/92 Collection Time: 10:30
Submittal Date: 06/01/92 Submittal Time: 10:47
Customer Sample I.D#: AC-1

| TEST PARAMETER | UNITS | TEST RESULT | DETECTION LIMIT |
|---|---|---|---|
| Prep. Method 5030, GC FID | | done | |
| Dilution / Concentration Factor | | 1000 | |
| TPH by 5030, GC FID | mg/kg | [redacted] | .5 |
| % Duplicate Recovery, 5030 | % | 95 | 80 |
| % Spike Recovery, 5030 | % | 91 | 80 |
| Prep. Method 5030, GC FID | | done | |
| Dilution / Concentration Factor | | 100 | |
| Multicomponent analysis: Purgeable Aromatics, 8020 | | | |
| Methyl Tert Butyl Ether | ug/kg | Not Det | 100 |
| Benzene | ug/kg | Not Det | 100 |
| Toluene | ug/kg | Not Det | 100 |
| Ethyl Benzene | ug/kg | 317 | 100 |
| Xylene | ug/kg | 1827 | 100 |
| % Duplicate Recovery, 8020 | % | 100 | 80 |
| % Spike Recovery, 8020 | % | 107 | 80 |
| Multicomponent analysis: Reagent Blank for BTEX | | | |
| Benzene | ug/L | Not Det | 10 |
| Toluene | ug/L | Not Det | 10 |
| Ethylbenzene | ug/L | Not Det | 10 |
| M&P Xylene | ug/L | Not Det | 10 |
| O-Xylene | ug/L | Not Det | 10 |

Comment :
Project name: Lil Cricket Food Store

P.O. #: 10114
Composite Soil Stockpile

**Customer Code: BLUERIDG** Phone Number: (704)482-2111/fax(704)482-4335
**LAB I.D. AA00361** Prism ID Number 2018A7 Prism Customer Number 5-6771
Collection Date: 06/01/92 Collection Time: 10:33
Submittal Date: 06/01/92 Submittal Time: 10:47
Customer Sample I.D#: C-2

| TEST PARAMETER | UNITS | TEST RESULT | DETECTION LIMIT |
|---|---|---|---|
| Prep. Method 5030, GC FID | | done | |
| Dilution / Concentration Factor | | 100 | |
| TPH by 5030, GC FID | mg/kg | 40.0 | .5 |
| % Duplicate Recovery, 5030 | % | 95 | 80 |
| % Spike Recovery, 5030 | % | 107 | 80 |
| Prep. Method 5030, GC FID | | done | |
| Dilution / Concentration Factor | | 100 | |
| Multicomponent analysis: Purgeable Aromatics, 8020 | | | |
| Methyl Tert Butyl Ether | ug/kg | Not Det | 100 |
| Benzene | ug/kg | 400 | 100 |
| Toluene | ug/kg | Not Det | 100 |
| Ethyl Benzene | ug/kg | Not Det | 100 |
| Xylene | ug/kg | 377 | 100 |
| % Duplicate Recovery, 8020 | % | 100 | 80 |
| % Spike Recovery, 8020 | % | 91 | 80 |
| Multicomponent analysis: Reagent Blank for BTEX | | | |
| Benzene | ug/L | Not Det | 10 |
| Toluene | ug/L | Not Det | 10 |
| Ethylbenzene | ug/L | Not Det | 10 |
| M&P Xylene | ug/L | Not Det | 10 |
| O-Xylene | ug/L | Not Det | 10 |

Comments:
Project name: Lil Cricket Food Store
P.O. #: 10114
Composite Soil Stockpile

Customer Code: BLUERIDG Phone Number: (704)482-2111/fax(704)482-4335
LAB I.D. AA00362 Prism ID Number 2018A7 Prism Customer Number 5-6771
Collection Date: 06/01/92 Collection Time: 10:37
Submittal Date: 06/01/92 Submittal Time: 10:47
Customer Sample I.D#: C-3

| TEST PARAMETER | UNITS | TEST RESULT | DETECTION LIMIT |
|---|---|---|---|
| Prep. Method 5030, GC FID | | done | |
| Dilution / Concentration Factor | | 1000 | |
| TPH by 5030, GC FID | mg/kg | 87.0 | .5 |
| % Duplicate Recovery, 5030 | % | 95 | 80 |
| % Spike Recovery, 5030 | % | 107 | 80 |
| Prep. Method 5030, GC FID | | done | |
| Dilution / Concentration Factor | | 100 | |
| Multicomponent analysis: Purgeable Aromatics, 8020 | | | |
| Methyl Tert Butyl Ether | ug/kg | Not Det | 100 |
| Benzene | ug/kg | Not Det | 100 |
| Toluene | ug/kg | Not Det | 100 |
| Ethyl Benzene | ug/kg | 482 | 100 |
| Xylene | ug/kg | 4213 | 100 |
| % Duplicate Recovery, 8020 | % | 100 | 80 |
| % Spike Recovery, 8020 | % | 91 | 80 |
| Multicomponent analysis: Reagent Blank for BTEX | | | |
| Benzene | ug/L | Not Det | 10 |
| Toluene | ug/L | Not Det | 10 |
| Ethylbenzene | ug/L | Not Det | 10 |
| M&P Xylene | ug/L | Not Det | 10 |
| O-Xylene | ug/L | Not Det | 10 |

Comments:
Project name: Lil Cricket Food Store
P.O. #: 10114
Composite Soil Stockpile

Customer Code: BLUERIDG Phone Number: (704)482-2111/fax(704)482-4335
LAB I.D. AA00363 Prism ID Number 2018A7 Prism Customer Number 5-6771
Collection Date: 06/01/92 Collection Time: 10:42
Submittal Date: 06/01/92 Submittal Time: 10:47
Customer Sample I.D#: C-4

| TEST PARAMETER | UNITS | TEST RESULT | DETECTION LIMIT |
|---|---|---|---|
| Prep. Method 5030, GC FID | | done | |

Sample AA00363 (continued)

| TEST PARAMETER | UNITS | TEST RESULT | DETECTION LIMIT |
|---|---|---|---|
| Dilution / Concentration Factor | | 100 | |
| TPH by 5030, GC FID | mg/kg | 20.0 | .5 |
| % Duplicate Recovery, 5030 | % | 95 | 80 |
| % Spike Recovery, 5030 | % | 107 | 80 |
| Prep. Method 5030, GC FID | | done | |
| Dilution / Concentration Factor | | 100 | |
| Multicomponent analysis: Purgeable Aromatics, 8020 | | | |
| Methyl Tert Butyl Ether | ug/kg | Not Det | 10 |
| Benzene | ug/kg | Not Det | 10 |
| Toluene | ug/kg | Not Det | 10 |
| Ethyl Benzene | ug/kg | Not Det | 10 |
| Xylene | ug/kg | Not Det | 10 |
| % Duplicate Recovery, 8020 | % | 100 | 80 |
| % Spike Recovery, 8020 | % | 91 | 80 |
| Multicomponent analysis: Reagent Blank for BTEX | | | |
| Benzene | ug/L | Not Det | 10 |
| Toluene | ug/L | Not Det | 10 |
| Ethylbenzene | ug/L | Not Det | 10 |
| M&P Xylene | ug/L | Not Det | 10 |
| O-Xylene | ug/L | Not Det | 10 |

**Comments:**
Project name: Lil Cricket Food Store
P.O. #: 10114
Composite Soil Stockpile

**Customer Code: BLUERIDG** Phone Number: (704)482-2111/fax(704)482-4335
**LAB I.D. AA00364** Prism ID Number 2018A7 Prism Customer Number 5-6771
**Collection Date: 06/01/92** **Collection Time: 10:48**
Submittal Date: 06/01/92 Submittal Time: 10:47
Customer Sample I.D#: C-5

| TEST PARAMETER | UNITS | TEST RESULT | DETECTION LIMIT |
|---|---|---|---|
| Prep. Method 5030, GC FID | | done | |
| Dilution / Concentration Factor | | 100 | |
| TPH by 5030, GC FID | mg/kg | 48.0 | .5 |
| % Duplicate Recovery, 5030 | % | 95 | 80 |

Sample AA00364 (continued)

| TEST PARAMETER | UNITS | TEST RESULT | DETECTION LIMIT |
|---|---|---|---|
| % Spike Recovery, 5030 | % | 107 | 80 |
| Prep. Method 5030, GC FID | | done | |
| Dilution / Concentration Factor | | 100 | |
| Multicomponent analysis: Purgeable Aromatics, 8020 | | | |
| Methyl Tert Butyl Ether | ug/kg | Not Det | 100 |
| Benzene | ug/kg | Not Det | 100 |
| Toluene | ug/kg | Not Det | 100 |
| Ethyl Benzene | ug/kg | Not Det | 100 |
| Xylene | ug/kg | Not Det | 100 |
| % Duplicate Recovery, 8020 | % | 100 | 80 |
| % Spike Recovery, 8020 | % | 91 | 80 |
| Multicomponent analysis: Reagent Blank for BTEX | | | |
| Benzene | ug/L | Not Det | 10 |
| Toluene | ug/L | Not Det | 10 |
| Ethylbenzene | ug/L | Not Det | 10 |
| M&P Xylene | ug/L | Not Det | 10 |
| O-Xylene | ug/L | Not Det | 10 |

**Comments:**
**Project name: Lil Cricket Food Store**
**P.O. #: 10114**
**Composite Soil Stockpile**

**Customer Code: BLUERIDG** Phone Number: (704)482-2111/fax(704)482-4335
**LAB I.D. AA00365** Prism ID Number 2018A7 Prism Customer Number 5-6771
Collection Date: 06/01/92 Collection Time: 10:54
Submittal Date: 06/01/92 Submittal Time: 10:47
Customer Sample I.D#: C-6

| TEST PARAMETER | UNITS | TEST RESULT | DETECTION LIMIT |
|---|---|---|---|
| Prep. Method 5030, GC FID | | done | |
| Dilution / Concentration Factor | | 100 | |
| TPH by 5030, GC FID | mg/kg | 199.0 | .5 |
| % Duplicate Recovery, 5030 | % | 95 | 80 |
| % Spike Recovery, 5030 | % | 107 | 80 |
| Prep. Method 5030, GC FID | | done | |
| Dilution / Concentration Factor | | 100 | |

Sample AA00365 (continued)

| TEST PARAMETER | UNITS | TEST RESULT | DETECTION LIMIT |
|---|---|---|---|
| Multicomponent analysis: Purgeable Aromatics, 8020 | | | |
| Methyl Tert Butyl Ether | ug/kg | Not Det | 100 |
| Benzene | ug/kg | Not Det | 100 |
| Toluene | ug/kg | Not Det | 100 |
| Ethyl Benzene | ug/kg | 280 | 100 |
| Xylene | ug/kg | 1884 | 100 |
| % Duplicate Recovery, 8020 | % | 100 | 80 |
| % Spike Recovery, 8020 | % | 91 | 80 |
| Multicomponent analysis: Reagent Blank for BTEX | | | |
| Benzene | ug/L | Not Det | 10 |
| Toluene | ug/L | Not Det | 10 |
| Ethylbenzene | ug/L | Not Det | 10 |
| M&P Xylene | ug/L | Not Det | 10 |
| O-Xylene | ug/L | Not Det | 10 |

Comments:
Project name: Lil Cricket Food Store
P.O. #: 10114
Composite Soil Stockpile

**Customer Code: BLUERIDG** Phone Number: (704)482-2111/fax(704)482-4335
**LAB I.D. AA00366** Prism ID Number 2018A7 Prism Customer Number 5-6771
Collection Date: 06/01/92 Collection Time: 11:02
Submittal Date: 06/01/92 Submittal Time: 10:47
Customer Sample I.D#: C-7

| TEST PARAMETER | UNITS | TEST RESULT | DETECTION LIMIT |
|---|---|---|---|
| Prep. Method 5030, GC FID | | done | |
| Dilution / Concentration Factor | | 100 | |
| TPH by 5030, GC FID | mg/kg | 31.0 | .5 |
| % Duplicate Recovery, 5030 | % | 95 | 80 |
| % Spike Recovery, 5030 | % | 107 | 80 |
| Prep. Method 5030, GC FID | | done | |
| Dilution / Concentration Factor | | 100 | |
| Multicomponent analysis: Purgeable Aromatics, 8020 | | | |
| Methyl Tert Butyl Ether | ug/kg | Not Det | 100 |
| Benzene | ug/kg | Not Det | 100 |

| | | | |
|---|---|---|---|
| Purgeable Aromatics, 8020 (continued): | | | |
| Toluene | ug/kg | Not Det | 100 |
| Ethyl Benzene | ug/kg | Not Det | 100 |
| Xylene | ug/kg | 309 | 100 |
| % Duplicate Recovery, 8020 | % | 100 | 80 |
| % Spike Recovery, 8020 | % | 91 | 80 |
| Multicomponent analysis: Reagent Blank for BTEX | | | |
| Benzene | ug/L | Not Det | 10 |
| Toluene | ug/L | Not Det | 10 |
| Ethylbenzene | ug/L | Not Det | 10 |
| M&P Xylene | ug/L | Not Det | 10 |
| O-Xylene | ug/L | Not Det | 10 |

Comments:
Project name: Lil Cricket Food Store
P.O. #: 10114
Composite Soil Stockpile

Please advise should you have questions concerning these data.

Respectfully submitted,

Amy Aukamp

Amy Aukamp
Laboratory Supervisor

# PRISM LABORATORIES, INC.

2018A7


**CHAIN OF CUSTODY RECORD**
Main Office: 449 Springbrook Road; Charlotte, NC 28217
P.O. Box 240543; Charlotte, NC 28224-0543
Phone: (704) 529-6364 Fax: (704) 525-0409
SC Lab: 10471 Asheville Highway; P.O. Box 137; Inman, SC 29349
Phone:(803) 472-9046 Fax:(803) 472-5172


Client: Blue Ridge
Address:

Report To: Blue Ridge Environmental Services
Bill To: N/A
P.O.#/Billing Reference:
Project Name/#: Li'l Cricket Food Store Union, SC

Prism Client No.
Sampled by (PRINT): SCOTT T. OLSON
Sampler Signature:
Requested Due Date:

| Item No. | Sample Description | Time | Matrix | Prism No. | No. of Containers | Preservatives: None | $H_2SO_4$ | $HNO_3$ | VOA | Analyses Request: 5030 | 8020 | | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | C-1 | 10:30 | Soil | AA03360 | 1 | X | | | | ✓ | ✓ | | | | | |
| 2 | C-2 | 10:32 | " | AA03361 | 1 | X | | | | ✓ | ✓ | | | | | Comp to 2 soil stockpiles |
| 3 | C-3 | 10:37 | " | 362 | 1 | X | | | | ✓ | ✓ | | | | | " |
| 4 | C-4 | 10:42 | " | 363 | 1 | X | | | | ✓ | ✓ | | | | | " |
| 5 | C-5 | 10:48 | " | 364 | 1 | X | | | | ✓ | ✓ | | | | | " |
| 6 | C-6 | 10:54 | " | 365 | 1 | X | | | | ✓ | ✓ | | | | | " |
| 7 | G-7 | 11:02 | " | 366 | 1 | X | | | | ✓ | ✓ | | | | | " |
| 8 | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | |

| Relinquished By/Affiliation | Accepted By/Affiliation | Date | Time |
|---|---|---|---|
| Scott T. Olson | Amy Aukamp | 6-1-92 | 12:08 |
| | | | |
| | | | |
| | | | |

Comments: PO# 10114

Cooler Nos.: Bailers: Shipment Method: Out/Date: Returned/Date:

DES: UST: X Groundwater: Drinking Water: Solid Waste:

May 20, 1992

Mr. Mike Davis
Groundwater Protection Division
SCDHEC
2600 Bull Street
Columbia, South Carolina 29201

Ref: Crawford's Country Store
GWPD Site ID # 12335
Route 4, Box 205
Abbeville, South Carolina

Dear Mr. Davis:

I have discussed the above referenced site with Freddie Harrill of Blue Ridge Environmental Services, Inc. Soil Remediation Company has hereby agreed to accept the soils at Yadkin Brick Company located in New London, North Caorlina.

If you have any questions, please contact the undersigned at (303) 756-2441.

Sincerely,

SOIL REMEDIATION COMPANY

Gary Eggspuehler
Technical Representative

South Carolina
DHEC
Department of Health and Environmental Control
2600 Bull Street, Columbia, SC 29201

**Commissioner:** Michael D. Jarrett

**Board:** William E. Applegate, III, Chairman
John H. Burriss, Vice Chairman
Richard E. Jabbour, DDS, Secretary
Toney Graham, Jr., MD
Sandra J. Molander
John B. Pate, MD
Robert J. Stripling, Jr.

*Promoting Health, Protecting the Environment*

Date May 25, 1992

Name Frank Crawford
Address Crawford's Country Store
Rt. 4 Box 205
Abbeville, SC 29620

**GWPD Site ID#** 12335
Facility Name Crawford's Country Store
Report dated 12/3/91
EQC District Upper Savannah

Dear Tank Owner:

The South Carolina Department of Health and Environmental Control has received the above referenced report of stockpiled soils. The disposal plan as submitted is **incomplete in the following checked areas** and cannot be evaluated by this office. Please review the Assessment Guidelines and submit the requested information to the person listed below on or before July 15, 1992

**PLEASE SUBMIT THE FOLLOWING INFORMATION:**

___) The type of petroleum product released.
___) The volume of soil to be treated. (CY or TONS)
___) A scaled site map with stockpile and sample locations.

___) A description of sampling methods.
___) A description of analytical methods.
_✓_) The analytical laboratories' Chain-of-Custody forms.
_✓_) An acceptance letter from the thermal facility treating the soils or the landfill accepting the soils.

**THE FOLLOWING ANALYSIS MUST BE SUBMITTED:**

_✓_) Additional composite samples are required. 15 (number)
_✓_) Each composite sample must be analyzed for: (TPH) (BTEX)
_✓_) A DHEC Certified ORGANIC Lab must analyze the samples.

**FOR A SUPERB FUND REQUEST TO BE EVALUATED SUBMIT THE FOLLOWING:**

___) A written request for participation in the SUPERB program.
___) 1) A copy of any environmental spill insurance policy or,
2) a written statement of a self insurance mechanism or,
3) a written statement that no such insurance policy exists.
___) Full payment of the annual UST invoices. ($_____ DUE)

On all correspondence related to this site, please reference the **GWPD Site ID Number.** Questions should be addressed to the Ground-Water Protection Division at (803) 734-5331.

Please return requested information to: Angela L. Dillon,
GWPD, 2600 Bull St., Columbia, SC 29201 FAX (803) 734-4661

ISS 920512

South Carolina
DHEC
Department of Health and Environmental Control
2600 Bull Street, Columbia, SC 29201

**Commissioner:** Michael D. Jarrett

**Board:** William E. Applegate, III, Chairman
John H. Burriss, Vice Chairman
Richard E. Jabbour, DDS, Secretary
Toney Graham, Jr., MD
Sandra J. Molander
John B. Pate, MD
Robert J. Stripling, Jr.

*Promoting Health, Protecting the Environment*

March 23, 1992

Crawford's Country Store
Rt. 4, Box 205
Abbeville, SC 29620

Re: CRAWFORD'S COUNTRY STORE, ABBEVILLE
**GWPD Site # 12335**
Release Report dated December 3, 1991
Abbeville County

Dear Mr. Crawford:

The Ground-Water Protection Division (GWPD) of the South Carolina Department of Health and Environmental Control (SCDHEC) has received the above referenced release report. Soil contamination at this site has been confirmed at levels that require rehabilitation. This letter addresses the following topics: SUPERB Qualification, Initial Abatement, Free Product Recovery, Checklists, Expanded Assessment Plan, SUPERB Payment of the Expanded Assessment Plan, SUPERB Payment of Initial Abatement, and Enforcement.

**SUPERB Qualification**

Provided none of the exclusions listed in Section 44-2-110 of the State Underground Petroleum Environmental Response Bank Act (**SUPERB**) apply to this site, reasonable costs for site assessment and/or rehabilitation can be paid, either by direct billing or reimbursement, from the **SUPERB** fund in accordance with the enclosed **SUPERB** guidance. Prior to release of **SUPERB** funds, this office must have written confirmation of the existence (or nonexistence) of an environmental insurance policy or financial responsibility mechanism for this site and a written request for **SUPERB** funding.
Please note that reimbursement or direct billing from the SUPERB Account cannot occur until all applicable tank registration fees have been paid. If there are outstanding fees for the subject facility, please contact the Finance and Data Management Section of the Ground-Water Protection Division.

**Initial Abatement**

It is imperative that the cause of the release be identified and corrected in accordance with Section 280.62 of the South Carolina Underground Storage Tank Control Regulations (SCUSTCR). If the underground storage tank (UST) system is still in

recycled paper

operation or still contains product, the immediate removal of the product from the UST system and/or immediate performance of a complete system test must be performed. Confirmation of product removal or current results of tightness tests which verify that all existing systems (i.e. USTs and associated lines) are not leaking, must be submitted on or before **August 7, 1992**, in accordance with Sections 280.52 and 280.62 of the SCUSTCR. **SUPERB** funding cannot be made available until the source of the release is stopped.

**Free Product Recovery**

In accordance with Section 280.64 of the SCUSTCR, if free product has been indicated at the site, please begin free product removal to the maximum extent as practicable and in a manner that minimizes the spread of contamination.

**Checklist**

Please complete the enclosed standardized checklists and submit with the above required documentation. These checklists will assist you in understanding your responsibilities as well as expediting the assessment of the sites' contamination.

**Expanded Assessment Plan**

The extent and severity of soil and possible ground water-contamination at this site must be investigated pursuant to Sections 280.64 and 280.65 of the SCUSTCR. In an effort to expedite activities, streamlining of the assessment phase is being promoted. If your response action contractor participates in the streamlining activities, the Expanded Assessment Plan (EAP) would include specifications for the complete assessment (e.g. a sufficient number of boring/well locations, soil or water quality evaluation, aquifer property evaluations) such that a complete Corrective Action Plan can be prepared. This expanded assessment initiative will be allowed only to Responsible Parties and/or contractors who perform work associated with the UST Regulatory Section and/or the UST Corrective Action Sections. Please read the enclosed Assessment Guidance for a complete explanation of the streamlining option.

**SUPERB Payment of the EAP**

The requested EAP (2 copies) must be submitted on or before **August 7, 1992**. If the Assessment Plan is to be implemented under a Cost Proposal from the contractor, the Cost Proposal must be submitted with the EAP. If a Cost Proposal is not submitted with the plan, cost for EAP implementation can be recovered through reimbursement or Direct Contractor Payment. The cost associated with preparation and submittal of the EAP may be recovered through Direct Contractor Payment or reimbursement. Please note; Direct Contractor Payment Invoices for preparation and submittal of the EAP submitted with the EAP will be processed upon submittal to the SCDHEC.

**SUPERB Payment of Initial Abatement**

Cost associated with abatement actions (see Sections 280.61 through 280.63 of the SCUSTCR) may be recovered through reimbursement to the Responsible Party or Direct Contractor Payment to the Contractor. This office will not accept Cost Proposals for the work associated with compliance to Sections 280.61 through 280.63 of the SCUSTCR or for preparation and submittal of the Expanded Assessment Plan. Please read the enclosed **SUPERB** guidance for further elaboration on the financial aspects of payment.

**Enforcement**

The SCDHEC expects all Responsible Parties to comply with the activities required in Sections 280.61 - .64 of the SCUSTCR and of the requests made in this correspondence. Failure to comply with these regulations and/or requests may result in the initiation of enforcement action against the Responsible Party.

On all future correspondence, please reference the **GWPD Site ID number**. Questions concerning the above should be addressed to the Ground-Water Protection Division at 734-5331.

Sincerely,

James R. Hess, P.G., Manager
UST State Corrective Action Section
Ground-Water Protection Division
Bureau of Drinking Water Protection

enclosure

cc: Upper Savannah District EQC
Robertha Dorsey, GWPD

March 3, 2000

RECEIVED
MAR 03 2000
Bureau of Underground
Storage Tank Management

Mr. Read Corely, P.G.
Underground Storage Tank Program
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: Corrective Action Plan/Engineering Report
Crawford's Country Store
5870 Highway 28 North
Abbeyville, South Carolina
SCDHEC Site ID # 12335

Dear Mr. Corely:

Attached please find three (3) copies of the Corrective Action Plan/Engineering Report for the above referenced facility.

Also attached are three copies each of the UIC and BAQC Permit Applications, please forward these to the appropriate personnel. The performance bond was forwarded to Chris Doll on February 28, 2000.

Please do not hesitate to call me at (803) 749-4080 if you have any questions.

Sincerely,

$H_2O$ Environmental, Inc.

Noal Hudson
Project Manager

Enclosures

UST
407
DOCKETING

$H_2O$ ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS
130 Centrum Drive, Suite 3B • Irmo, South Carolina 29063 • 803•749•4080 • Fax 803•749•9911

# CORRECTIVE ACTION PLAN

**CRAWFORD'S COUNTRY STORE**
**5870 HIGHWAY 28 NORTH**
**ABBEVILLE, SOUTH CAROLINA**
**SCDHEC ID NO. 12335**

**$H_2O$ PROJECT NO.: DHE - 12335**

**PREPARED FOR:**

**SOUTH CAROLINA DEPARTMENT OF**
**HEALTH AND ENVIRONMENTAL CONTROL**
**2600 BULL STREET**
**COLUMBIA, SOUTH CAROLINA**
**(803) 898-4350**

**PREPARED BY:**

**$H_2O$ ENVIRONMENTAL, INC.**
**1061 WEST OAKLAND PARK BOULEVARD**
**FORT LAUDERDALE, FLORIDA 33311**
**(954) 565-7650**

**MARCH 2000**

**Reviewed By:**

Richard Gillespie 3/2/00

**Richard Gillespie, P.G.**
**S.C. License No. 2199**

# ENGINEERING REPORT

**CRAWFORD'S COUNTRY STORE**
**5870 HIGHWAY 28 NORTH**
**ABBEVILLE, SOUTH CAROLINA**
**SCDHEC ID NO. 12335**

**$H_2O$ PROJECT NO.: DHE - 12335**

**PREPARED FOR:**

**SOUTH CAROLINA DEPARTMENT OF**
**HEALTH AND ENVIRONMENTAL CONTROL**
**2600 BULL STREET**
**COLUMBIA, SOUTH CAROLINA**
**(803) 898-4350**

**PREPARED BY:**

**CAROLINA ENVIRONMENTAL, INC.**
**6316-C ST. ANDREWS ROAD**
**COLUMBIA, SOUTH CAROLINA 29212**
**(803) 731-0400**

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER JOHN MEETZE WAITES, JR. No. 18379

**JANUARY 2000**

SOUTH CAROLINA CAROLINA ENVIRONMENTAL, INC. No. C01580 CERTIFICATE OF AUTHORIZATION

**Prepared By:**

3/21/00

**John M Waites, P.E.**
**S.C. License No. 18379**

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RECEIVED
MAR 0 3 2000
Bureau of Underground
Storage Tank Management

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Figure 2.0 Site Map
Figure 3.0 Ground Water Flow and Elevation Map – 8/5/99
Figure 4.0 Ground Water/Soil Quality Map – 8/5/99 and 11/10/99
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Table 2 Summary of Ground Water Elevations
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**Appendix A** Regulatory Correspondence

**Appendix B** Air Sparging Equipment Specifications

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**Appendix D** Vapor Extraction Equipment Specifications

**Appendix E** BAQC UST Modeling Information Form

**Appendix F** Adjacent Property Owners Information

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# SECTION 1.0
# INTRODUCTION

In correspondence dated December 18, 1999, $H_2O$ Environmental, Inc. ($H_2O$) received notification from the Bureau of Underground Storage Tank Management of the South Carolina Department of Health and Environmental Control (SCDHEC) to proceed with corrective action activities at the Crawford's Country Store (Site ID #12335). The bid package requested submittal of three (3) copies each of a corrective action plan, a Bureau of Air Quality Control Modeling Form, an injection permit and an engineering report. The notification is included in Appendix A, Regulatory Correspondence.

A corrective action strategy was developed based on assessment information provided by SCDHEC in Bid Number SB-9570-12/02/99-TC and available information obtained from the SCDHEC Freedom of Information Office. The assessment information available for review included portions of various assessment reports submitted by SCDHEC and others.

Based on the available assessment data, appropriate remedial processes were reviewed to determine their feasibility for application at this site. The proposed remediation system will consist of in-situ air sparging coupled with vapor extraction. These are proven, cost-effective methods for remediation of petroleum hydrocarbons in this type of environmental setting. This Corrective Action Plan/Engineering Report (CAP/ER) was prepared in general accordance with the Corrective Action Guidance Document (SCDHEC, June, 1997) and established scientific and engineering principles. The engineering system design consists only of sizing the air sparging and vapor extraction equipment and is, therefore, abbreviated in comparison to Engineering Reports associated with conventional pump and treatment systems. The sizing of the equipment is closely related to site hydrogeological characteristics, therefore, the Engineering Report is enclosed within the Corrective Action Plan.

## SECTION 2.0
## CONTAMINATION ASSESSMENT SUMMARY

Available contaminant assessment information was reviewed by $H_2O$ in preparation of this CAP. Pertinent assessment information is summarized below.

- The site is located on the U.S.G.S. Antreville, S.C. 7.5 Minute Quadrangle Map. The site and surrounding areas are depicted in Figure 1.0. Specifically, the site is located at 5870 Highway 28 North in Abbeville, South Carolina.
- The site is bordered to the north, east and south by private property, and to the west by Highway 28 North.
- The elevation of the site averages approximately 700 feet above mean sea level. The site topography slopes towards the east, southeast.
- The approximate location of the tankhold is in the area of MW-5 and MW-6 see Figure 2.0.
- There are currently seventeen (17) wells located at the site. The well network includes sixteen (16) shallow wells and one (1) deep well. The locations of these wells are depicted on Figure 2.0. Well construction information is summarized in Table 1.
- The site geology is summarized as follows: 0 to 65 feet below land surface (BLS) is a gray/yellow or brown medium to fine sandy clay with calcitic rock fragments and from 65 to at least 75 feet BLS is a competent bedrock.
- The ground water flow direction of the surfical aquifer on site is towards the southeast as shown on Figure 3.0. Depth to ground water ranges on site from approximately 15 to 17 feet BLS.
- The ground water analytical results of the most recent sampling event are summarized in Table 3. A ground water quality map is included as Figure 4.0, which illustrates the detected concentrations of benzene, total BTEX, MTBE and naphthalene from the August 1999 sampling event.
- Site Specific Target Levels (SSTLs) for chemicals of concern (BTEX, MTBE, and naphthalene) for seventeen (17) wells OMW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, DMW-17, CLS-WW and CP-WW and four (4) soil borings are listed in the SCDHEC bid package correspondence included in Appendix A.

# SECTION 3.0
# CORRECTIVE ACTION METHOD

The recommended corrective action strategy, for the dissolved hydrocarbon plume at Crawford's Country Store is in-situ air sparging coupled with vapor extraction. The free product in OMW-1, MW-2, MW-3 and MW-10 will be removed via manual bailing and absorbent pads. System operation is **projected** to continue for 18 months to decrease contaminant concentrations to levels below the assigned SSTLs. An additional 6 months are provided as a period of ground water monitoring to demonstrate that the chemicals of concern (COC) have been effectively reduced.

The recommended corrective action has proven effective at other sites with similar geologic and contaminant characteristics. A primary factor in achieving successful aquifer remediation is the understanding that the majority of the contamination exists adsorbed to the saturated soils. The detected COC in groundwater are only a small portion of the total amount present in the subsurface. The following are the results of two distribution studies. Felton, et al. 1992, reports that for a petroleum spill in a sandy soil, only 0.5% of the total mass of contamination is in the ground water, 31.5% is sorbed in the unsaturated soils and 68% is sorbed to the saturated soils. Leonard, et al. 1992, reports that for hydrocarbon solvents in sand, 5% is dissolved in ground water and 75% of the remaining 95% is in the saturated zone soils. These distributions are typical of hydrocarbons in shallow aquifers such as this site.

In-situ air sparging coupled with vapor extraction is an effective remediation technique for physically removing contaminants adsorbed to saturated soils and enhancing natural biodegradation.

# SECTION 4.0
# ENGINEERING REPORT

## 4.1 Air Sparging/Soil Vapor Extraction Pilot Testing

The need for air sparging/soil vapor extraction pilot testing was reviewed during the preparation of this CAP. It was decided that pilot testing is unnecessary since, the remedial design does include conservative placement of the vapor extraction wells and air sparging wells based on review of design literature and testing results at sites with similar lithology. An as-built plan will be submitted within 90 days of completion of the system installation.

## 4.2 Air Sparging System Design

Air sparging will be used to treat adsorbed phase hydrocarbons located beneath the water table, facilitate groundwater treatment through in-situ stripping, and enhance biodegradation through the addition of oxygen. Nine (9) air sparging wells (ASWs); SV-1, SV-2, SV-3, SV-4, SV-5, SV-6, SV-7, S-8 and S-9 are proposed for use within the area of dissolved and adsorbed phase hydrocarbon contamination as illustrated on Figure 5.0. A design flow rate of 3 cfm per well is expected to produce a radius of influence of approximately 30 feet.

### 4.2.1 Air Sparging Well Design

The depth to water at the site throughout the assessment phase ranged from approximately 15-17 feet BLS. Therefore, in order to obtain optimum air dispersion without excessive head pressure, the ASWs will be constructed of 1-inch diameter, Schedule 40 PVC with 25 feet of solid casing and 5 feet of 0.020 inch slotted screen. A 20/30 grade silica sand pack will extend approximately one foot above the screened interval and will be overlain with a 2 foot layer of bentonite. The remainder of the borehole annular space will be grouted with a mixture of Portland Cement and a 5% bentonite slurry. See Figure 7.0 for the construction details of the sparge wells.

### 4.2.2 Air Sparging Compressor Sizing

One 7.5-hp Ingersoll-Rand compressor has been selected to supply air to the seven (7) sparge wells (SV-1 through SV-7). Head losses for the air injection system were calculated to verify that the compressor would provide the design flow rate of 21cfm (3cfm per leg). Total system head loss, including the average 15 feet of static pressure and a 10% safety factor, is approximately 8 psi. The compressor will supply 24 cfm at 175 psi, which provides flexibility in flow rates and injection pressures. A portable 1.0-hp GAST compressor has been selected to supply air to the two sparge wells (S-8 and S-9), again 3cfm and 8 psi will be used. A flow meter, a gate valve and a pressure gauge will be fitted on each leg of the air injection system to allow flow/pressure adjustments. Manufacturer's specifications for the compressors are provided in Appendix B. A copy of the air injection UIC permit application is presented in Appendix C.

## 4.3 Vapor Extraction System Design

Adsorbed phase hydrocarbons and hydrocarbon vapors generated by air sparging will be recovered with a vapor extraction system (VES). The system will utilize seven (7) vapor extraction wells (SV-1 through SV-7), 15 feet in depth, placed in the same borehole as the sparge wells. See Figure 5.0 for the locations. In order to confirm that the vapor extraction system will affect the areal extent of "excessively contaminated" soil and capture the hydrocarbon vapors, verification testing will be conducted during system startup. The layout of the vapor extraction wells and configuration of the piping provide a flexible system which will allow more or less vacuum to be applied to the VES wells to enhance soil cleanup and vapor recovery.

### 4.3.1 Vapor Extraction Well Design

The vapor extraction wells will be installed adjacent to the air sparging wells, within the same borehole. The vapor extraction legs will consist of 2-inch diameter, 0.020 slotted, Schedule 40 PVC, place 5 feet below land surface (BLS) to 15 BLS.. The construction of the vapor extraction wells is illustrated on Figure 7.0 and the location is illustrated on Figure 5.0. The extraction wells will be piped to the equipment compound via 2-inch diameter Schedule 40 PVC. The pipe will be combined into a manifold connected to a vapor extraction blower. The extraction wells will be equipped with a flow control valve, a vacuum gauge and a sample port as illustrated in Figure 6.0.

### 4.3.2 Vapor Extraction Blower Sizing

Based on pilot testing conducted at sites with similar lithology, an applied vacuum of 25 inches water gauge (w.g.) at a flowrate of approximately 5 cfm (per well) is expected to produce the desired radius of influence of approximately 40 feet from each well. Based on this assumed vacuum and flowrate, total system head losses were calculated for the VES. Calculation of friction loss from the piping, valves, fittings, manifold and appurtenances predicts a loss of approximately 10 in. w.g. Therefore, the blower design requirements for the system (including a 10% safety factor) are a vacuum of 40 in. w.g. and a flow of 35 cfm. Two blowers will be required to obtain these numbers. Each VES blower will be 2.3-hp vacuum blower which will provide 50 cfm at 60 in. w.g. The blowers will be equipped with a particle filter and an air/water separator. The VES equipment layout is illustrated on Figure 6.0. Manufacturer's specifications for the blower and ancillary equipment are provided in Appendix D.

### 4.3.3 Vapor Extraction System Off-Gas Treatment

The discharge stack for the vapor extraction system will be constructed of a 15 foot tall, 4-inch diameter Schedule 40 PVC pipe. Air samples will be collected from the VES off-gas for analysis in accordance with EPA Test Method 18 to determine total volatile organic compound (VOC) concentrations. If VOC concentrations exceed limits established by SCDHEC, off-gas treatment will be installed. A copy of the SCDHEC BAQC UST Modeling Information Form is included in Appendix E.

## 4.4 Equipment Trailer

The air sparging and the vapor extraction equipment will be housed in a 6'x10' aluminum trailer. The equipment trailer will be supplied with a 100 amp, 230 volt, single-phase power drop. Safety features include a circuit interrupt, which will shut down the air sparging system should a failure occur in the vapor extraction system. This feature will also be triggered through a high-level float switch located in the condensate drum. The equipment trailer layout is shown on Figure 6.0.

# SECTION 5.0
# MAINTENANCE, MONITORING AND REPORTING

## 5.1 System Maintenance

The remediation system will be routinely monitored to evaluate the effectiveness and progress of the site cleanup. This will include minor flow rate adjustments, equipment inspections and performance of any routine, necessary or preventative maintenance task.

## 5.2 System Monitoring

All monitoring wells associated with the release will be sampled quarterly for a period of one year or until site clean up, whichever arrives first. After the first year of system operation and monitoring, the number of wells to be sampled may be reduced to exclude those wells that have remained below detection limits or others based upon consultation with the SCDHEC project manager. The appropriate monitoring wells will be sampled and analyzed for BTEX, MTBE and naphthalene on a quarterly basis. A soil vapor extraction system effluent air sample will also be collected, field screened with an OVA and analyzed for BTEX, MTBE and naphthalene. Quarterly air samples will not be collected if the analytical results of the air sample are below the BAQC limits. OVA field screening will be completed quarterly and if warranted an air sample would be collected. Liquid levels will be measured in all wells on a quarterly basis.

## 5.3 Project Reporting

As-built drawings will be prepared and submitted within 90 days of system installation and included in the first quarterly report.

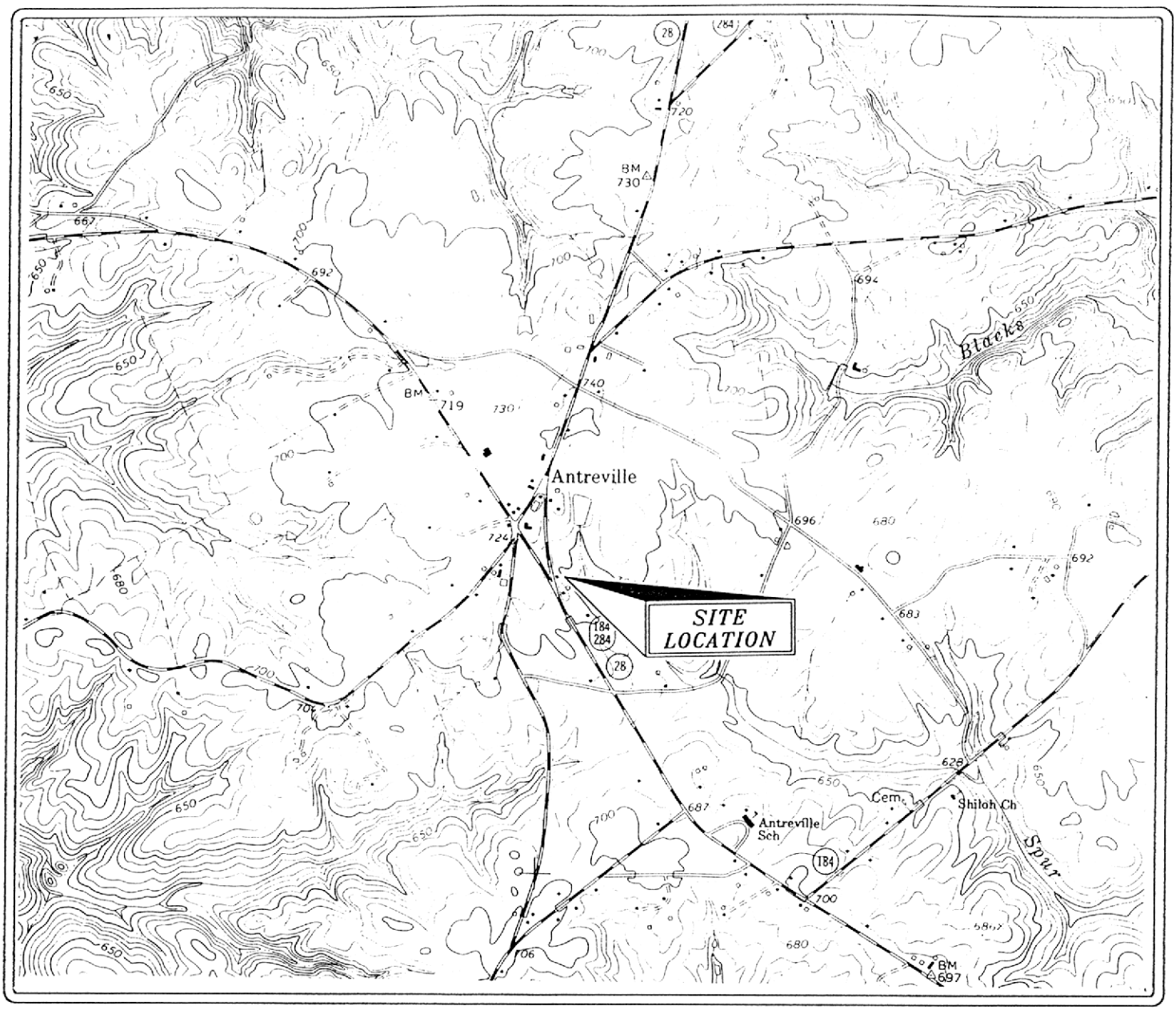
Quarterly status reports will be submitted to the SCDHEC. The reports will summarize system operation and maintenance activities as well system and ground water monitoring results. The reports will include suggestions and recommendations to enhance the effectiveness of the treatment system. At minimum, the quarterly status reports will include:

- A brief summary of the progress and operating effectiveness of the remedial system
- Water table elevation maps and tables

# SECTION 6.0
# REFERENCES

Felton, Daniel W., Leaky, Maureen C., Bealer, L.J. and Kline, Barry A. "Case Study: Site Remediation Using Air Sparging and Soil Vapor Extraction". NGWA/API Proceedings of the 1992 Petroleum Hydrocarbons and Organic Chemicals in Groundwater: Prevention, Detection, and Restoration. November 1992 Houston, TX. pp. 395-411.

Leonard, Wendy C., Bouwer, Richard A. "Air Sparging: An Optimal Solution". NGWA/API Proceedings of the 1992 Petroleum Hydrocarbons and Organic Chemicals in Groundwater: Prevention, Detection, and Restoration. November 1992 Houston, TX. pp. 349-364.



U.S.G.S. SOURCE QUADRANGLE:

ANTREVILLE QUADRANGLE
S.C., 1973, 7.5 MINUTE MAPS
GEOLOGICAL SURVEY, DENVER, COLORADO

GRAPHIC SCALE IN FEET

2000 0 1000 2000 4000

$H_2$ $H_2O$ ENVIRONMENTAL, INC.
ASSESSMENT AND REMEDIATION SPECIALISTS

PREPARED FOR:
SCDHEC

SITE ADDRESS:
CRAWFORD'S COUNTRY STORE
ABBEVILLE, SC
SCDHEC SITE 12335

NORTH

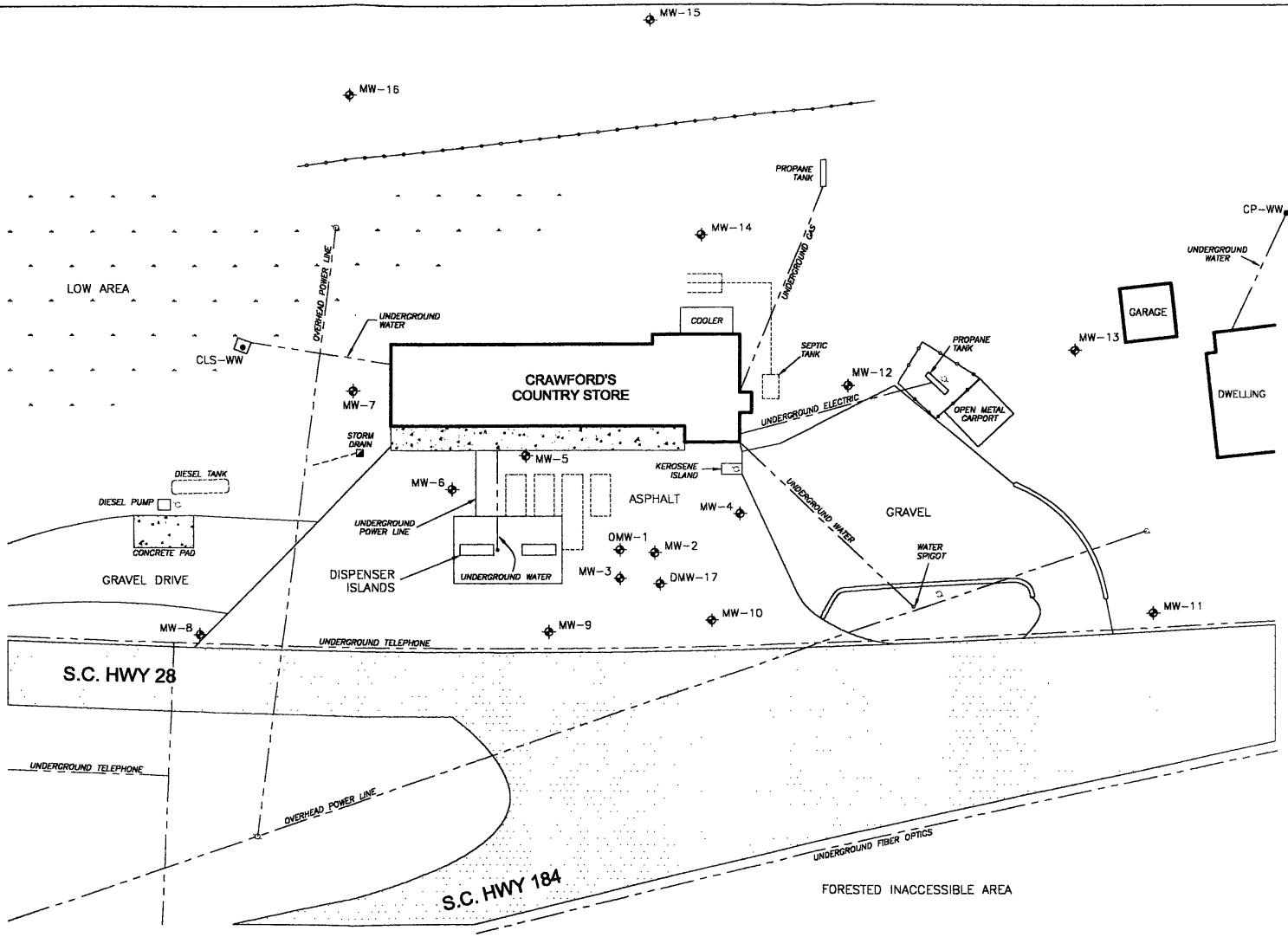
FIGURE TITLE:
U.S.G.S. SITE LOCATION MAP

DRAWN BY:

DATE DRAWN:
01/07/00

JOB NUMBER:
DHE-12335

FIGURE NUMBER:
1.0




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

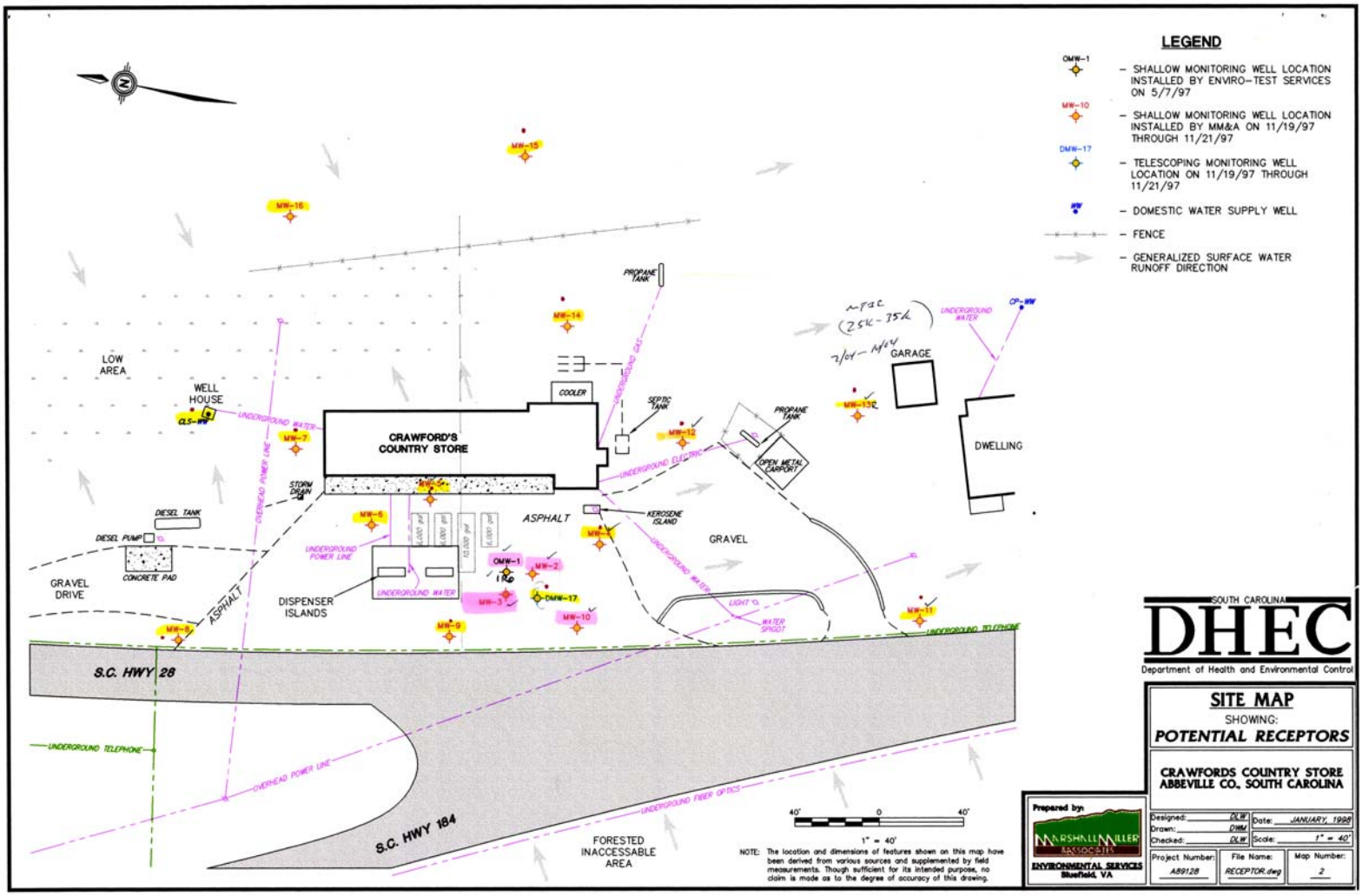
PROJECT NO: DHE-12335

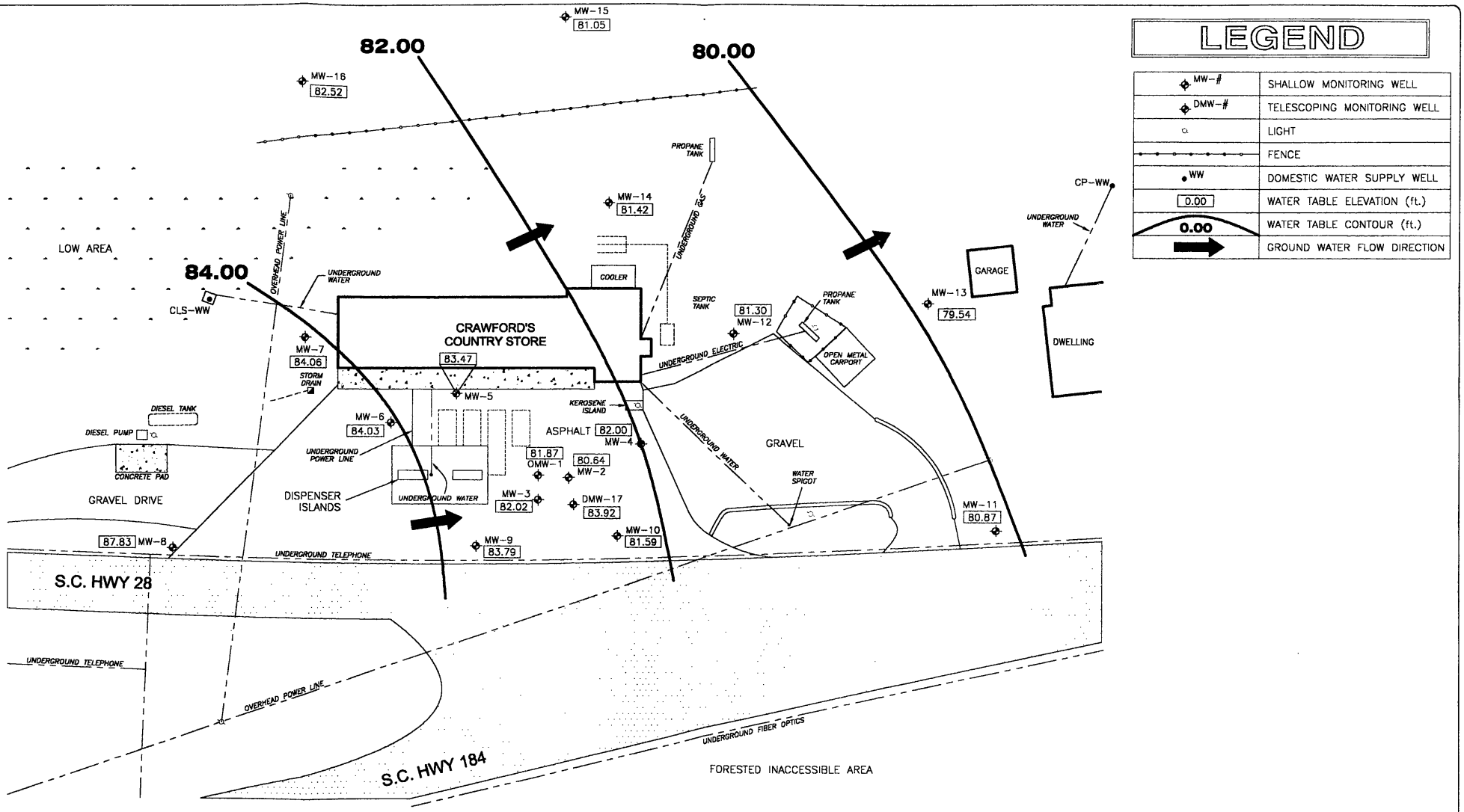
DRAWING DATE: 01/10/2000

DRAWN BY: J.Driscoll

FIGURE NO: 2.0

FIGURE TITLE: SITE PLAN


LEGEND
OMW-1 – SHALLOW MONITORING WELL LOCATION INSTALLED BY ENVIRO-TEST SERVICES ON 5/7/97
MW-10 – SHALLOW MONITORING WELL LOCATION INSTALLED BY MM&A ON 11/19/97 THROUGH 11/21/97
DMW-17 – TELESCOPING MONITORING WELL LOCATION ON 11/19/97 THROUGH 11/21/97
DW – DOMESTIC WATER SUPPLY WELL
– FENCE
– GENERALIZED SURFACE WATER RUNOFF DIRECTION
CRAWFORD'S COUNTRY STORE
COOLER
PROPANE TANK
SEPTIC TANK
OPEN METAL CARPORT
GARAGE
DWELLING
WELL HOUSE
LOW AREA
DIESEL TANK
DIESEL PUMP
CONCRETE PAD
GRAVEL DRIVE
ASPHALT
DISPENSER ISLANDS
KEROSENE ISLAND
GRAVEL
STORM DRAIN
UNDERGROUND WATER
UNDERGROUND POWER LINE
UNDERGROUND ELECTRIC
OVERHEAD POWER LINE
UNDERGROUND TELEPHONE
UNDERGROUND FIBER OPTICS
LIGHT
WATER SPIGOT
S.C. HWY 28
S.C. HWY 184
FORESTED INACCESSABLE AREA
40' 0 40'
1" = 40'
NOTE: The location and dimensions of features shown on this map have been derived from various sources and supplemented by field measurements. Though sufficient for its intended purpose, no claim is made as to the degree of accuracy of this drawing.
SOUTH CAROLINA DHEC
Department of Health and Environmental Control
SITE MAP
SHOWING:
POTENTIAL RECEPTORS
CRAWFORDS COUNTRY STORE
ABBEVILLE CO., SOUTH CAROLINA
Prepared by
MARSHALL MILLER & ASSOCIATES
ENVIRONMENTAL SERVICES
Bluefield, VA
Designed: DLW
Drawn: DMW
Checked: DLW
Date: JANUARY, 1998
Scale: 1" = 40'
Project Number: A89128
File Name: RECEPTOR.dwg
Map Number: 2




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| 0.00 | WATER TABLE ELEVATION (ft.) |
| 0.00 | WATER TABLE CONTOUR (ft.) |
| | GROUND WATER FLOW DIRECTION |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHBC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

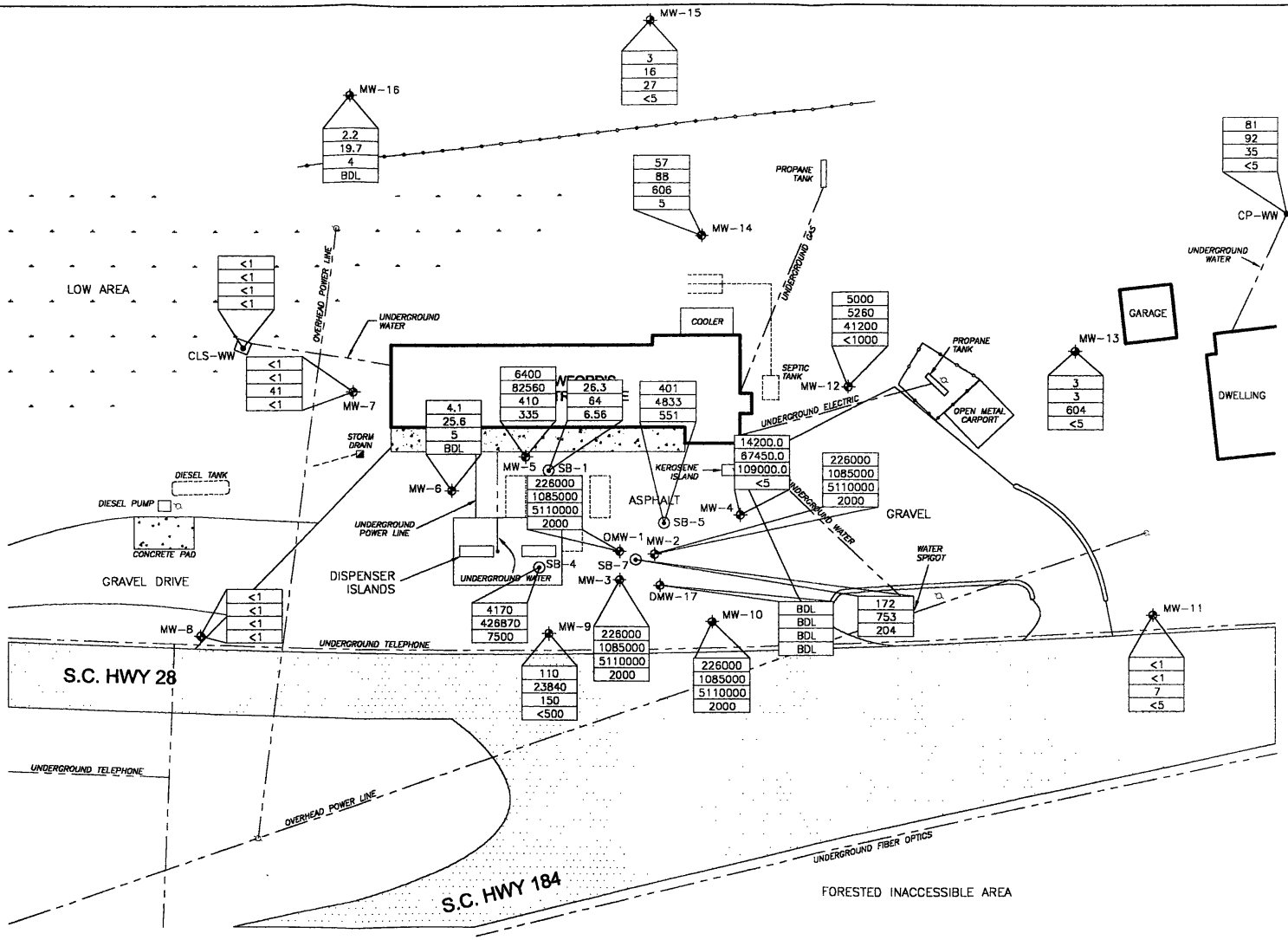
PROJECT NO: DHE-12335

DRAWING DATE: 01/12/2000

DRAWN BY: J.Driscoll

FIGURE NO: 3.0

FIGURE TITLE: GROUND WATER FLOW AND ELEVATION MAP - 08/05/99




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SB-# | SOIL BORING |

**SUMMARY OF GROUND WATER QUALITY**

| | |
|---|---|
| ug/l | BENZENE |
| ug/l | TOTAL BTEX |
| ug/l | MTBE |
| ug/l | NAPHTHALENE |

BDL – BELOW DETECTION LIMITS

**SUMMARY OF SOIL ANALYTICAL DATA**

| | |
|---|---|
| ug/l | BENZENE |
| ug/l | TOTAL BTEX |
| ug/l | NAPHTHALENE |

BDL – BELOW DETECTION LIMITS

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site no. 12335
5870 Hwy 28 N
Abbeville, South Carolina

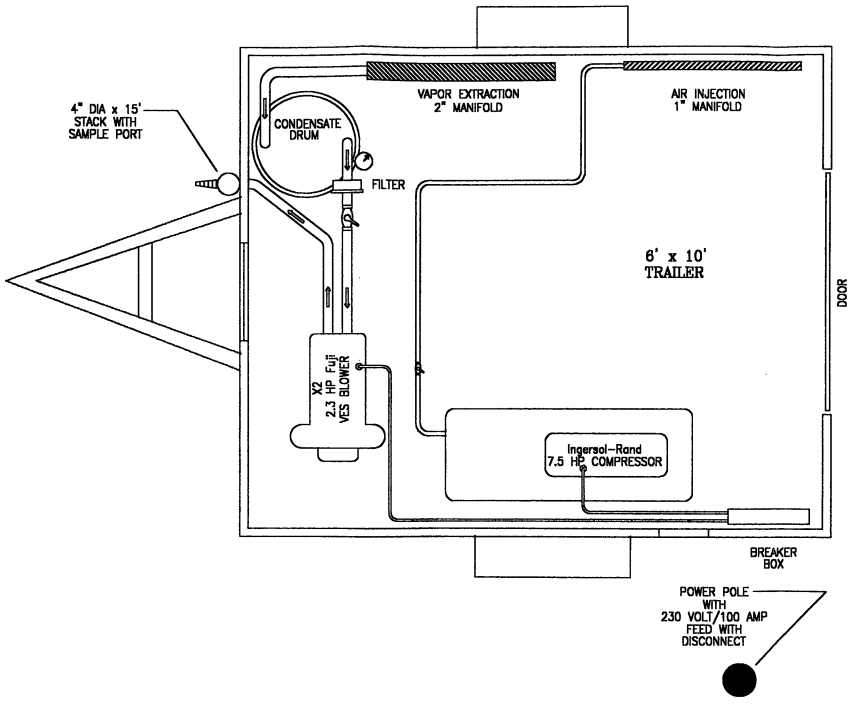
PROJECT NO: DHE-12335

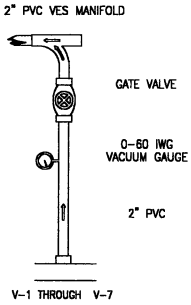
DRAWING DATE: 01/12/2000

DRAWN BY: J.Driscoll

FIGURE NO: 4.0

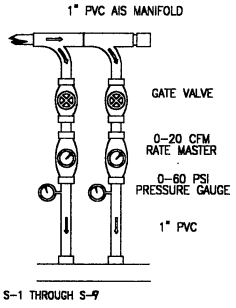
FIGURE TITLE: GROUND WATER & SOIL QUALITY MAP - 08/05/99 & 11/10/99




VAPOR EXTRACTION SYSTEM MANIFOLD

NO SCALE




AIR INJECTION SYSTEM MANIFOLD

NO SCALE


$H_2O$ ENVIRONMENTAL, INC.
ASSESSMENT AND REMEDIATION SPECIALISTS
130 CENTRUM DR, SUITE 3B IRMO, SC 29063
803 749 4080 FAX: 803 749 9911


Not To Scale

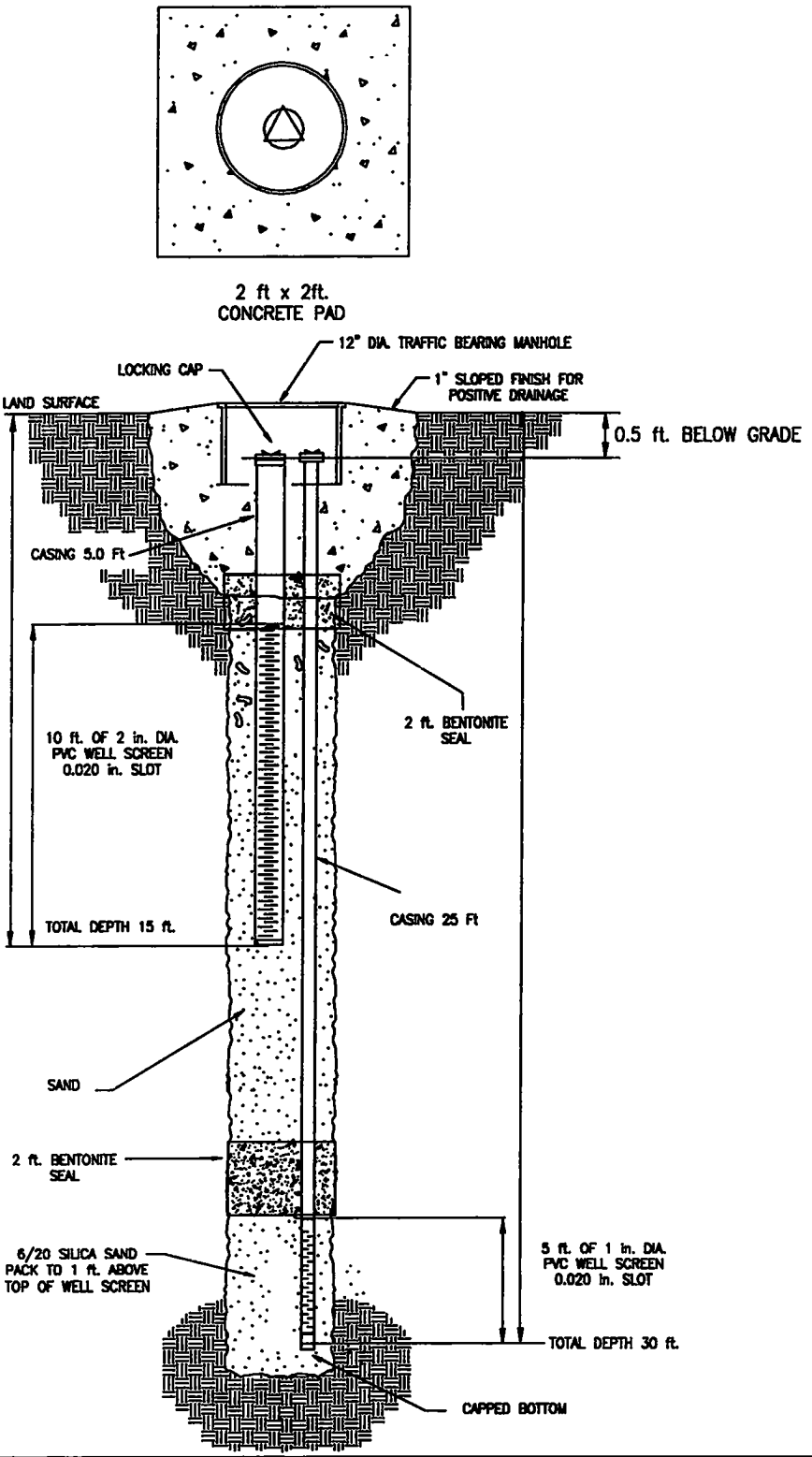
PREPARED FOR: D H E C (PROMOTE PROTECT PROSPER)

CRAWFORD'S COUNTRY STORE
SCDHEC SITE 12335
5870 HIGHWAY 28 NORTH
ABBEVILLE, SOUTH CAROLINA

NORTH

DRAWN BY:
CHECKED BY:
PROJECT MNGR:
DATE DRAWN: 1/7/00
JOB NUMBER: DHE-12335
FIGURE NUMBER: 6.0

FIGURE TITLE: REMEDIATION SYSTEM-TRAILER LAYOUT/MANIFOLD




SCALE: NOT TO SCALE

H2 ENVIRONMENTAL, INC.
ASSESSMENT AND REMEDIATION SPECIALISTS

PREPARED FOR: Crawford's Country Store

SITE ADDRESS:
SCDHEC SITE 12335
5870 Highway 28 North
ABBEVILLE, SOUTH CAROLINA

JOB DESIGNATION: DHE-12335

DRAWN BY:

DATE DRAWN: 02/20/99

FIGURE TITLE: SPARGE AND VAPOR EXTRACTION WELL

FIGURE NUMBER: 7.0

# TABLE 1

## WELL CONSTRUCTION DETAILS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well Identification | Date Installed | Well Diameter | Total Depth | Screened Interval |
|---|---|---|---|---|
| OMW-1 | 5-Aug-99 | 2" | 22' | 15' |
| MW-2 | 5-Aug-99 | 2" | 25' | 15' |
| MW-3 | 5-Aug-99 | 2" | 25' | 15' |
| MW-4 | 5-Aug-99 | 2" | 25' | 15' |
| MW-5 | 5-Aug-99 | 2" | 25' | 15' |
| MW-6 | 8-May-99 | 2" | 25' | 15' |
| MW-7 | 5-Aug-99 | 2" | 25' | 15' |
| MW-8 | 5-Aug-99 | 2" | 25' | 15' |
| MW-9 | 5-Aug-99 | 2" | 25' | 15' |
| MW-10 | 5-Aug-99 | 2" | 25' | 15' |
| MW-11 | 5-Aug-99 | 2" | 25' | 15' |
| MW-12 | 5-Aug-99 | 2" | 25' | 15' |
| MW-13 | 5-Aug-99 | 2" | 25' | 15' |
| MW-14 | 5-Aug-99 | 2" | 25' | 15' |
| MW-15 | 5-Aug-99 | 2" | 25' | 15' |
| MW-16 | 5-Aug-99 | 2" | 25' | 15' |
| DMW-17 | 5-Aug-99 | 2" | 75' | 15' |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| OMW-1 | Dec-97 | 99.82 | 17.13 | - | 82.69 |
| | Aug-99 | | 17.95 | 1.05 | 81.87 |
| MW-2 | Dec-97 | 99.83 | 17.43 | - | 82.40 |
| | Aug-99 | | 19.19 | 2.29 | 80.64 |
| MW-3 | Dec-97 | 99.98 | 17.00 | - | 82.98 |
| | Aug-99 | | 17.96 | 1.01 | 82.02 |
| MW-4 | Dec-97 | 99.59 | 17.60 | - | 81.99 |
| | Aug-99 | | 17.59 | - | 82.00 |
| MW-5 | Dec-97 | 99.42 | 15.04 | - | 84.38 |
| | Aug-99 | | 15.95 | - | 83.47 |
| MW-6 | Dec-97 | 99.47 | 14.37 | - | 85.10 |
| | Aug-99 | | 15.44 | - | 84.03 |
| MW-7 | Dec-97 | 99.47 | 13.96 | - | 85.51 |
| | Aug-99 | | 15.41 | - | 84.06 |
| MW-8 | Dec-97 | 102.42 | 12.53 | - | 89.89 |
| | Aug-99 | | 14.59 | - | 87.83 |
| MW-9 | Dec-97 | 100.53 | 16.17 | - | 84.36 |
| | Aug-99 | | 16.74 | - | 83.79 |
| MW-10 | Dec-97 | 99.65 | 17.40 | - | 82.25 |
| | Aug-99 | | 18.06 | 1.01 | 81.59 |
| MW-11 | Dec-97 | 96.47 | 15.74 | - | 80.73 |
| | Aug-99 | | 15.60 | - | 80.87 |
| MW-12 | Dec-97 | 98.63 | 17.03 | - | 81.60 |
| | Aug-99 | | 17.33 | - | 81.30 |
| MW-13 | Dec-97 | 100.80 | 21.05 | - | 79.75 |
| | Aug-99 | | 21.26 | - | 79.54 |
| MW-14 | Dec-97 | 89.38 | 7.27 | - | 82.11 |
| | Aug-99 | | 7.96 | - | 81.42 |
| MW-15 | Dec-97 | 87.33 | 5.10 | - | 82.23 |
| | Aug-99 | | 6.28 | - | 81.05 |
| MW-16 | Dec-97 | 93.74 | 9.69 | - | 84.05 |
| | Aug-99 | | 11.22 | - | 82.52 |
| DMW-17 | Dec-97 | 100.08 | 15.53 | - | 84.55 |
| | Aug-99 | | 16.16 | - | 83.92 |

**Notes:**
TOC - Top-of-Casing elevation refrenced to common datum.
NM - Not measured.
All measurments in units of feet.
- = No Data

# TABLE 3
# SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| OMW-1 | 1-Dec-97 | 14.9 | 85.5 | 5.2 | 24.8 | 130 | 96 | BDL |
| | 5-Aug-99 | 226000 | 301000 | 280000 | 278000 | 1085000 | 5110000 | 2000 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-2 | 1-Dec-97 | 9900 | 42300 | 2040 | 12100 | 66340 | 242000 | 71.2 |
| | 5-Aug-99 | 226000 | 301000 | 280000 | 278000 | 1085000 | 5110000 | 2000 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-3 | 1-Dec-97 | 9820 | 54500 | 2160 | 11900 | 78380 | 81200 | 445 |
| | 5-Aug-99 | 226000 | 301000 | 280000 | 278000 | 1085000 | 5110000 | 2000 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-4 | 1-Dec-97 | 8140 | 21000 | 1510 | 11500 | 42150 | 215000 | 813 |
| | 5-Aug-99 | 14,200.0 | 34,600.0 | 2,750.0 | 15,900.0 | 67,450.0 | 109,000.0 | <5 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | <5 |
| MW-5 | 1-Dec-97 | 5930 | 47600 | 2100 | 12600 | 68230 | BDL | 125 |
| | 5-Aug-99 | 6400 | 61600 | 2460 | 12100 | 82560 | 410 | 335 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-6 | 1-Dec-97 | 5.5 | 137 | 6.0 | 149 | 297.5 | BDL | BDL |
| | 5-Aug-99 | 4.1 | 1.1 | 3.7 | 16.7 | 25.6 | 5 | BDL |
| MW-7 | 1-Dec-97 | 1.1 | 1.7 | BDL | 1.1 | 3.9 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 41 | <1 |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-8 | 1-Dec-97 | BDL | 2.4 | 1.2 | 5.4 | 9.0 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-9 | 1-Dec-97 | 77 | 14000 | 2390 | 20700 | 37167 | 114 | 384 |
| | 5-Aug-99 | 110 | 4280 | 2450 | 17000 | 23840 | 150 | <500 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-10 | 1-Dec-97 | 6220 | 46300 | 2320 | 14800 | 69640 | 938 | 542 |
| | 5-Aug-99 | 226000 | 301000 | 280000 | 278000 | 1085000 | 5110000 | 2000 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-11 | 1-Dec-97 | 1.4 | 3.4 | BDL | 4.7 | 9.5 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 7 | <5 |
| SSTL | | <1 | <1 | <1 | <1 | - | 7 | <5 |
| MW-12 | 1-Dec-97 | 7970 | 382 | 266 | 1540 | 10158 | 99900 | 119 |
| | 5-Aug-99 | 5000 | 260 | <200 | <200 | 5260 | 41200 | <1000 |
| SSTL | | 5 | 260 | <200 | <200 | - | 40 | 25 |

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-13 | 1-Dec-97 | BDL | 1.4 | BDL | 1.6 | 3 | 82.3 | BDL |
| | 5-Aug-99 | 3 | <1 | <1 | <1 | 3 | 604 | <5 |
| SSTL | | 3.0 | <1 | <1 | <1 | 3 | 40 | <5 |
| MW-14 | 1-Dec-97 | 1.1 | 1.4 | BDL | 2.7 | 5 | 76.5 | BDL |
| | 5-Aug-99 | 57 | 7 | 1 | 23 | 88 | 606 | 5 |
| SSTL | | 5 | 7 | 1 | 23 | - | 40 | 5 |
| MW-15 | 1-Dec-97 | 1.0 | 1.6 | BDL | 2.5 | 5 | BDL | BDL |
| | 5-Aug-99 | 3 | 6 | 1 | 6 | 16 | 27 | <5 |
| SSTL | | 3 | 6 | 1 | 6 | - | 27 | <5 |
| MW-16 | 1-Dec-97 | BDL | 1.2 | BDL | 1.3 | 2.5 | BDL | BDL |
| | 5-Aug-99 | 2.2 | 8.8 | 1.6 | 7.1 | 19.7 | 4 | BDL |
| DMW-17 | 1-Dec-97 | 1.6 | 3.8 | 2.3 | 12.7 | 20.3 | BDL | BDL |
| | 5-Aug-99 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | <1 | <1 | <1 | <1 | - | <1 | <1 |
| CLS-WW | 1-Dec-97 | BDL | 1.2 | BDL | BDL | 1.2 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| SSTL | | <1 | <1 | <1 | <1 | - | <1 | <1 |
| CP-WW | 1-Dec-97 | 81.3 | 1.1 | BDL | 9.6 | 92 | 34.5 | BDL |
| | 5-Aug-99 | 81 | 1 | <1 | 10 | 92 | 35 | <5 |
| SSTL | | 5 | <1 | <1 | 10 | - | 35 | <5 |

Notes:

All results reported in parts per billion (ug/L) unless otherwise noted.

SSTL = Site specific target levels referenced in bid

FP = Free Product; NS = Not Sampled

BDL = Below detecatable Levels

Total BTEX = Summation of benzene, toluene, ethylbenzene and xylenes

MTBE = Methyl-tert-buytl-ether

## TABLE 4

## SUMMARY OF SOIL ANALYTICAL DATA

Crawfords Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID #12335

| Well I.D. | Date Sampled | Depth (ft) | Benzene | Toluene | Ethyl-benzene | Total Xylenes | Total BTEX | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| SB-1 | 11/10/97 | 8' | 26.3 | 19.4 | <5 | 18 | 64 | 6.56 |
| SSTL | | | 5 | 19 | <5 | 18 | 42 | 6 |
| SB-4 | 11/10/97 | 12 | 4170 | 119000 | 43700 | 262000 | 428,870 | 7500 |
| SSTL | | | 5 | 1622 | 1260 | 42470 | - | 210 |
| SB-5 | 11/10/97 | 8' | 401 | 1940 | 372 | 2120 | 4,833 | 551 |
| SSTL | | | 5 | 1622 | 373 | 2120 | - | 210 |
| SB-7 | 11/10/97 | 8' | 172 | 145 | 62 | 374 | 753 | 204 |
| SSTL | | | 5 | 145 | 62 | 374 | - | 204 |

D. H E C

PROMOTE PROTECT PROSPER

South Carolina Department of Health and Environmental Control

# Purchase Order

| PURCHASE ORDER NO | REVISION | PAGE |
|---|---|---|
| 230000 | 0 | 1 OF 2 |

THIS PURCHASE ORDER NO. MUST APPEAR ON ALL INVOICES, PACKING LISTS, CARTONS AND CORRESPONDENCE RELATED TO THIS ORDER

SHIP TO
UST MANAGEMENT
SC DHEC
2600 BULL STREET
COLUMBIA, SC 29201-1708
United States

VENDOR:
[illegible] ENVIRONMENTAL INC
SUITE 3-B
130 CENTRUM DRIVE
IRMO, SC 29063

BILL TO
UST MANAGEMENT
SC DHEC
2600 BULL STREET
COLUMBIA, SC 29201-1708
United States

| CUSTOMER ACCOUNT NO. | VENDOR NO. | DATE OF ORDER/BUYER | REVISED DATE / BUYER |
|---|---|---|---|
| | 14547 | 04-FEB-00 CLARK, H | |
| **PAYMENT TERMS** | **SHIP VIA** | **F.O.B** | |
| NET 30 | | Destination | |
| **FREIGHT TERMS** | **REQUESTOR/DELIVER TO** | **CONFIRM TO / TELEPHONE** | |
| Prepaid | JONES, Mr. JAMES C | (803) 749-4080 | |

| ITEM | PART NUMBER / DESCRIPTION | DELIVERY DATE | QUANTITY | UNIT | UNIT PRICE | EXTENSION |
|---|---|---|---|---|---|---|
| | BUYER: TRIPP CLARK, (803) 898-3501 | | | | | |
| | SCOPE OF WORK AND TERMS AND CONDITIONS OF SB-9570-[illegible]-TO APPLY. | | | | | |
| | DHEC PROJECT MANAGER: REED CORLEY, (803) 898-43[illegible]<br>VENDOR CONTACT: SCOTT JOHNSTON, (800) 251-4374 | | | | | |
| | PRICE PER ABOVE REFERENCED SOLICITATION SIGNED BY SCOTT JOHNSTON ON 12/14/9[illegible] | | | | | |
| | EFFECTIVE DATES: 07-FEB-00 UNTIL THE CORRECTIVE ACTION AS DESCRIBED IN THE SOLICITATION HAS BEEN COMPLETED. | | | | | |
| | Planned Purchase Order<br>Effective From: 07-FEB-00 To: | | | | | |
| 1 | 918.43<br>SITE ID#12335, CONTRACT TO PERFORM CORRECTIVE ACTION OF A PETROLEUM RELEASE FROM A REGULATED UNDERGROUND STORAGE TANK SITE AT CRAWFORDS COUNTRY STORE, 5870 HWY 28 N, ABBEVILLE, SC.<br>TOTAL AMOUNT OF PURCHASE ORDER: $117,000.00 | | 58,500.00 | US D | 1 | 58,500.00 |

RECEIVED FEB 0 [illegible] 2000

Payments through cost proposal method of expenses incurred in remediation [illegible] release from underground storage tanks as provided under Section 44-2-130 [illegible] Code of Laws (SUPERB Act).

Total

Continued

AUTHORIZED SIGNATURE

DHEC 0109 (12/1997)

PROMOTE PROTECT PROSPER

South Carolina Department of Health and Environmental Control

| PURCHASE ORDER NO | REVISION | PAGE |
|---|---|---|
| P300019 | 0 | 2 OF 2 |

THIS PURCHASE ORDER NO. MUST APPEAR ON ALL INVOICES, PACKING LISTS, CARTONS AND CORRESPONDENCE RELATED TO THIS ORDER.

SHIP TO.
UST MANAGEMENT
SC DHEC
2600 BULL STREET
COLUMBIA, SC 29201-1708
United States

VENDOR
[illegible]
SUITE 3-B
130 CENTRUM DRIVE
IRMO, SC 29063

BILL TO
UST MANAGEMENT
SC DHEC
2600 BULL STREET
COLUMBIA, SC 29201-1708
United States

| CUSTOMER ACCOUNT NO. | VENDOR NO. | DATE OF ORDER/BUYER | REVISED DATE / BUYER |
|---|---|---|---|
| | 14547 | 04-FEB-00 CLARK, H | |
| PAYMENT TERMS | SHIP VIA | F.O.B. | |
| NET 30 | | Destination | |
| FREIGHT TERMS | REQUESTOR/DELIVER TO | CONFIRM TO / TELEPHONE | |
| Prepaid | JONES, Mr. JAMES C | (803) 749-4080 | |

| ITEM | PART NUMBER / DESCRIPTION | DELIVERY DATE | QUANTITY | UNIT | UNIT PRICE | EXTENSION |
|---|---|---|---|---|---|---|
| | THIS CONTRACT WILL CONTINUE UNTIL THE SITE REHABILITATION ACTIVITY AS DESCRIBED IN THE SOLICITATION HAS BEEN COMPLETED; PROVIDED, HOWEVER, THAT COMMITTED FUNDS FOR SITE REHABILITATION ACTIVITY UNDER THIS CONTRACT REVERT TO UNCOMMITTED STATUS AFTER FOUR MONTHS OF THE DATE OF THIS CONTRACT AWARD IF NO INVOICES FOR THE SITE REHABILITATION ACTIVITIES HAVE BEEN RECEIVED BY THE DEPARTMENT, PURSUANT TO SC CODE 44-2-40(B)(1976), AS AMENDED. IF THE FUNDS REVERT TO UNCOMMITTED STATUS, ANY SUBSEQUENT INVOICE WILL NOT BE PROCESSED FOR PAYMENT UNTIL ALL OTHER COMMITTED FUNDS ARE PAID OR MONEY BECOMES AVAILABLE. | | | | | |
| 0 | SHIP TO:<br>MAIL & SUPPLY ROOM 173<br>SC DHEC<br>2600 BULL STREET<br>COLUMBIA, SC 29201-1708<br>United States | | 58,500.00 | US D | | N |

# Purchase Order

| Total | 58,500.00 |
|---|---|

AUTHORIZED

DHEC 0109 (12/1997)

D H E C

ROMOTE PROTECT PROSPER

South Carolina Department of Health and Environmental Control

BUREAU OF
BUSINESS MANAGEMENT
DIVISION OF PROCUREMENT SERVICES
2600 Bull Street
Columbia, SC 29201-1708
Telephone (803) 898-3501 Fax (803) 898-3505

BID MUST BE SUBMITTED ON THIS FORM TO BE ACCEPTED

| SEALED BID INVITATION | BID NUMBER: SB-9570-12/02/99-TC (Number Must Be Shown On Front Of Envelope) | DATE ISSUED: 10/20/99 PAGE 1 OF 123 |
|---|---|---|

SEALED BIDS WILL BE RECEIVED UNTIL:

TIME: 2:30 pm DATE: 12/02/99
(Local Time)

AND THEN PUBLICLY OPENED

Mail To:

S.C. Department of Health & Environmental Control
Division of Procurement Services
2600 Bull Street
Columbia, South Carolina 29201-1708
ATTENTION: BID CLERK
BID#: SB-9570-12/02/99-TC

DIRECT INQUIRIES TO:
Tripp Clark, (803) 898-3501

REASON FOR NO BID

VENDOR:

**This Section Must Be Completed By Vendor:**

H20 ENVIRONMENTAL INC.
Vendor Name

130 CENTRUM DR. SUITE 3B
Mailing Address

IRMO SC 29063
City State Zip Code

Area Code: Telephone Number 803-749-4080

Toll Free Number 800-251-4374

Federal I.D. Or Social Security Number: 65-

Bid Security Is Attached When Required In The Amount of: $_____

I certify that this bid is made without prior understanding, agreement or connection with any corporation, firm or person submitting a bid for the same materials, supplies or equipment and is in all respects fair and without collusion or fraud. I agree to abide by all conditions of this bid and certify that I am authorized to sign this bid for the bidder. In compliance with the invitation and subject to all conditions thereof, the above signed offers and agrees, if this bid is accepted within 60 days from date of opening, to furnish any or all items/services quoted at the prices set forth.

Authorized Signature (Manual) | Scott Johnston Division Director (Authorized Signature (Typed) Title) | 12/14/99 (Date Signed)

COMMODITY: To perform corrective action of a petroleum release from a regulated underground storage tank site at Crawfords Country Store (UST Permit #12335), 5870 Hwy. 28 N., Abbeville, South Carolina

METHOD OF BID AWARD: Award will be made by total to the lowest responsive and responsible bidder.

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
BID NUMBER: SB-9570-12/02/99-TC

## PURPOSE and SCOPE OF WORK

The Division of Underground Storage Tank (UST) Management of the South Carolina Department of Health and Environmental Control (DHEC) is seeking services to perform corrective action of a petroleum release from a regulated underground storage tank site in accordance with defined remediation goals. The objective is to remove free product AND/OR reduce the levels of chemicals of concern (CoC) in the ground water and subsurface soil to or below defined site specific target levels (SSTLs). All bidders must be South Carolina Certified Class I Site Rehabilitation Contractors. The scope of work defined in this bid invitation is to be implemented at Crawfords Country Store (UST Permit #12335), 5870 Hwy. 28 N., Abbeville, South Carolina for the release reported on December 3, 1991.

## SPECIAL CONDITIONS

1. CONTRACT PERIOD: The contract will be effective from date of award until the corrective action is complete as described in this contract.

2. This contract is for corrective action at only one (1) site in South Carolina. Compensation from the SUPERB Account is not considered a state contract for purposes of procurement or subject to state bid requirements in accordance with Section 44-2-130(D) of the SUPERB Act.

3. AWARD: Award will be made to a South Carolina Certified UST Site Rehabilitation Contractor based on the total cost of corrective action to SSTLs and removal or abandonment of assessment and rehabilitation items. The proposed implementation schedule to achieve the remediation goals, the removal of all equipment and abandonment of wells, (including pre-existing wells), trenches, etc. installed by the contractor, and the proposed remediation technology(ies) or method(s) must protect public health and the environment and be eligible for permitting by DHEC. The total cost, methods, and estimated time to complete the contract must also be advantageous to the State of South Carolina.

4. REASONABLE BID: DHEC reserves the right to reject any and all bids that appear to be above the customary and reasonable cost for the same scope of work in a similar geologic setting.

5. Contractor must agree to make positive efforts to use women and minority owned businesses and individuals.

6. AMENDMENTS: All amendments to this solicitation will be in writing from the DHEC Procurement Officer indicated on page one of this solicitation. DHEC will not be legally bound by any amendment or interpretation that is not in writing.

7. QUESTIONS: Questions or requests for information must be submitted in writing and received by 5:00 P.M., November 9, 1999. After this date, no further questions will be addressed. A written response will be mailed to all requestors of the bid package. The questions may be faxed to Tripp Clark, fax number (803) 898-3505.

8. NOTE . . . THE ONLY OFFICIAL CONTACT PERSON AT DHEC DURING THE BIDDING AND AWARDING PROCESS IS THE PROCUREMENT OFFICER INDICATED ON PAGE ONE OF THIS SOLICITATION. BIDDING CONTRACTORS ARE NOT TO CONTACT DHEC PERSONNEL LOCATED OUTSIDE THE BUREAU OF BUSINESS MANAGEMENT.

9. The contractor will be required to treat the area where the petroleum chemicals of concern are above site-specific target levels (see figure #2). Verification that interim corrective action goals have been met will be based upon ground-water quality samples collected from monitoring wells OMW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, DMW-17, and water wells CLS-WW, and CP-WW. Verification that final corrective goals have been met will be based upon ground-water quality samples collected from all existing monitoring wells (including water wells CLS-WW and CP-WW), and additional verification wells and verification soil borings to be installed at locations designated by SCDHEC (see specification #10 for more detail).

**SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL**
**BID NUMBER: SB-9570-12/02/99-TC**

10. REPORTS: Deliver the reports to: SCDHEC, Division of UST Management, ATTN: **H. Reed Corley**, 2600 Bull Street, Columbia, SC 29201. A minimum of two (2) copies of each plan and two (2) copies of each report must be delivered to the above address. Based on permitting and other requirements, an engineering report, UIC permits, air modeling forms or NPDES Permits may be required. Please contact the Department for the exact number of copies of each document to be submitted.

11. INVOICING: Invoices will be submitted to: SCDHEC, Division of UST Management, ATTN: Financial Section, 2600 Bull Street, Columbia, SC 29201, using the Department's Corrective Action (CA) Bid Invoice form. The initial invoice must be received at the above address within four months of CAP approval or funds will be uncommitted as required by the Section 44-2-40(B) of the SUPERB Act. If funds are uncommitted the submitted invoice will be held until funding is available. Payment to the contractor will be a pay for performance system as follows:

A. Payment of forty percent (40%) of the total bid price will be made within 90 days of operation of the remediation system or implementation of corrective action as described in the approved corrective action plan (CAP), subject to the limitations of Section 44-2-40 of the SUPERB Act. The implementation should be documented in the first corrective action monitoring report.

B. Payment of thirty-five percent (35%) of the total bid price will be made based on removal of free product to .01 foot as verified in monitoring wells OMW-1, MW-2, MW-3, and MW-10 and achieving interim CoC mass reduction goals at the site as verified in monitoring wells OMW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, DMW-17, and water wells CLS-WW, and CP-WW. Payment will be made for interim goals of 25, 50, and 75 percent reduction of <u>total</u> CoC mass by the implementation of corrective action. **NOTE: Payment cannot be based on laboratory analyses for any well that has been used for injection unless that well has returned to ambient conditions.** The CoC mass requiring reduction is as follows:

CoC mass in parts per billion (mg/l) based on 08/05/99, sampling: (CoC may increase or decrease in the future)

| Well | Benzene | Toluene | Ethylbenzene | Xylenes | MTBE | Naphthalene | Total Mass |
|---|---|---|---|---|---|---|---|
| OMW-1** | 226,000 | 301,000 | 280,000 | 278,000 | 5,110,000 | 2,000 | 6,197,000 |
| MW-2** | 226,000 | 301,000 | 280,000 | 278,000 | 5,110,000 | 2,000 | 6,197,000 |
| MW-3** | 226,000 | 301,000 | 280,000 | 278,000 | 5,110,000 | 2,000 | 6,197,000 |
| MW-4 | 14,200 | 34,600 | 2,750 | 15,900 | 109,000 | <5 | 176,455 |
| MW-5 | 6,400 | 61,600 | 2,460 | 12,100 | 410 | 335 | 83,305 |
| MW-7 | <1 | <1 | <1 | <1 | 41 | <1 | 46 |
| MW-8 | <1 | <1 | <1 | <1 | <1 | <1 | 6 |
| MW-9 | 110 | 4,280 | 2,450 | 17,000 | 150 | <500 | 24,490 |
| MW-10** | 226,000 | 301,000 | 280,000 | 278,000 | 5,110,000 | 2,000 | 6,197,000 |
| MW-11 | <1 | <1 | <1 | <1 | 7 | <5 | 16 |

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| | | | | | | | |
|---|---|---|---|---|---|---|---|
| MW-12 | 5,000 | 260 | <200 | <200 | 41,200 | <1000 | 47,860 |
| MW-13 | 3 | <1 | <1 | <1 | 604 | <5 | 615 |
| MW-14 | 57 | 7 | 1 | 23 | 606 | 5 | 699 |
| MW-15 | 3 | 6 | 1 | 6 | 27 | <5 | 48 |
| DMW-17 | <1 | <1 | <1 | <1 | <1 | <1 | 6 |
| CLS-WW | <1 | <1 | <1 | <1 | <1 | <1 | 6 |
| CP-WW+ | 81 | 1 | <1 | 10 | 35 | <5 | 133 |
| Initial Mass* | 929,859 | 1,304,760 | 1,127,869 | 1,157,245 | 20,592,083 | 9,869 | 25,121,685 |
| SSTL Mass | 61 | 7,280 | 5,109 | 70,245 | 473 | 209 | 83,377 |
| Initial Mass above SSTL | 929,798 | 1,297,480 | 1,122,760 | 1,087,000 | 20,591,610 | 9,660 | 25,038,308 |

* CoC mass may change due to seasonal fluctuations in the groundwater.

** Contains free phase product (OMW-1 {1.05 ft.}, MW-2 {2.29 ft.}, MW-3 {1.01 ft.}, and MW-10 {1.01 ft.}) initial mass based on maximum solubility limits

\+ Sample collected December 1997

(1) 25 percent total mass reduction will be achieved when free product has been removed to .01 foot from OMW-1, MW-2, MW-3, and MW-10, and one-quarter of the initial BTEX, MTBE, and Naphthalene mass from monitoring wells OMW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, DMW-17, and water wells CLS-WW, and CP-WW is removed compared to the SSTLs. The following formula will be used to calculate the percent total mass reduction: total mass above SSTLs from initial sampling less total mass above SSTLs from subsequent sampling divided by total mass above SSTLs from initial sampling. Payment of 10 percent (10%) of the total bid price will be made upon verification (see Specifications item 10 for the method of verification) of at least one-quarter of the total CoC mass above SSTLs is removed.

(2) 50 percent total mass reduction will be achieved when one-half of the initial BTEX, MTBE, and Naphthalene mass from monitoring wells OMW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, DMW-17, and water wells CLS-WW, and CP-WW is removed as compared to the SSTLs. The formula outlined in item 11. B. (1) will be used. Payment of 10 percent (10%) of the total bid price will be made upon verification (see Specifications item 10 for the method of verification) of at least one-half of the total CoC mass above SSTLs is removed.

(3) 75 percent total mass reduction will be achieved when three-quarters of the initial BTEX, MTBE, and Naphthalene mass from monitoring wells OMW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, DMW-17, and water wells CLS-WW, and CP-WW is removed as compared to the SSTLs. The formula outlined in item 11 B (1) will be used. Payment of 15 percent (15%) of the total bid price will be made upon verification (see Specifications item 10 for the method of verification) of at least three-quarters of the total CoC mass above SSTLs is removed.

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C. **The final 25 percent (25%) of the total bid price will be paid upon: 1) verification that the thickness of free product does not exceed .01 foot and the levels of CoC do not exceed the site-specific target levels (SSTLs) defined in item 11.C. at any point in the area of concern (see figure #2). Verification that the SSTLs have been met will be based upon ground-water quality samples collected from all existing monitoring wells, additional verification wells, and soil quality samples from verification soil borings to be installed at locations designated by DHEC (see specification #10 for more detail); and 2) all remediation and assessment items installed by the contractor (e.g., wells [including preexisting wells], trenches, etc.) are removed from the site or properly abandoned.** The SSTLs are as follows:

Site Specific Target Levels (SSTLs) in parts per billion (mg/l)

| Well | Benzene | Toluene | Ethylbenzene | Xylenes | MTBE | Naphthalene |
|---|---|---|---|---|---|---|
| OMW-1 | 5 | 1,000 | 700 | 10,000 | 40 | 25 |
| MW-2 | 5 | 1,000 | 700 | 10,000 | 40 | 25 |
| MW-3 | 5 | 1,000 | 700 | 10,000 | 40 | 25 |
| MW-4 | 5 | 1,000 | 700 | 10,000 | 40 | <5** |
| MW-5 | 5 | 1,000 | 700 | 10,000 | 40 | 25 |
| MW-7 | <1** | <1** | <1** | <1** | <1** | <1** |
| MW-8 | <1** | <1** | <1** | <1** | <1** | <1** |
| MW-9 | 5 | 1,000 | 700 | 10,000 | 40 | 25 |
| MW-10 | 5 | 1,000 | 700 | 10,000 | 40 | 25 |
| MW-11 | <1** | <1** | <1** | <1** | 7* | <5** |
| MW-12 | 5 | 260* | <200** | <200** | 40 | 25 |
| MW-13 | 3* | <1** | <1** | <1** | 40 | <5** |
| MW-14 | 5 | 7* | 1* | 23* | 40 | 5* |
| MW-15 | 3* | 6* | 1* | 6* | 27* | <5** |
| DMW-17 | <1** | <1** | <1** | <1** | <1** | <1** |
| CLS-WW | <1** | <1** | <1** | <1** | <1** | <1** |
| CP-WW | 5 | <1** | <1** | 10* | 35* | <5** |
| Total | 61 | 7,280 | 5,109 | 70,245 | 473 | 209 |

* Laboratory analysis is less than calculated SSTLs; therefore, SSTL mass is set equal to laboratory mass.

** Laboratory analysis is below detection limits; therefore, SSTL mass is set equal to detection limits.

Soil CoC mass is parts per billion (ug/kg) based on 11/10/97, sampling: (CoC mass may increase or decrease in the future)

| Soil Boring | Benzene | Toluene | Ethylbenzene | Xylenes | Naphthalene |
|---|---|---|---|---|---|
| SB-1 | 26 | 19 | <5 | 18 | 7 |

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| | | | | | |
|---|---|---|---|---|---|
| SB-4 | 4,170 | 119,000 | 43,700 | 262,000 | 7,500 |
| SB-5 | 401 | 1,940 | 372 | 2,120 | 551 |
| SB-7 | 172 | 145 | 62 | 374 | 204 |

Soil Site Specific Target Levels (SSTLs) in parts per billion (ug/kg):

| Soil Boring | Benzene | Toluene | Ethylbenzene | Xylenes | Naphthalene |
|---|---|---|---|---|---|
| SB-1 | 5 | 19* | <5** | 18* | 6* |
| SB-4 | 5 | 1,622 | 1,260 | 42,470 | 210 |
| SB-5 | 5 | 1,622 | 373* | 2,120* | 210 |
| SB-7 | 5 | 145* | 62* | 374* | 204* |

* Laboratory analysis is less than calculated SSTLs; therefore, SSTL mass is set equal to laboratory mass.

** Laboratory analysis is below detection limits; therefore, SSTL masss is set equal to detection limits.

1. NOTIFICATION FOR FAILURE TO PERFORM: If the contractor fails to meet any specification of corrective action as outlined in this document, DHEC will notify the contractor by certified letter of the deficiency (ies). If the contractor does not correct the deficiency(ies) within 30 days, the contractor will be in breach of contract and the bid award may be voided by DHEC. DHEC will notify the contractor by certified letter that the bid award is void and any invoices are payable upon review and approval of DHEC. If the contractor corrects the deficiency(ies) within 30 days, the bid award will continue. Please note contractor-owned items used on-site for the contract that are destroyed by acts of nature, improper maintenance or handling, theft or vandalism will not be replaced or reimbursed by the SUPERB fund. The accepted bid will be final and will not be increased or cancelled for any reason (e.g., unanticipated iron fouling of a system, wells clogging because of biological activity or sediments, increased subcontractor costs, loss of utilities, modification to the system to meet the remediation goals, etc.) with the exception of unforeseen geologic circumstances or identification of additional CoC from another release.

2. SITE SPECIFIC DETAILS: A brief technical summary of the release, including a location map and specifics of existing wells, is attached. The detailed technical file will be available for review through the Freedom of Information (FOI) Office located on the third floor of the Sims Building, 2600 Bull Street, Columbia, SC. **Review of the detailed technical file is not mandatory; however, bidders are strongly encouraged to review the file to ensure a complete understanding of the contract requirements. The successful bidder will be responsible for all information included in the technical file.** Appointments to view the technical file may be scheduled on weekdays between the hours of 8:30 A.M. to 5:00 P.M. by calling the SCDHEC Freedom of Information Office at (803) 898-3882. Please request file #12335.

3. **The contractor will submit a CAP within 30 days of Statement of Award notification from the Bureau of Business Management in accordance with Specification Item 2.** The implementation of the CAP will be initiated immediately upon Departmental approval of the CAP and all associated permit(s), and in accordance with the schedule presented in the bid. A performance bond or irrevocable standby letter of credit, equal to the award price, will be required by DHEC. The issuing institution for an irrevocable standby letter of credit must be an entity that has the authority to issue letters of credit in South Carolina and whose letter-of-credit operations are regulated and examined by a federal or state agency. The original performance bond or irrevocable standby letter of credit will be submitted to the Division of UST Management, Attn: Chris Doll, within 30 days of award. The performance bond or irrevocable standby letter of credit will specify that the SUPERB Account will be the recipient of any forfeiture.

4. **MINIMUM REQUIREMENTS: Corrective action will be considered complete once the levels of CoC in the area of concern (see figure #2) are verified to be at or below the SSTLs listed in item 11.C., and removal or abandonment of all remediation and assessment items installed by the contractor (e.g., wells [including preexisting wells], trenches, etc.). See Specification #10 for the method of verification.** All rehabilitation activities associated with a UST release must be performed by a SCDHEC certified Class I site rehabilitation contractor as required by R. 61-98. All corrective action plans and reports must be sealed by a Professional Engineer or Professional Geologist registered in the State of South Carolina. All engineering reports, drawings and plans must be sealed by a Professional Engineer registered in the State of South Carolina. All laboratory analysis for CoC must be performed by a SC certified laboratory. All monitoring, verification, injection, or recovery wells must be installed and abandoned by a SC certified well driller. All applicable certification, training, permits, applications, and fees associated with well installation; injection, discharge, treatment, or transportation of ground water, air, or soil; construction or operation of a remediation system; and any other action requiring a permit are the responsibility of the contractor. Any required business or occupation license and occupational safety and health training (e.g., OSHA) as defined by the laws and regulations of the United States of America, State of South Carolina, county or city is also the responsibility of the contractor. The terms and conditions of all applicable permits will be met. Any contaminated ground water, soil, or construction material must be properly transported and disposed of, or treated at an approved facility with prior approval from DHEC. Any costs for utilities construction and service (electric, telephone, sewer, etc.) required by the corrective action are the responsibility of the contractor.

SPECIFICATIONS for CORRECTIVE ACTION

The successful contractor must meet the following specifications as required by the proposed treatment method(s) or corrective action technology(ies):

1. Submit a CAP bid proposal. The proposal will outline in general terms an approach to achieve the remediation goals (e.g., reduction of each CoC to SSTL). The proposal must outline the following:

   A. A description of the proposed treatment method(s) or technology(ies) for corrective action.

   B. The total cost (in thousands of dollars) to complete site rehabilitation to meet the remediation goals and to remove or abandon all assessment and remediation items installed as part of corrective action.

   C. The estimated amount of time in months to complete site rehabilitation to meet the remediation goals, install verification wells, and remove or abandon all assessment and remediation items installed as part of corrective action.

2. Complete and submit a detailed CAP (three copies) for the release at Crawford's Country Store, 5870 Hwy. 28 N., Abbeville, South Carolina **within 30 days of Statement of Award notification by the Bureau of Business Management.** NOTE: ***Use of monitoring well(s) for injection purposes is not allowed.*** A condition of the plan may include installation of additional recovery, sparge, compliance, or injection wells. The plan must define all active (pump and treat, sparge, vapor extraction, excavation of impacted soils, bioremediation, etc.) and passive (intrinsic remediation, monitoring, etc.) corrective action method(s) proposed to reduce CoC to SSTLs. It must be shown, by use of scientific models, computations, or discussion, how each CoC will be reduced to the SSTL for each remediation method proposed for the release. Any assumptions used in a model will be listed or shown, as well as, appropriate references. Intrinsic corrective action will require monitoring to verify remediation. General construction details will be included (e.g., install four additional recovery wells, construct a compliance point, install four air injection wells, excavate 3,000 cubic yards of impacted soils, etc.) as well as details of well abandonment and equipment removal. A remediation timetable including abandonment of wells and removal of equipment will be included with the CAP. The Division of UST Management will review the CAP and initiate a public notice period for a maximum of 30 days. The contractor must obtain a copy of the applicable portion of the tax map. This map will depict the location of the facility,

and all impacted properties, and all properties located adjacent to the impacted properties. The names and addresses of the owners of each of these properties will be provided. The contractor may be required to attend or provide input at a public meeting upon request by DHEC. Any CAP amendments and modifications arising from public notice must be submitted within 15 days of notification by DHEC. The CAP and any amendments or modifications must be sealed by a qualified Professional Engineer or Geologist registered in the State of South Carolina. The owner/operator, Frank Crawford, will be consulted and will approve the location of the corrective action system. If permanent, the system must be enclosed in a fenced area or small building. The initial invoice must be received at the above address within four months or funds will be uncommitted as required by the SUPERB Act. If funds are uncommitted this invoice will be held until funding is available.

An initial monitoring report documenting CoC concentrations in all wells and potentiometric conditions prior to start up (including verification of system operation or CAP implementation) must be submitted to the Division of UST Management within 45 days after award. Sampling for the initial monitoring report must occur prior to system startup.

Based on naturally occurring conditions, the dissolved concentration of petroleum chemicals of concern (CoC) will increase or decrease. For the purposes of this contract, the total CoC mass for the wells included in the bid package may reasonably increase up to 150 percent or decrease as much as 50 percent. If the total CoC concentration in all wells listed in Special Condition 11.B. increases more than 150 percent based on this initial sampling or if measurable free product that has not been previously documented in any report is detected during the initial sampling event, the contractor may request in writing that the award be canceled. **If either of these conditions occurs, the contractor will contact the UST project manager within two days of problem identification and will submit written documentation within five days of notification.** The contractor will be reimbursed for one personnel mobilization to collect samples, one sample collection and one analytical fee each monitoring well sampled as outlined in SUPERB Allowable Costs, plus $6,000 for all other costs incurred (e.g., CAP preparation, obtaining performance bond, business license). The contract will be canceled and the performance bond will be returned to the company. If the total CoC concentration in all wells listed in Special Condition 11.B. decreases more than 50 percent based on this initial sampling the DHEC may cancel the award. If the corrective action system is started or treatment is performed, the contractor will be required to complete the contract unless geological conditions change or another release is confirmed. See special condition 12. If the contract is canceled by DHEC, the contractor will be notified by certified letter and an invoice for the above outlined items shall be submitted within 20 days from the date of the certified letter canceling the contract.

3. Complete and submit all applications for permits (injection, NPDES, BAQC modeling form, thermal treatment, construction, etc.; 3 copies) and an engineering report (ER; 4 copies) with the CAP. Any required permit changes or corrections will be submitted within 15 days of notification by DHEC. The ER and any ER amendments and modifications, must be sealed by a Professional Engineer registered in the State of South Carolina. After review of the CAP and all permit applications by DHEC, the Division of UST Management will issue a notice to proceed with CAP implementation.

Implementation of the corrective action plan before the completion of the public notice process and approval of all permits by DHEC is not authorized. If premature implementation occurs, the Department will not reimburse those costs from the SUPERB Account, and the bid award will be reduced by that amount. If the Department agrees with early implementation to better protect human health in an emergency and provides approval in writing, early implementation without any reduction to the bid amount will be authorized.

4. Implement the CAP within 30 days of receipt of notice to proceed and any required permit to construct. Disruption to the owner/operator's normal business will be kept to a minimum. Upon completion of any required construction, DHEC will inspect the system and issue a permit to operate.

5. Gain access to the adjacent property to sample monitoring wells and to install any corrective action equipment, as required.

6. Initiate system startup within 15 days of receipt of the permit to operate. Remediation as defined in the CAP and ER will begin upon system startup. **If any problem with CAP implementation occurs, the contractor will contact the UST project manager within 24 hours of problem identification and will submit written documentation within five days of notification.** ***Note: The application of corrective action technologies can result in the mobilization and possible increase in the thickness of free phase product or elevated CoC concentrations in the monitoring wells.***

7. Complete and submit a corrective action monitoring report (first quarterly due within 90 days of the date of the permit to operate and quarterly thereafter) 3 copies plus one copy for any DHEC Bureau that issued a permit) on a quarterly basis. The corrective action monitoring reports must include:

   A. A narrative portion that documents current site conditions and system effectiveness in achieving the remediation goals (e.g., free product removal, reducing CoC to the SSTLs) as outlined in the CAP. Any system down time and the associated reason(s) will be included in the report.

   B. Conclusions and recommendations based on the reported data.

   C. Ground-water laboratory analytical data for all monitoring wells in the following format (additional parameters such as dissolved oxygen may be required; do not sample wells containing free product):

Analytical Data (mg/l)

| Monitoring Well | Date | Benzene | Toluene | Ethylbenzene | Xylenes | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|
| MW-1 | 7/15/97<br>10/15/97 | 145<br>140 | 200<br>190 | 146<br>140 | 1,000<br>900 | 170<br>50 | 47<br>165 |
| MW-2 | 7/15/97<br>10/15/97 | 580<br>480 | 800<br>690 | 300<br>257 | 1,000<br>912 | 60<br>50 | 20<br>19 |

   D. Ground-water potentiometric data for all monitoring wells in the following format:

Ground water Data (feet)

| Monitoring Well | Date | TOC Elevation | TOC to GW | TOC to FP | FP Thickness | GW Elevation |
|---|---|---|---|---|---|---|
| MW-1 | 7/15/97<br>10/15/97 | 98.0<br>98.0 | 17.54<br>17.90 | | | 80.46<br>80.10 |
| MW-2 | 7/15/97<br>10/15/97 | 100.0<br>100.0 | 20.50<br>21.50 | 20.47<br>21.48 | 0.03<br>0.02 | 79.50<br>78.50 |

E. A ground-water elevation contour map of the site based on current ground-water potentiometric data.

F. A CoC map based upon current ground-water laboratory analytical data. The ground-water data should be adjacent to the relevant monitoring well using the following format (additional parameters such as dissolved oxygen may be required):

MW - Number
Benzene (mg/l)
Toluene (mg/l)
Ethylbenzene (mg/l)
Xylenes (mg/l)
MTBE (mg/l)
Naphthalene (mg/l)

G. A copy of the DHEC approval letter and manifests for any contaminated soil and ground-water removed from the site for treatment and/or disposal.

H. Additional data required by permits (e.g., air analyses, wastewater effluent analyses and amounts, etc.). The data should be reported on a form or in a format specified in the permits, and attached to the monitoring report as an addendum.

All rehabilitation activities associated with the UST release must be performed by a SCDHEC Certified Site Rehabilitation Contractor. All air, soil, and ground-water analyses must be performed by a South Carolina certified laboratory. The corrective action monitoring report must be sealed by a Professional Engineer or Geologist registered in the State of South Carolina. All monitoring wells associated with the release will be sampled on a quarterly basis for the first year. Thereafter, the number of wells sampled may be reduced and/or the interval between corrective action monitoring reports may be lengthened upon clear demonstration of CoC reduction, unless restricted by permit requirements. DHEC may require data to be reported on a form or in a specific format. The contractor will be provided with the proper report forms and format prior to system startup. The contractor will be notified of any revisions to the report forms or format 90 days prior to the due date for the corrective action monitoring report.

8. Collect one (1) ground-water sample per monitoring event for all monitoring wells associated with the release. Each well should be purged prior to sampling. Purging is considered complete once the ground-water temperature and pH have stabilized. Sampling logs should note all temperature and pH measurements, as well as the location and type of each sample submitted for laboratory analysis. Each ground-water sample will be collected in accordance with established QA/QC protocol and submitted to a certified laboratory for analysis. The ground-water samples must be analyzed for the following parameters:

| Analyte | Analytical Method* | Reporting Limit (mg/l) |
|---|---|---|
| BTEX | 8260B/5030B | 5 |
| Naphthalene | 8260B/5030B | 5 |
| MTBE | 8260B/5030B | 5 |

*or EPA equivalent method that can achieve the same reporting level

The soil samples must be analyzed for the following parameters:

| Analyte | Analytical Method* | Reporting Limit (mg/kg) |
|---|---|---|
| BTEX | 8260B/5030B | 5 |
| Naphthalene | 8260B/5030B | 5 |

*or EPA equivalent method that can achieve the same reporting level

Additional samples (air, groundwater, effluent, soil) required by permits must be collected in accordance with established QA/QC protocol and submitted to a certified laboratory for analysis. The samples will be analyzed for parameters stipulated in the permits. Sampling and analytical data for each sample (e.g., field sampling logs, chain of custody forms, certificates of analysis, and the lab certification number) will be included in the corrective action monitoring report.

9. Properly dispose of all contaminated soil and ground water generated during the implementation of the CAP and installation of verification wells and soil borings. DHEC must approve the disposal facility selected for treatment and disposal of the free product and contaminated soil and ground water. The owner/operator of the facility is considered the generator for any contaminated soil and ground water. The contractor must document all disposal of free product and contaminated soil and ground water in the corrective action monitoring report.

10. Verification for the removal of free product will be conducted by SCDHEC personnel with an interface probe. If the remediation technology is in-situ (e.g., pump and treat, air sparging, vapor extraction): suspend operation of the system once the remediation goals for all CoC have been maintained for a period of 30 days. Samples are to be taken after one (1) quarter or after all CoC levels have reached equilibrium and again after a second quarter. Along with the parameters listed in Specification #8, the ground-water samples should also be sampled for the following parameters:

| Analyte | Analytical Method* | Reporting Limit (mg/l) |
|---|---|---|
| Dissolved Oxygen | SM4500-O G | 500 |
| Ferrous Iron | SM3500-Fe D | 30 |
| Methane | Kerr Method | 1000 |
| Nitrate | 9056/9210 | 100 |
| Sulfate | 9038/9056 | 1000 |

*or EPA equivalent method that can achieve the same reporting level

If sample results indicate that the remediation goals are not sustained, the contractor must submit a corrective action status report (3 copies) that outlines the deficiency(ies) and offers recommendations for achieving the remediation goals with a revised timetable. Modifying and restarting of the system will be directed by DHEC. The system will operate until all remediation goals are again maintained for a period of 30 days. Operation of the system will then be suspended again and samples taken to verify that remediation goals are sustained. This cycle of activity, including status reports, will be repeated until all CoC levels remain below SSTLs for all wells listed in Special Conditions item 11 C for two (2) consecutive quarters. Three (3) verification wells and three (3) verification soil borings may then be installed at locations designated by DHEC. Costs for verification well and soil boring installation are considered part of this bid price. Each well and soil boring will be sampled in accordance with Specifications item 8 and the analyses compared to the calculated SSTLs for the CoC at that well and soil boring location. If the laboratory analyses are at or below the SSTLs, corrective action will be considered complete. If any analysis is above the SSTL, the corrective action will not be considered complete, and the activity cycle described above must be repeated until all CoC levels remain below SSTLs for those wells and soil borings listed in Special Conditions item 11 C. Split or duplicate samples may be collected by DHEC (or its subcontractors) to verify achievement of remediation goals. At least two weeks

notice will be provided to DHEC prior to mobilizing to the site for sampling to verify attainment of remediation goals. Costs for transportation and analysis of split or duplicate samples will be paid by DHEC.

or

If the remediation technology is a single event (e. g. excavation of impacted soils, vacuum enhanced recovery): collect sufficient samples as outlined in the CAP to verify the reduction of CoC to the remediation goals. The contractor may be required to install and sample **three (3)** verification wells and **three (3)** verification soil borings at locations designated by DHEC. If the levels of CoC in all samples are at or below SSTLs, corrective action will be considered complete. If the level of any CoC is above the SSTL, additional corrective action will be required. The contractor will submit one (1) corrective action status report to document the reduction of CoC to the remediation goals. Split or duplicate samples will be collected **by DHEC (or its subcontractors)** to verify achievement of remediation goals. **At least two weeks notice will be provided to DHEC prior to mobilizing to the site for sampling to verify attainment of remediation goals.** Costs for transportation and analysis of split or duplicate samples will be paid by DHEC.

11. Disassemble and remove the remediation system and all associated remediation items including utilities from the site within 60 days of notification by DHEC that the remediation goal for the release associated with the UST(s) at the site has been achieved. Disruption to the owner/operator's normal business will be kept to a minimum.

12. Properly abandon all wells (including preexisting wells), borings, trenches, and piping/utility runs installed by the contractor as part of corrective action within 60 days of notification by DHEC that the remediation goal for the release associated with the UST(s) at the site has been achieved. The abandonment will be in accordance with South Carolina Well Standards and Regulations R. 61-71 and accepted industry standards for abandonment of trenches and piping/utility runs. Disruption to the property owner's normal business will be kept to a minimum. The contractor must notify DHEC of the method of well abandonment and final disposal of any free product and contaminated soil or ground water. The contractor will return the site to the condition prior to corrective action (e.g., asphalt paved areas will be repaved with asphalt, concrete areas will be replaced with concrete, grass areas will have soil replaced to the original grade and reseeded or sodded with grass, etc.).

BIDDING SCHEDULE

**The total cost in dollars to treat the area of concern (see figure #2) such that the thickness of free product does not exceed .01 foot and the levels of CoC do not exceed the site-specific target levels (SSTLs) defined in item 11.C. at any point, complete all associated monitoring and post-remediation verification, prepare all plans, reports, and correspondence; obtain and meet all terms and conditions of all required permits and licenses; design, install, monitor, operate, maintain, and when completed, properly abandon or remove all assessment and remediation items installed as part of corrective action; provide evidence of performance bond; and other items outlined in this bid invitation for the Crawford's Country Store, (UST Permit # 12335), 5870 Hwy. 28 N., Abbeville, South Carolina is:**

$ 117,000.00

**SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL**
**BID NUMBER: SB-9570-12/02/99-TC**

**OTHER CRITERIA**

Please respond to the following questions that have been designed to verify your corrective action qualifications:

1. The corrective action method(s) or technology (ies) that will be proposed in the CAP will be (list all active and/or intrinsic methods or technologies for remediation of the aquifer; attach additional pages(s) as required):

   Air Sparging enhanced with Soil Vapor Extraction.

2. The estimated time in months to complete the corrective action from the date of bid award, corrective action goals are met, and all corrective action items are removed from the site or properly abandoned is approximately 30 months. This time assumes all submitted plans and reports will be reviewed by DHEC within 30 days of receipt.

**BID ACCEPTANCE and DELIVERY STATEMENT**

In compliance with the bid solicitation and subject to all conditions thereof, the contractor offers and agrees, if this bid is accepted within 60 days from date of bid opening, to furnish any or all items/services quoted at the prices set forth.

# SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
## BID NUMBER: SB-9570-12/02/99-TC

---

## PLEASE READ THE FOLLOWING CAREFULLY PRIOR TO COMPLETING BID

### INSTRUCTIONS TO BIDDERS

DISCUSSIONS AND NEGOTIATIONS: By submission of a bid, bidder agrees that during the period following issuance of this solicitation and prior to notification of intent or award of a contract, the bidder shall not discuss this procurement with any party except members of the DHEC Procurement Division or other parties designated in this solicitation. Bidder shall not discuss or attempt to negotiate with the using area or program any aspects of the procurement without prior approval of the DHEC Procurement Division Buyer responsible for the procurement. Infractions may result in rejection of the violator's bid.

1. Unless otherwise required herein, only one signed copy of the invitation to bid is required.
2. Bids "faxed" directly to the DHEC Procurement Office will not be accepted or considered for award.
3. Bids, amendments thereto or withdrawal request must be received by the time advertised for bid opening. It is the bidder's sole responsibility to insure that these documents are received by the person (or office) at the time indicated in this solicitation document. Any withdrawal request received after the time of the bid opening shall be governed by DHEC Underground Storage Tank Environmental Remediation Procedures.
4. When specifications or descriptive papers are submitted with the bid submission, enter bidder's name thereon.
5. Submit your signed bid on this form. Show the bid number on the envelope as instructed. DHEC assumes no responsibility for unmarked or improperly marked envelopes. All envelopes received showing a bid number are placed directly under locked security until the date and time of opening. Do not include more than one bid invitation per envelope. If directing any other correspondence, address the envelope to the Procurement Officer but do not include the bid number on the envelope since it does not include your bid.
6. Bidders must clearly mark as "CONFIDENTIAL" each part of their bid which they consider to be proprietary information that could be exempt from disclosure under Section 30-4-40, Code of Laws of South Carolina 1976 (1986 Cum. Supp.; Freedom of Information Act) If any part is designated as confidential, there must be attached to that part an explanation of how this information fits within one or more categories listed in Section 30-4-40. DHEC reserves the right to determine whether this information should be exempt from disclosure and no legal action may be brought against the State, DHEC or its agents for its determination in this regard.
7. By submission of a bid, you are guaranteeing that all goods and services meet the requirements of this solicitation during the contract period.
8. Tie bids will be resolved as outlined in DHEC Underground Storage Tank Environmental Remediation Procedures.
9. Do not include any taxes that DHEC may be required to pay in the bid price. Upon submission of a bid by a state agency, the Procurement Officer will compute a 5% sales and use tax to the non-state agency bids when applicable (service and labor excluded) in determining the low bidder. This procedure conforms with the SC Tax Commission Sales and Use Tax Regulation 117-174-.95.
10. Correction of errors on this bid form: All prices and notations should be printed in ink or typewritten. Errors should be crossed out corrections entered and initialed by the person signing the bid. Erasures or use of typewriter correction fluid may be cause for rejection No bid shall be altered or amended after the time specified for the bid opening.
11. Ambiguous bids which are uncertain as to terms, delivery, quantity or compliance with this solicitation may be rejected or otherwise disregarded.
12. Any bidder desiring to exercise a grievance may do so under section IV of DHEC Underground Storage Tank Environmental Remediation Procedures. All correspondence should be directed to the Director of Procurement Services, Bureau of Business Management, 2600 Bull Street, Columbia, SC 29201.
13. Failure to respond to three consecutive bid notices may result in removal of bidder's name from the mailing list.

### GENERAL PROVISIONS

14. DHEC reserves the right to reject any and all bids, and to cancel this solicitation.
15. Unit prices will govern over extended prices unless otherwise stated in this solicitation.
16. Prohibition of Gratuities: Amended section 8-13-420 of the 1976 Code of Laws of South Carolina States: "Whoever gives or offers to any public official or public employee any compensation, including a promise of future employment, to influence his action, vote, opinion or judgement as a public official or public employee or such public official solicits or accepts such compensation to influence his action, vote, opinion or judgement shall be subject to the punishment as provided by Section 16-9-210 and Section 16-9-220. The provisions of this section shall not apply to political contributions unless such contributions are conditioned upon the performance of specific action of the person accepting such contribution nor shall they prohibit a parent, grand-parent or relative from making a gift to a child, grandchild or other close relative for love and affection except as hereafter provided".
17. Bidder's Qualification: Bidders must, upon request of DHEC, furnish satisfactory evidence of their ability to furnish products or services in accordance with the terms and conditions of these specifications. DHEC reserves the right to make the final determination as to the bidder's ability to provide the products or services requested herein.

# SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
## BID NUMBER: SB-9570-12/02/99-TC

18. **Bidder's Responsibility:** Each bidder shall fully acquaint himself with conditions relating to the scope and restrictions attending th execution of the work under the conditions of this solicitation. It is expected that this will sometimes require on-site observation. Th failure or omission of a bidder to acquaint himself with existing conditions shall in no way relieve him of any obligation with respect to thi bid or to the subsequent contract.
19. **Amendments:** All amendments to and interpretations of this solicitation shall be in writing from the DHEC Procurement Office. Neith DHEC or the Procurement Officer shall be legally bound by any amendment or interpretation that is not in writing.
20. **Award Criteria:** Award shall be as indicated herein to the lowest responsible and responsive bidder whose bid meets the requiremen and criteria set forth in this solicitation. Award may take longer than fourteen days. A copy of the award notice should be posted on th Procurement Bulletin Board located at 2600 Bull Street in the Aycock Building directly across from the Personnel Division and next to th Bureau of Business Management Procurement Services Division.
21. **Rejection:** DHEC reserves the right to reject any bid that contains prices for individual items or services that are unreasonable whe compared to the same or other bids if the rejection is in the best interest of the State.
22. **Competition:** This solicitation is intended to promote competition. If the language, specifications, terms and conditions, or an combination thereof restricts or limits the requirements in this solicitation to a single source, it shall be the responsibility of the intereste bidders to notify the DHEC Procurement Office in writing so as to be received five days prior to the opening date. Notification may b "faxed" to the DHEC Procurement Office, (803) 734-4874. The solicitation may or may not be changed but a review of such notificatio will be made prior to award.
23. **Order of Precedence:** In the event of inconsistency between provisions of this solicitation, the inconsistency shall be resolved by givir precedence in the following order; (A) the bidding schedule, (B) the specifications, (C) general conditions, (D) special provisions c special conditions of the contract whether incorporated by reference or otherwise, and (E)instruction to bidders.

### GENERAL CONDITIONS

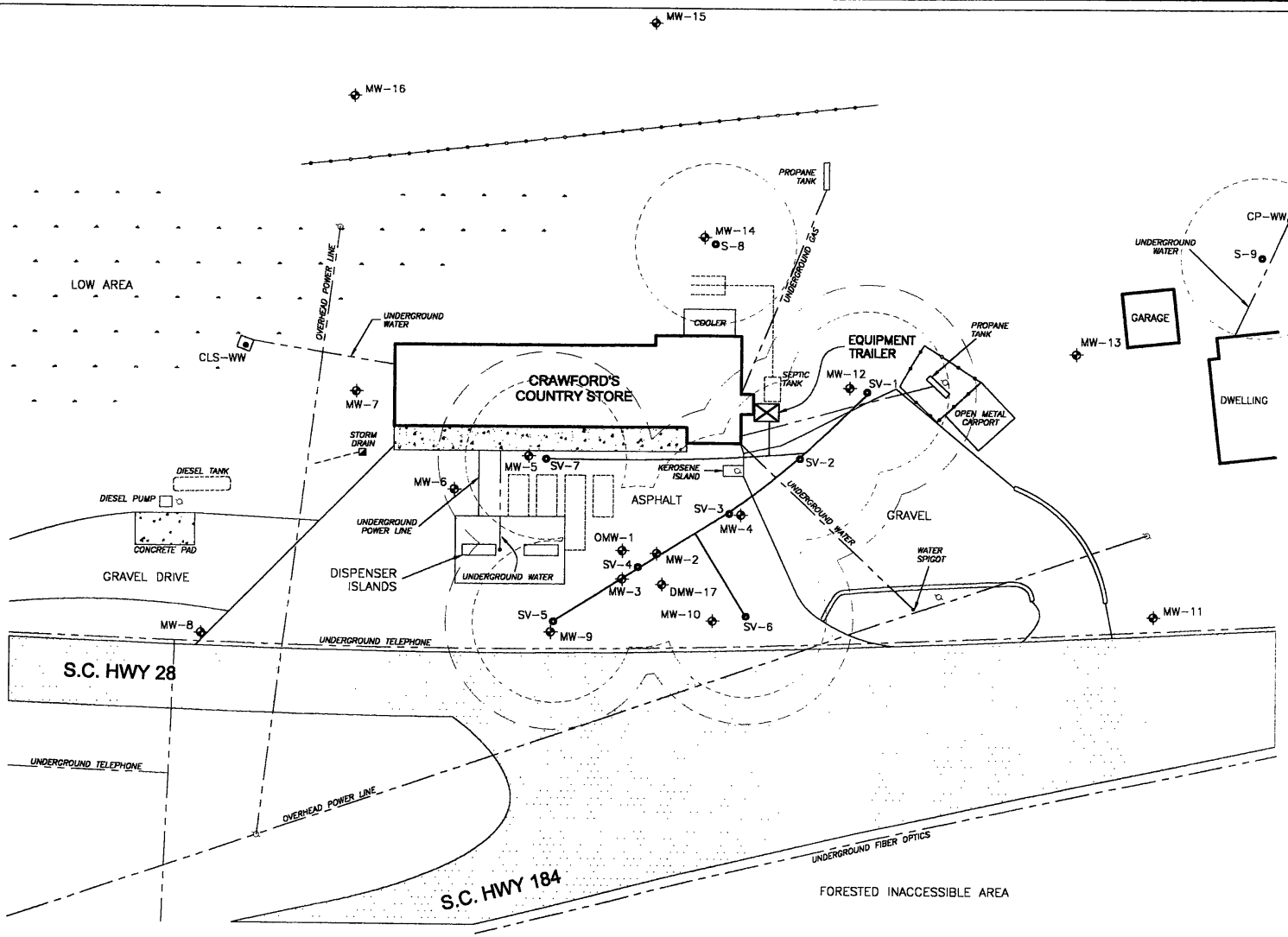
24. **Contract Administration:** Questions or problems arising after award of this solicitation/contract shall be directed to the DHE Procurement Office, 2600 Bull Street, Columbia, SC, 29201. Reference the solicitation and contract number.
25. **Default:** In case of default by the contractor, DHEC reserves the right to purchase any or all items in default in the open market, chargin the contractor with any additional costs. The defaulting contractor shall not be considered a responsible bidder until the assessed charg has been satisfied.
26. **Save Harmless:** (This General Condition does not apply to solicitations for service requirements). The successful bidder shall indemni and save harmless the State of South Carolina and DHEC and all its officers, agents and employees from all suits or claims of an character brought by reason of infringing on any patent, trade mark or copyright. The bidder shall have no liability to DHEC if such paten trade mark or copyright infringement or claim is based upon the bidder's use of material furnished to the bidder by the State.
27. **Publicity Releases:** By submission of a bid, the contractor agrees not to refer to award of this contract in commercial advertising in suc a manner as to state or imply that the products or services provided are endorsed or preferred by DHEC or user.
28. **Tax Credit Availability:** Bidders interested in income tax credit availability by subcontracting with Certified Minority Firms should conta the Office of Minority Business Assistance, 1205 Pendleton Street, Columbia, SC, 29201. (803-734-0562)
29. **Affirmative Action:** The successful bidder will take affirmative action in complying with all Federal and State requirements concernin fair employment and employment of the handicapped, and concerning the treatment of all employees, without regard or discriminatio by reason of race, color, religion, sex, national origin or physical handicap.
30. **Assignment:** Unless otherwise indicated in this solicitation, no contract or its provisions may be assigned, sublet, subcontracted, c transferred without the prior written consent of the DHEC Procurement Office.
31. **Termination:** Any contract resulting from this solicitation may be terminated by DHEC by providing a thirty day advance notice in writin to the successful contractor.
32. **Non-Appropriations:** Any contract entered into by DHEC resulting from this solicitation shall be subject to cancellation without damage or further obligation when funds are not appropriated or otherwise made available to support continuation of performance in a subsequer fiscal period or appropriated year.
33. **Convenience:** In the event that this contract is terminated or canceled upon request and for the convenience of DHEC without th required thirty days advance written notification, then DHEC shall negotiate reasonable applicable termination costs.
34. **Cause:** Any contract resulting from this solicitation may be terminated without advance notice by DHEC for cause, default or negligenc on the part of the successful contractor.
35. **S.C. Law Clause:** Upon award of a contract under this bid, the person/partnership, association or corporation to whom the award is mac must comply with the laws of South Carolina which require such person or entity to be authorized and/or licensed to do busi State. Notwithstanding the fact that applicable statutes may exempt or exclude the successful bidder from requirements authorized and/or licensed to do business in this State. By submission of a bid, the bidder agrees to subject process of the courts of the State of South Carolina as to all matters and disputes arising performance thereof, including any questions as to the liability for taxes licenses or fees levied by
36. **Quality of Product:** (This general condition does not apply to solicitations for [illegible] unless otherwise indicated in this solicitation, it is understood and agreed that any [illegible] result of this solicitation shall be new and in first class condition that all containers shall be new and suitable for storage and shipment and that prices include standard commerci

packaging. If items that are other than new (i.e., remanufactured or refurbished) are desired to be bid, the bidder must obtain writte permission to bid such items at least five days in advance of the bid opening date. Written permission must be obtained from the DHEC Procurement Office.

37. **Compliance with Federal Requirements:** S.C. State or Federal requirements that are more restrictive shall be followed in bidding awarding and performance of this contract.
38. **Drug-Free Workplace:** Required by Section 44-107-10 (Drug Free Work-Place Act) of the SC Code of Laws, 1976, as amended. B submission of a bid, the bidder certifies that he will comply with all aspects of the Drug-Free Workplace Act and will not engage in th unlawful manufacture, distribution, dispensation, possession or use of a controlled substance in the performance of this contract. Thi certification also applies to any individual or firm employed by the contractor.
39. **Confidentiality Policy:** The successful contractor agrees to abide by DHEC's policy of confidentiality which states in part that a information as to personal facts and circumstances given or made available to employees and/or contractors of DHEC in administratio of programs shall be held confidential and shall not be divulged without the express written consent of the individual(s) to which it pertains
40. **Item Substitution:** No substitution of items will be allowed on any purchase made from the awarded contract without written permissio from the DHEC Procurement Office.
41. **Outside Contractor Program:** If applicable to scope of contract, contracted employees working on DHEC properties are entitled t information about hazardous chemicals present at DHEC; and DHEC's personnel are entitled to information about hazardous chemical brought to the facilities by contractors. In order to assure continued compliance with the Hazard Communication Standards whil contractors are on DHEC property and to control potential compliance obligations under the Superfund Amendments and Re-authorizatio Act, it is DHEC's policy to:
    A. Obtain written assurance that the contractor's employees have been trained to understand the hazards of the chemicals at DHE and how to use appropriate personal protective equipment. All personal protective equipment and training required for th contractor's employees will be provided by the contractor at the contractor's expense. (This includes SC State General Service employees).
    B. Require the contractor to notify the DHEC Bureau of Business Management or the appropriate DHEC unit Director whe introducing hazardous chemicals into DHEC work areas, which may harmfully expose DHEC employees. If the contractor i introducing such hazardous chemicals into any DHEC facility or onto DHEC property, the contractor shall provide the DHE Division of Procurement Services or the DHEC unit Director copies of the Material Safety Data Sheets (MSDS) for thos chemicals. The DHEC Division of Procurement Services or the DHEC unit Director should provide appropriate information t the DHEC employees before the contractor(s) enter any DHEC facility with chemicals.
    C. DHEC reserves the right to refuse to allow any contractor to bring any chemical onto DHEC property. DHEC also reserves th right to refuse to allow any contractor to bring certain quantities of chemicals on DHEC property.
42. Any written assurances, MSDS's, or correspondence required must be submitted prior to beginning any aspect of the contract.
43. **Travel:** As applicable, reimbursement to contractors for travel expenses will be made in accordance with regulations established for Sta employee travel and in accordance with guidelines established by DHEC.

## SPECIAL PROVISIONS

44. **FOB Destination:** All deliveries shall be FOB Destination. It is agreed by the parties hereto that delivery by the contractor to the comm carrier does not constitute delivery to the State. Any claim for loss or damage shall be between the contractor and the carrier. Bic received otherwise may be subject to rejection.
45. **Shipping/Delivery Charges:** Unless otherwise indicated in the "Special Conditions", any applicable shipping, delivery, assembly installation charges are to be indicated on the bidding schedule herein.
46. **Specifications:** The specifications listed herein are not to be considered restrictive to one source of supply. However, items offered mu be equal in quality and performance. The bidder to include with his bid supporting product data sufficient for DHEC to determine equali and acceptability. DHEC reserves the right to reject any offering in which the items offered are considered unsatisfactory in any manne DHEC will determine if minor deviations from the listed features or performance are acceptable.
47. **Confidentiality:** The Contractor and all contracting employees shall not discuss, disclose, release, divulge or otherwise communicat any confidential information as to personal facts and circumstances observed or overheard while performing work pursuant to this contra The Contractor and all contracting employees, their agents, personal representatives and assigns, shall be fully liable and accountab for any resulting damage or injury to any person, institution or DHEC.




## LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SPARGE/VAPOR EXTRACTION WELL |
| S-# | SPARGE WELL |
| | PIPING TRENCH |
| | SPARGE WELL PROPOSED RADIUS OF INFLUENCE (30') |
| | VAPOR EXTRACTION WELL PROPOSED RADIUS OF INFLUENCE (40') |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

FIGURE TITLE: **REMEDIATION SYSTEM LAYOUT**

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 1/12/2000

DRAWN BY: J.Driscoll

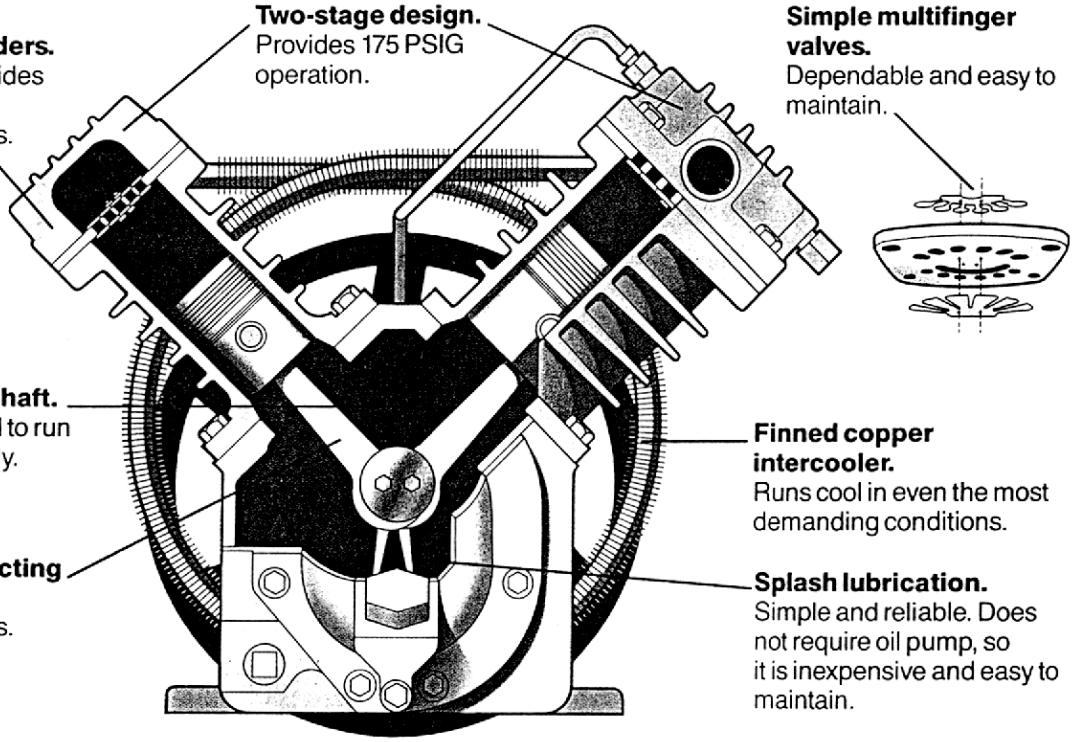
FIGURE NO: 5.0

# 7.5 HP Two-Stage Industrial Air Compressor

- 100% cast-iron design
- 175 PSIG operation
- Simple maintenance
- Durable construction
- Backed by Ingersoll-Rand, the world's largest manufacturer of air compressors

INGERSOLL-RAND®
AIR COMPRESSORS

# Around the world, millions of Type-30® air compressors are running strong in the most demanding conditions. Here's why:




## 100% Cast Iron

For more than 60 years, Ingersoll-Rand's Type-30 industrial air compressors have set the industry's standards. Their rugged, 100% solid cast-iron construction, proven reliability and durability have made them the number-one-selling compressors in their class. And they are backed by Ingersoll-Rand, the world's largest manufacturer of air compressors.

| Model | Motor | ASME Receiver Size | Capacity | Max. Pressure | Package Dimensions | Weight |
|---|---|---|---|---|---|---|
| | (HP) | (GAL) | (ACFM) | (PSIG) | LxWxH (in) | (lb) |
| 2475N7.5 | 7.5 | 80 (Vert.) | 24.0 | 175 | 36x22x69 | 590 |

AVAILABLE IN 230 VOLT, 1 PHASE, 60 CYCLE OR 200, 230, 460, 575 VOLT, 3 PHASE, 60 CYCLE ELECTRICS.

**Statement Concerning the Use of This Equipment for Breathing Air and/or Aqua Lung Service:** If the model number on this air compressor contains the letters "BAP," the compressor is suitable for use in breathing air services. In the absence of such a designation, the compressor is *not* considered as capable of producing air of breathing quality. Should the purchaser and/or user proceed to use the compressor for breathing air service, the purchaser/user assumes all liability resulting therefrom without any responsibility or liability being assumed by Ingersoll-Rand Company. **Disclaimer:** Nothing contained within this brochure is intended to extend any warranty or representation, expressed or implied, regarding the products described herein. Any such warranties or other terms or conditions of sale of products shall be in accordance with Ingersoll-Rand Standard Terms and Conditions of Sale for such products, which are available upon request. Product improvement is a continuing goal at Ingersoll-Rand. Designs and specifications are subject to change without notice or obligation.

**INGERSOLL-RAND®**
**AIR COMPRESSORS**

Small Compressor Division
Ingersoll-Rand Company
Davidson, North Carolina 28036

Form 1879
Printed in U.S.A.

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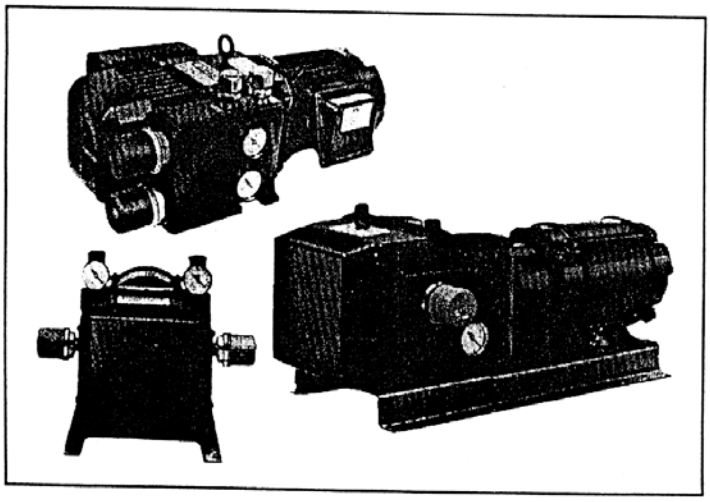
70-950 G437PL (Rev.B)

GAST

# 70 AND 80 SERIES OILLESS ROTARY VANE VACUUM PUMPS & COMPRESSORS



## OPERATION & MAINTENANCE TECHNICAL MANUAL

CONTENTS:


General Information, Installation, and Mounting ..... 2

Wiring, Operation, Performance, and Maintenance Inspection ..... 3

Shut-Down Procedures, Troubleshooting, and Accessories ..... 4

Service Kit Installation ..... 5

70 Series Exploded View and Parts Ordering Information ..... 6-7

80 Series Exploded View and Parts Ordering Information ..... 8-9

Relief Valve Recommendations ..... 10

Warranty and Authorized Service Facilities ..... 11


KEEP THIS DOCUMENT FOR FUTURE REFERENCE

## ADJUSTABLE VACUUM / PRESSURE RELIEF VALVE RECOMMENDATIONS

| Pressure Relief Valves | | |
|---|---|---|
| PART# | SUGGESTED PRESSURE RANGE | SUGGESTED DUTY RANGE |
| AN225<br>AN225B | 1-15 lbs. per sq. in.<br>3-15 lbs. per sq. in. | 15-45 Cubic ft. per min.<br>45-75 Cubic ft. per min. |
| AN225A<br>AN225C | .07-1.0 Bar<br>.2-1.0 Bar | 25-76 Cubic meters per hr.<br>76-127 Cubic meters per hr. |

| Vacuum Relief Valves | | |
|---|---|---|
| AN226<br>AN226A | 5-25 in. of mercury<br>844-167 Millibar | 15-55 Cubic ft. per min.<br>25-93 Cubic meters per hr. |

⚠ **WARNING** Relief Valves have set-screws (loctited in place) to prevent cap from screwing entirely off. Do not remove. See above table for suggested operating range.

⚠ **CAUTION** Relief Valves have insulating, color-coded sleeves (black for pressure, red for vacuum) to prevent the hand from contacting hot surfaces. Do not remove. The pressure relief valve will get particularly warm without the insulator while under pressure. Do not touch the lower portion of the valve.

Application of the relief valves may prevent a pump from hitting its maximum duty and will marginally reduce flow at a given duty as well due to the creation of an arbitrary leak path as the internal spring compresses slightly. Please do not mistake this for pump malfunction.

Gast relief valves will withstand mild solvents. If solvent collects in valve, it will blow out during operation.

The customer needs to establish pressure requirements, then adjust appropriate regulator by turning the knob to required level.

Form 1 UIC

D H E C

**Underground Injection Control Permit Application**
**Ground-Water Protection Division**
(Collected under the Authority of Title 48 Chapter 1 of the 1976 South Carolina Code of Laws)

**I. EPA ID NUMBER**

| | | T/A | C |
|---|---|---|---|
| U | | | |

**Read attached instructions before starting.**
**For Offical Use Only**

| Application Approved month day year | Date Received month day year | Permit/Well Number |
|---|---|---|
| | | |

**Comments**

| **II. Facility Name and Address** | **III. Owner/Operator and Address** |
|---|---|
| Facility Name<br>Crawford's Country Store<br><br>Site# 12335 | Owner/Operator Name<br>Harold Franklin Crawford |
| Street Address<br>5870 Highway 28 North | Street Address<br>5870 Highway 28 North |
| City State Zip Code<br>Abbeville,SC 29620 | City State Zip Code<br>Abbeville, SC 29620 |

**IV. Ownership Status** (Mark "x")

☐ A. Federal ☒ B. State ☐ C. Private
☐ D. Public ☐ E. Other (Explain)

**V. SIC Codes**

201-Petroleum

**VI. Well Status** (Mark "x")

☐ A. Operating — Date Started month day year

☐ B. Modification/Conversion ☒ C. Proposed

**VII. Type of Permit Requested - Class and Type of Well** (see reverse)

| A. Class(es) enter code(s) | B. Type(s) enter code(s) | C. If class is "other" or type is code "x", explain | D. Number of Wells per type |
|---|---|---|---|
| V.a | I | Corrective Action Wells | 9 |

**VIII. Location of Wells or Approximate Center of field or Project**

| C | A. Latitude | | | | B. Longitude | | | |
|---|---|---|---|---|---|---|---|---|
| | | Deg | Min | Sec | | Deg | Min | Sec |
| I | | 34 | 18 | 151 | | 82 | 32 | 473 |

**IX. Attachments**

Complete the following questions on a separate sheet(s) and number accordingly; see instructions for Classes II, III, and V, complete and submit on a separate sheet(s) attachments A-U as appropriate. Attach maps where required. List attachments by letter which are applicable and include with your application.

**X. Certification**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment.

| A. Name and Title (Type or Print) | B. Phone No. |
|---|---|
| Scott Johnston-Division Director | ( 803 749-4080 |
| C. Signature | D. Date Signed |
| | 1-10-99 |

DHEC2502 (04/1999)

# ATTACHMENTS FOR UIC PERMIT

**Attachment A**

Nine (9) proposed sparge wells will be used to inject clean air for sparging.

**Attachment B**

The construction details for the proposed sparge well S-1 through S-9 are attached (Figure 7.0).

**Attachment C**

Clean air will be injected into all sparge wells continually at a flow rate of approximately 3 CFM and 8 PSI, for a period of approximately 24 months.

The hydraulic conductivity of the site is approximately 3.169 ft/day and will accept the flows proposed.

**Attachment D**

The monitoring program is provided in the associated CAP.

**Attachment E** N/A

**Attachment F**

The site is a retail fueling station/convenience store.

**Attachment G** See CAP/ER

**Attachment H** Attached please find a USGS Quad Map and a site map.

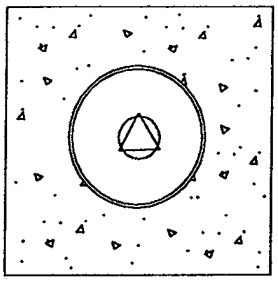
**Attachment I** See Expanded Assessment Report

**Attachment J** Shallow Surfical Aquifer

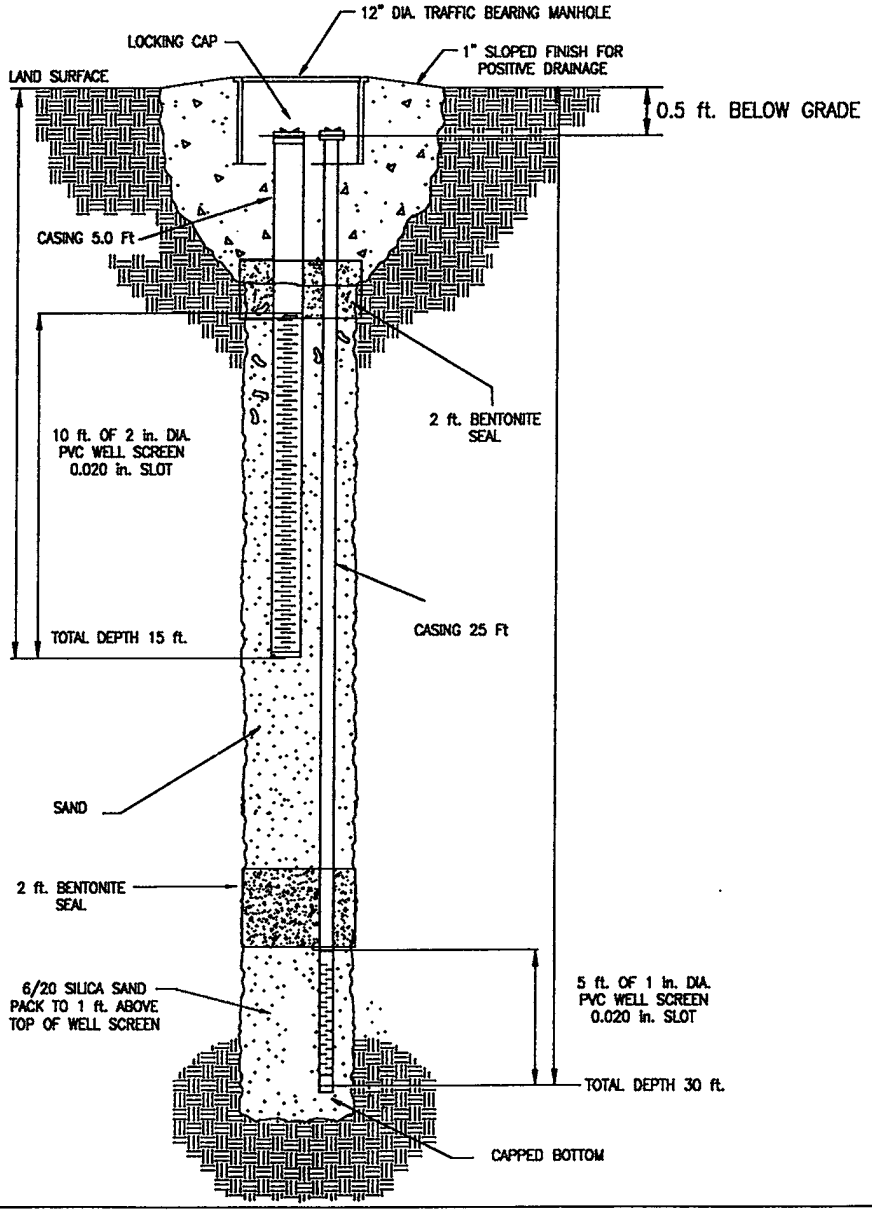
**Attachment K** See Expanded Assessment Report

# ATTACHMENT B

# WELL CONSTRUCTION DATA



2 ft x 2ft.
CONCRETE PAD




SCALE: NOT TO SCALE

H2 ENVIRONMENTAL, INC.
ASSESSMENT AND REMEDIATION SPECIALISTS

PREPARED FOR: Crawford's Country Store

SITE ADDRESS:
SCDHEC SITE 12335
5870 Highway 28 North
ABBEVILLE, SOUTH CAROLINA

JOB DESIGNATION: DHE-12335

DRAWN BY:

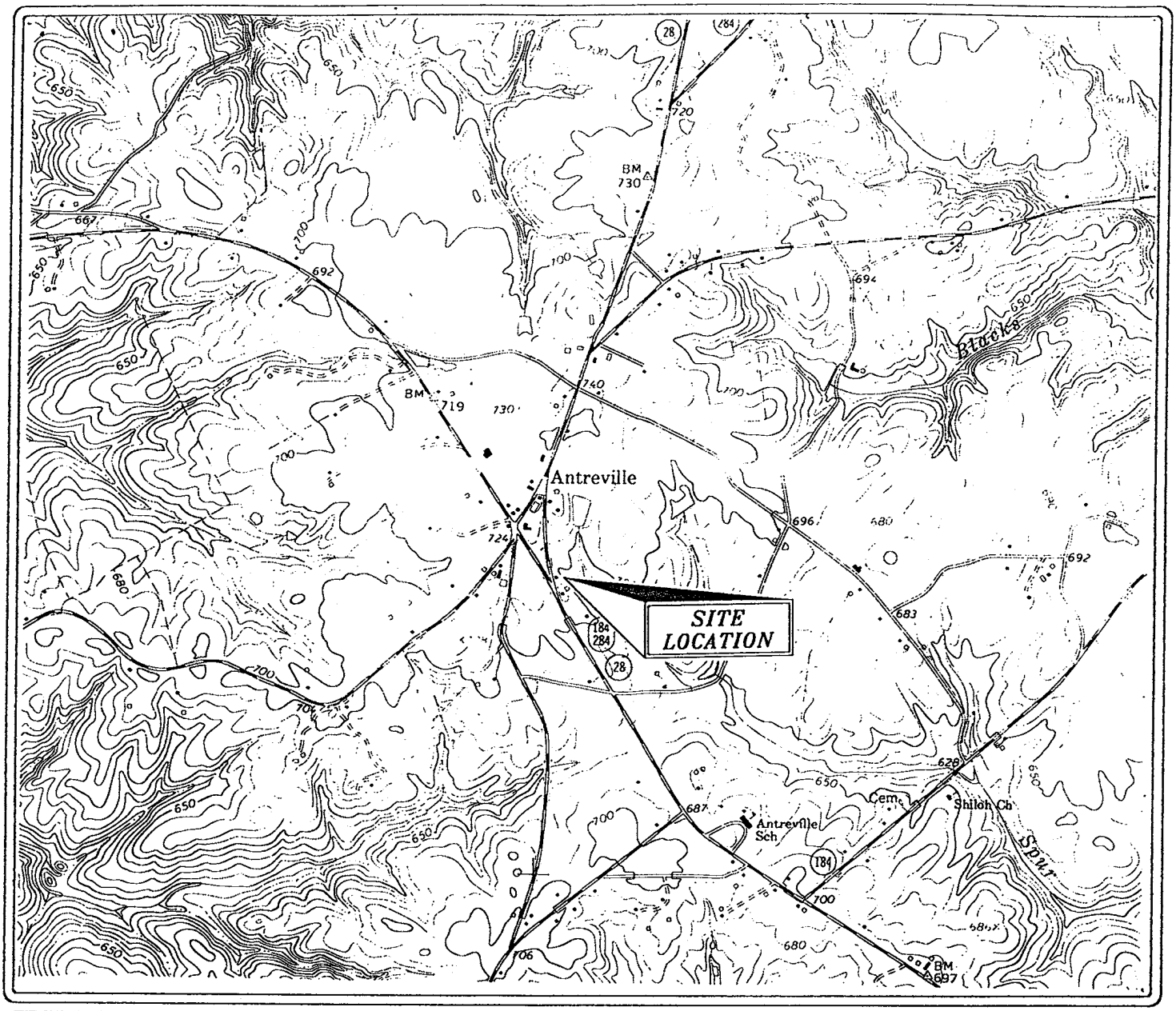
DATE DRAWN: 02/20/99

FIGURE NUMBER: 7.0

FIGURE TITLE: SPARGE AND VAPOR EXTRACTION WELL

# MAPS

# MAPS



U.S.G.S. SOURCE QUADRANGLE:

ANTREVILLE QUADRANGLE
S.C., 1973, 7.5 MINUTE MAPS
GEOLOGICAL SURVEY, DENVER, COLORADO

GRAPHIC SCALE IN FEET

2000 0 1000 2000 4000

$H_2O$ ENVIRONMENTAL, INC.
ASSESSMENT AND REMEDIATION SPECIALISTS

PREPARED FOR:
SCDHEC

SITE ADDRESS:
CRAWFORD'S COUNTRY STORE
ABBEVILLE, SC
SCDHEC SITE # 12335

NORTH

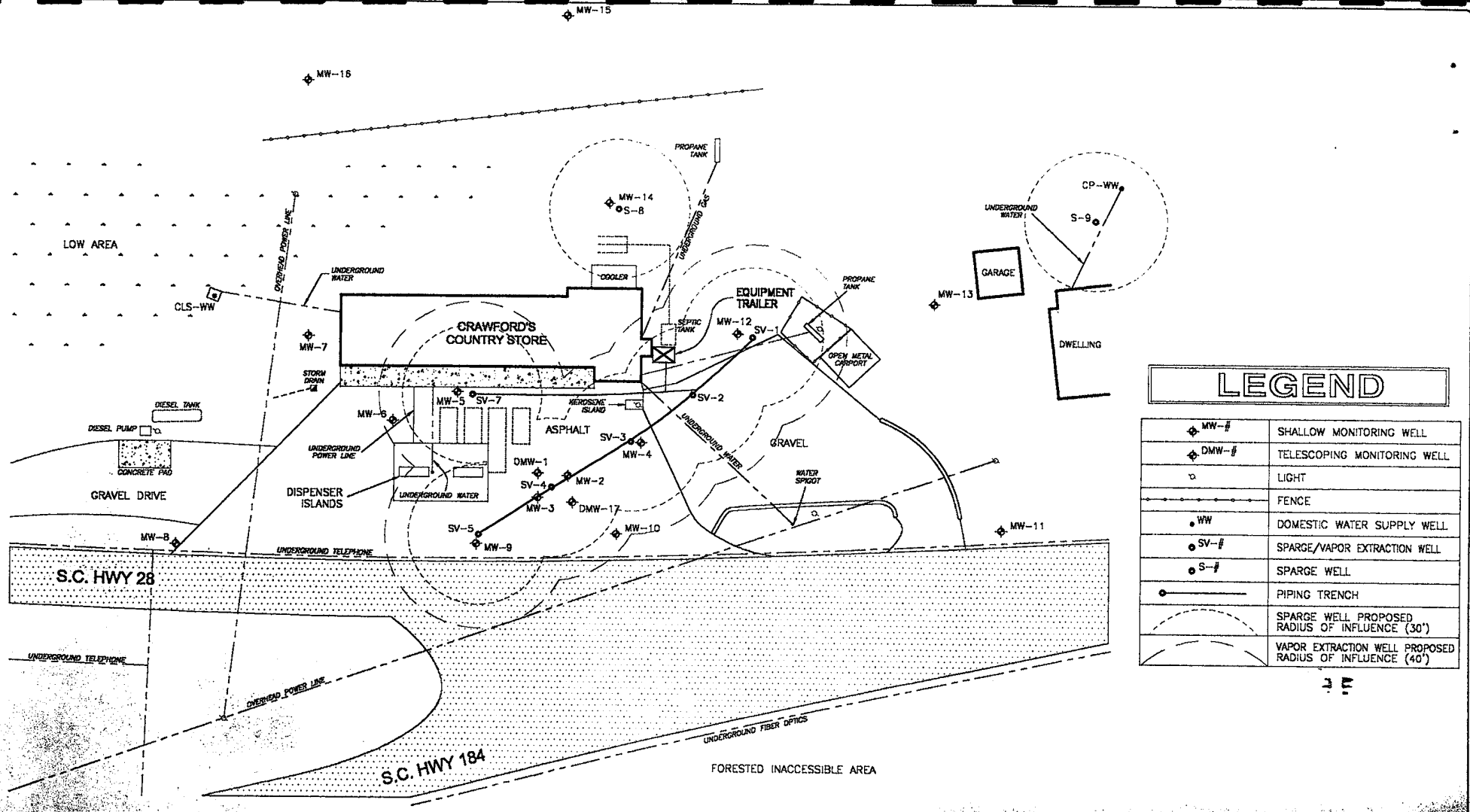
FIGURE TITLE:
U.S.G.S. SITE LOCATION MAP

DRAWN BY:

DATE DRAWN:
01/07/00

DRAWING NUMBER:
DHEC 12335

REVISION:
0




## LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SPARGE/VAPOR EXTRACTION WELL |
| S-# | SPARGE WELL |
| | PIPING TRENCH |
| | SPARGE WELL PROPOSED RADIUS OF INFLUENCE (30') |
| | VAPOR EXTRACTION WELL PROPOSED RADIUS OF INFLUENCE (40') |

H2O ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Asheville, South Carolina

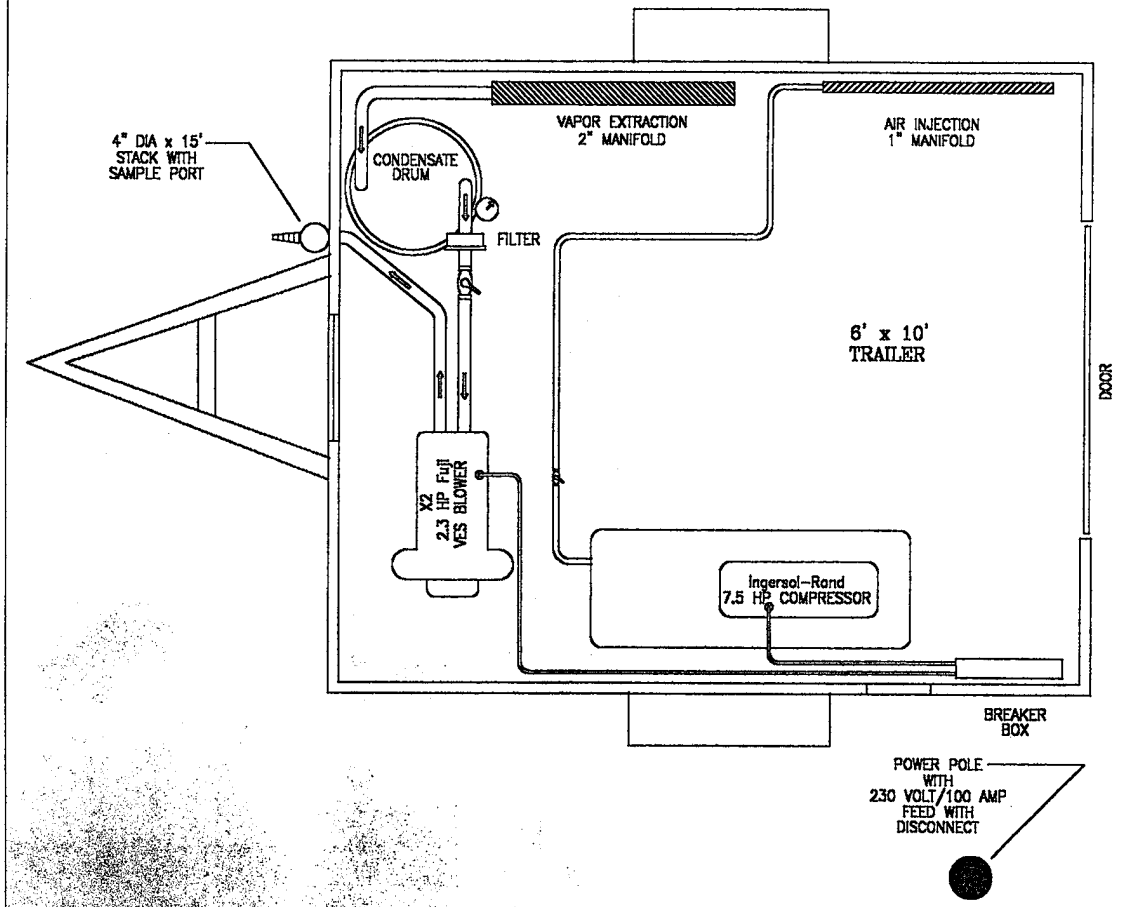
PROJECT NO.: DHE-12335

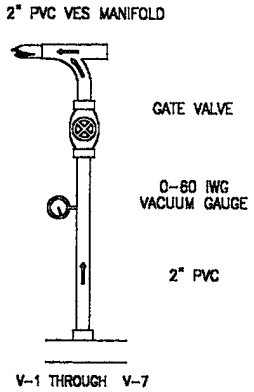
DRAWING DATE: 1/12/2000

DRAWN BY: J.Driscoll

FIGURE NO.: 5.0

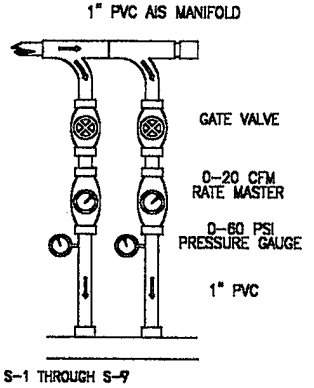
FIGURE TITLE: REMEDIATION SYSTEM LAYOUT




## VAPOR EXTRACTION SYSTEM MANIFOLD

NO SCALE




## AIR INJECTION SYSTEM MANIFOLD

NO SCALE

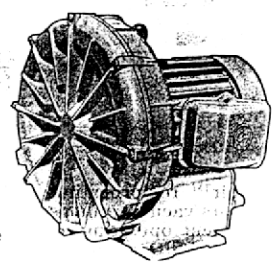
| | | | | | |
|---|---|---|---|---|---|
| $H_2O$ ENVIRONMENTAL, INC. ASSESSMENT AND REMEDIATION SPECIALISTS<br>130 CENTRUM DR, SUITE 3B IRMO, SC 29063<br>803-749-4080 FAX: 803-749-9911 | Not To Scale | PREPARED FOR D H E C | CRAWFORD'S COUNTRY STORE<br>SCDHEC SITE 12335<br>5870 HIGHWAY 28 NORTH<br>ABBEVILLE, SOUTH CAROLINA | NORTH | DRAWN BY:<br>CHECKED BY:<br>PROJECT MGR:<br>JOB NUMBER: DHE-12335 | DATE DRAWN: 1/7/00<br>FIGURE NUMBER: 6.0 |

FIGURE TITLE: REMEDIATION SYSTEM - TRAILER LAYOUT/MANIFOLD

Fuji regenerative blowers (ring compressors) are designed to generate pressure or vacuum through the rotation of a unique, single-stage impeller. Air enters through an inlet port and is picked up between the vanes of an impeller. As the impeller is rotated, air is bounced in and out between the base of the impeller and the outer casing. The cycle of air bouncing in and out of the casing to the rotating impeller vanes, accelerates and compresses, or regenerates the air until the air reaches the outlet port. Impeller, mounting base and housing are constructed of aluminum alloy (No. 5Z189, 5F243, and 5F651 have cast iron housing) for maximum strength, reduced weight and increased corrosion resistance. No. 5F241 is constructed of polyethylene plastics. Dustproof shaft seal protects bearings from contaminated air and foreign particles. Dynamically balanced to virtually eliminate vibration while increasing overall reliability. Class B NEMA insulation. Blower and TEFC motor are built as single unit with no gears, belts, motor bushings or sliding vanes. Single-phase motors have automatic reset thermal protection; three-phase motors have pilot duty thermal protection. For use with air and noncombustible, noncorrosive, nonexplosive gases. Maximum ambient temperature: 104°F.

- Continuous duty
- Pressure or vacuum operated
- Air flow without pulsation
- Oil-free air
- Low noise levels
- For use as original equipment or for upgraded performance

FUJI



LR48762 E54355

Replacement Parts Available
1-800-323-0620

**Performance ratings shown below are rated with motor run at 60 Hz. If 50 Hz is used deduct 1/5 from rating. Minimum CFM ratings are at continuous flow. Conversions: to PSI = (inches of water x 0.036). To inches Hg = (Inches of water x 0.074).**

## FUJI REGENERATIVE BLOWER CFM AIR FLOW

| Stock No. | Open Flow | SCFM @ Pressure in Inches of Water 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 130 | Max | Min CFM* | SCFM @ Vacuum in Inches of Water 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5F241 | 17.7 | — | — | — | — | — | — | — | — | — | — | — | — | — | 10 | 0 | — | — | — | — | — | — | — | — | — | — | — |
| 4Z749 | 19.5 | 12 | — | — | — | — | — | — | — | — | — | — | — | — | 19.5 | 0 | 12 | — | — | — | — | — | — | — | — | — | — |
| 5F242 | 42 | 36 | 29 | 15 | — | — | — | — | — | — | — | — | — | — | 37 | 3.5 | 31 | 25 | 17 | 2 | — | — | — | — | — | — | — |
| 4Z750 | 42 | 36 | 29 | 15 | — | — | — | — | — | — | — | — | — | — | 34 | 3.5 | 34 | 25 | 10 | — | — | — | — | — | — | — | — |
| 5Z187, 5Z649 | 56 | 51 | 46 | 37 | 25 | — | — | — | — | — | — | — | — | — | 50 | 17 | 49 | 41 | 33 | 20 | — | — | — | — | — | — | — |
| 4Z751, 4Z752 | 98 | 88 | 79 | 69 | 55 | 30 | — | — | — | — | — | — | — | — | 54.5 | 3.5 | 85 | 70 | 62 | 45 | 13 | — | — | — | — | — | — |
| 4Z753, 5Z650 | 154 | 150 | 145 | 130 | 118 | 100 | 90 | 60 | — | — | — | — | — | — | 80 | 45/60 | 150 | 139 | 125 | 110 | 90 | 50 | 0 | — | — | — | — |
| 5Z188 | 206 | 199 | 182 | 175 | 162 | 150 | 138 | 125 | 112 | 100 | 80 | 62 | — | — | 118 | 56 | 198 | 180 | 165 | 150 | 137 | 117 | 100 | 79 | 59 | — | — |
| 5Z651 | 267 | 255 | 240 | 230 | 215 | 198 | 185 | 168 | 145 | 125 | 100 | 62 | 22 | — | 114 | 88 | 250 | 232 | 215 | 195 | 175 | 151 | 115 | 100 | 62 | — | — |
| 5Z189 | 388 | 376 | 365 | 353 | 340 | 329 | 316 | 300 | 283 | 276 | 245 | 225 | 185 | 150 | 135 | 135 | 370 | 351 | 340 | 320 | 300 | 275 | 250 | 225 | 192 | 145 | 0 |
| 5F243 | 570 | 550 | 530 | 510 | 482 | 458 | 430 | 402 | 375 | 341 | 302 | 275 | 275 | 175 | 139 | 195 | 530 | 500 | 470 | 440 | 400 | 365 | 325 | 275 | 225 | 150 | — |

(*) Minimum CFM continuous flow. Under minimum flow conditions or less, relief valves are mandatory.

## FUJI SPECIFICATION AND ORDERING DATA

| HP | Inlet/ Outlet (In.) | Phase | Volts, 60/50 | Full-Load Amps | Overall Dimensions (In.) Length | Width | Height | Fuji Model | Stock No. | List | Each | Shpg. Wt. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.05 | 1.26 OD | 1 | 110/115 | 0.56 | 5⅛ | 6 | 6⅞ | VFC063P-1T | 5F241 | $367.80 | $339.25 | 6.7 |
| 0.11 | 1.26 OD | 1 | 115/230 | 1.2/0.6 | 7¾ | 7 1/16 | 7 13/16 | VFC084P-5T | 4Z749 | 382.64 | 352.25 | 14.0 |
| 0.33 | 1 (F)NPT | 3 | 200-230/460 | 1.2/0.6 | 10 | 9 1/32 | 9⅜ | VFC200A-7W | 5F242 | 535.94 | 495.25 | 22.0 |
| 0.37 | 1 (F)NPT | 1 | 115/230 | 3.6/1.8 | 10 | 9 1/32 | 9 | VFC200P-5T | 4Z750 | 572.38 | 529.00 | 23.0 |
| 0.51 | 1¼ (F)NPT | 1 | 115/230 | 5.0/2.5 | 10 | 11⅜ | 10¼ | VFC300P-5T | 5Z187 | 630.19 | 581.50 | 31.0 |
| 0.56 | 1¼ (F)NPT | 3 | 200/230/460 | 1.7/.85 | 10 | 11⅜ | 10¼ | VFC300A-7W | 5Z649 | 575.30 | 532.50 | 31.0 |
| 1.00 | 1½ (F)NPT | 1 | 115/230 | 8.6/4.3 | 12 3/16 | 11⅜ | 11 13/16 | VFC400P-5T | 4Z751 | 716.65 | 661.00 | 57.0 |
| 1.10 | 1½ (F)NPT | 3 | 200/230/460 | 2.8/1.4 | 12 3/16 | 11⅜ | 11 13/16 | VFC400A-7W | 4Z752 | 609.99 | 563.50 | 55.0 |
| 2.30 | 1½ (F)NPT | 1 | 200/230 | 11 | 15 7/32 | 13 5/16 | 13⅛ | VFC504P-2T | 5Z650 | 907.88 | 835.00 | 102.0 |
| 2.50 | 1½ (F)NPT | 3 | 200/230/460 | 6.2/3.1 | 13 | 13½ | 13⅛ | VFC500A-7W | 4Z753 | 762.51 | 702.50 | 80.0 |
| 4.50 | 2 (F)NPT | 3 | 200/230/460 | 11/5.5 | 14¼ | 15⅛ | 15⅛ | VFC600A-7W | 5Z188 | 1165.76 | 1076.00 | 130.0 |
| 7.00 | 2 (F)NPT | 3 | 200/230/460 | 16/8 | 16 25/32 | 16 25/32 | 18½ | VFC704A-7W | 5Z651 | 1581.61 | 1457.00 | 287.0 |
| 10.00 | 2½ (F)NPT | 3 | 200/230/460 | 23/11.5 | 20 1/16 | 17 15/32 | 20 9/16 | VFC804A-7W | 5Z189 | 2263.99 | 2095.00 | 308.0 |
| 20.00 | 3 NPT | 3 | 200/230/460 | 44/22 | 25⅛ | 19 13/32 | 23 3/32 | VFC904A-7W | 5F243 | 3210.99 | 2965.00 | 450.0 |

## FUJI REGENERATIVE BLOWER CROSS-REFERENCE

| Stock No. | Fuji Current | Fuji Old | Gast | Rotron | Siemens | Spencer |
|---|---|---|---|---|---|---|
| 4Z749 | VFC084P-5T | VFC083P-1T | R1102 | DR083 | NONE | NONE |
| 5F242 | VFC200A-7W | VFC209A-7W | R2303 | DR202 3PH | NONE | VB002E |
| | | VFC204A-7W | | | | |
| | | VFC203A-4W | | | | |
| 4Z750 | VFC200P-5T | VFC209P-5T | R2103 | DR202 1PH | NONE | VB002E |
| | | VFC204P-5T | | | | VB003S |
| | | VFC202P-1T | | | | |
| 5Z187 | VFC300P-5T | VFC309P-5T | R3105 | DR303 1PH | 2CH3 1 PH | VB004S |
| | | VFC304P-5T | R3105-1 | | 2BH31 1 PH | |
| | | VFC303P-5T | | | | |
| 5Z649 | VFC300A-7W | VFC309A-7W | R3305 | DR303 3PH | 2CH3 1 PH | VB004S |
| | | VFC304A-7W | | | 2BH31 3PH | VB004E |
| | | VFC303A-7W | | | | |
| 4Z751 | VFC400P-5T | VFC409P-5T | R4110 | DR404 1PH | 2CH4 1 PH | VB007S |
| | | VFC404P-5T | R4110-1 | | 2BH41 1 PH | |
| | | VFC403P-5T | R4110-2 | | | |

| Stock No. | Fuji Current | Fuji Old | Gast | Rotron | Siemens | Spencer |
|---|---|---|---|---|---|---|
| 4Z752 | VFC400A-7W | VFC409A-7W | R4310 | DR404 3PH | 2CH4 3 PH | |
| | | VFC404A-7W | R4310A-1 | | 2BH41 3PH | VB007 |
| | | VFC403A-7W | R4310A-2 | | | VB007E |
| 5Z650 | VFC504P-2T | VFC502P-2Y | R5125 | DR505 1PH | 2CH5 1PH | VB019S |
| | | | | | 2BH51 1PH | |
| 4Z753 | VFC500A-7W | VFC509A-7W | R5325 | DR505 3PH | 2CH5 3PH | VB019 |
| | | VFC504A-7W | R5325A-1 | | 2BH51 3PH | VB019E |
| | | VFC503A-7W | | | | |
| 5Z188 | VFC600A-7W | VFC604A-7W | R6350 | DR606 3PH | 2CH6 3PH | VB037 |
| | | VFC603A-7W | R6350A | | 2BH61 3PH | VB037E |
| | | VFC601A-7W | | | | |
| 5Z651 | VFC704A-7W | VFC703A-7W | R6P355 | DR707 3PH | NONE | VB055 |
| | | VFC701A-7W | | | | |
| | | VFC701A-7W | | | | VB055E |
| 5Z189 | VFC804A-7W | VFC804A-7W | R7100 | DR808 3PH | 2BH81 3PH | VB075 |
| | | VFC803A-7W | R7100A | | | VB075E |
| | | VFC801A-7W | | | | |
| 5F243 | VFC904A-7W | VFC903A-7W | NONE | DR10 | 2BH847 | VB110 |
| | | VFC901A-7W | | | | |
| | | VFC901A-7W | | | | |

I H E C
PROMOTE PROTECT PROSPER
26 Bull Street
Columbia, SC 29201-1708

# BUREAU OF UNDERGROUND STORAGE TANK MANAGEMENT

Phone (803) 734-5331 Fax (803) 734-3604

## BAQC UST Modeling Information

PLEASE FILL OUT COMPLETELY

SITE/COMPANY NAME: Crawford's Country Store SITE ID # 12335

CLEANUP LOCATION: 5870 Hwy. 28 N., Abbeyville, SC 29620

TYPE OF OPERATION (i.e. AIR STRIPPER): Soil Vapor Extraction

CONTACT: Noal Hudson - H2O Environmental, Inc. (803) 749-4080

## SITE MAPS

Please include a scaled plot plan of the site location that clearly shows distances from the stack to the property boundaries. All buildings and/or structures within a radius of 5 stack heights (measured from the stack/vent) shall be incorporated on this plot plan and information on each building and/or structure's height, width, and length shall also be included.

## STACK INFORMATION

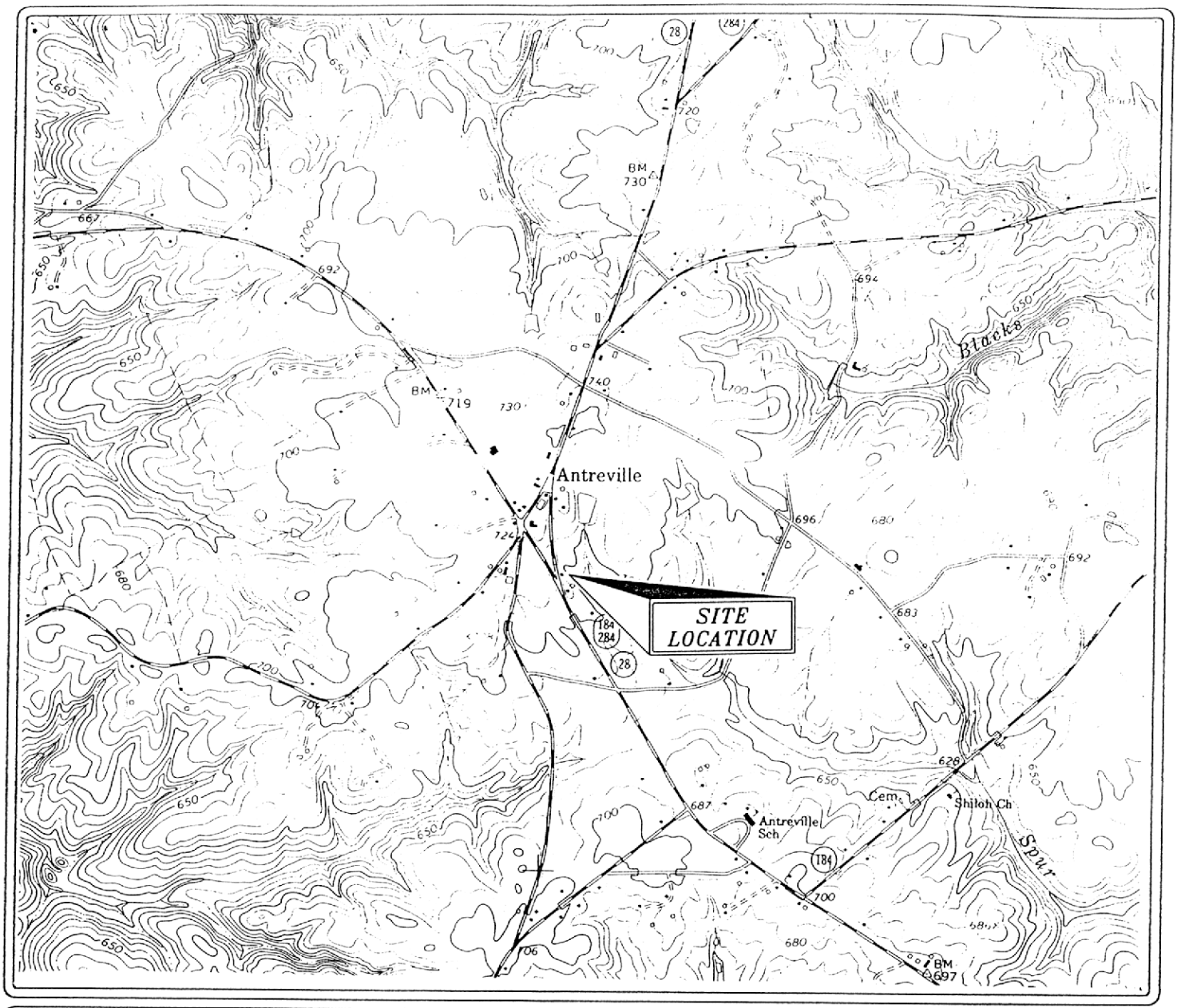
HEIGHT ABOVE GROUND: 15 FEET; DIAMETER: 0.333 FEET

TEMPERATURE: 140 F; VELOCITY: 11 FEET/SECOND

## AIR TOXIC INFORMATION

| AIR TOXIC EMITTED (i.e. BENZENE) | CHEMICAL ABSTRACT SERVICE (CAS) NUMBER | EMISSION RATE LB/HR |
|---|---|---|
| A) Benzene | 71432 | Unknown - will be determined after first sampling and submitted to BAQC. |
| B) Toluene | 108883 | |
| C) Ethyl Benzene | 100414 | |
| D) Xylenes | 1330207 | |
| E) Napthalene | 91203 | |

Please submit this completed sheet with scaled site maps to Reed Corley, project manager at the Bureau of Underground Storage Tank Management, 2600 Bull Street, Columbia, SC 29201.



U.S.G.S. SOURCE QUADRANGLE:

ANTREVILLE QUADRANGLE
S.C., 1973, 7.5 MINUTE MAPS
GEOLOGICAL SURVEY, DENVER, COLORADO

GRAPHIC SCALE IN FEET

2000 0 1000 2000 4000

$H_2O$ ENVIRONMENTAL, INC.
ASSESSMENT AND REMEDIATION SPECIALISTS

PREPARED FOR:
SCDHEC

SITE ADDRESS:
CRAWFORD'S COUNTRY STORE
ABBEVILLE, SC
SCDHEC SITE #12335

NORTH

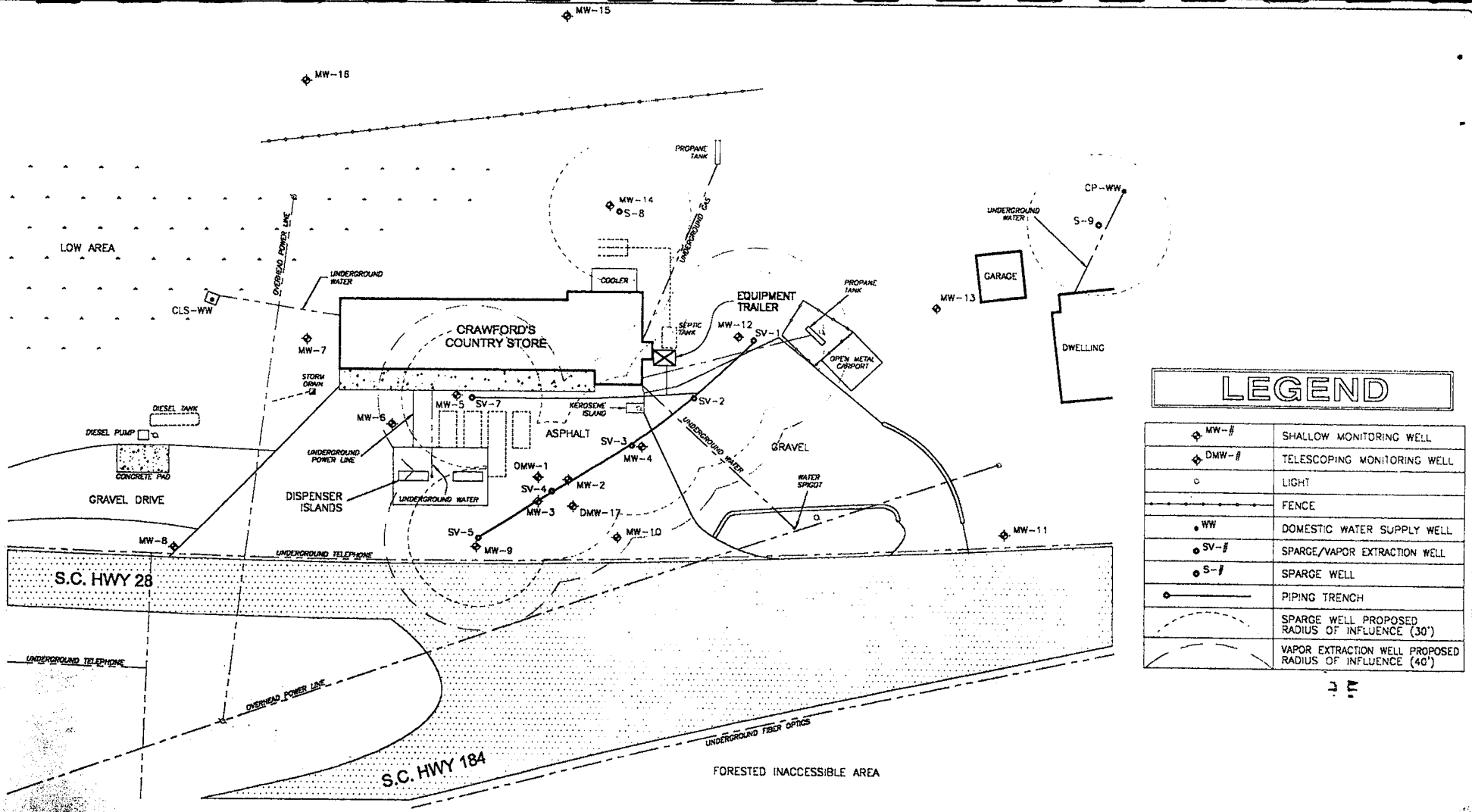
FIGURE TITLE:
U.S.G.S. SITE LOCATION MAP

DRAWN BY:

DATE DRAWN:
01/07/00

WORK NUMBER:
DHE #12335

REVISION NUMBER:
1.0




H2O ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

FIGURE TITLE: REMEDIATION SYSTEM LAYOUT

PREPARED FOR: South Carolina Department of Health and Environmental Control

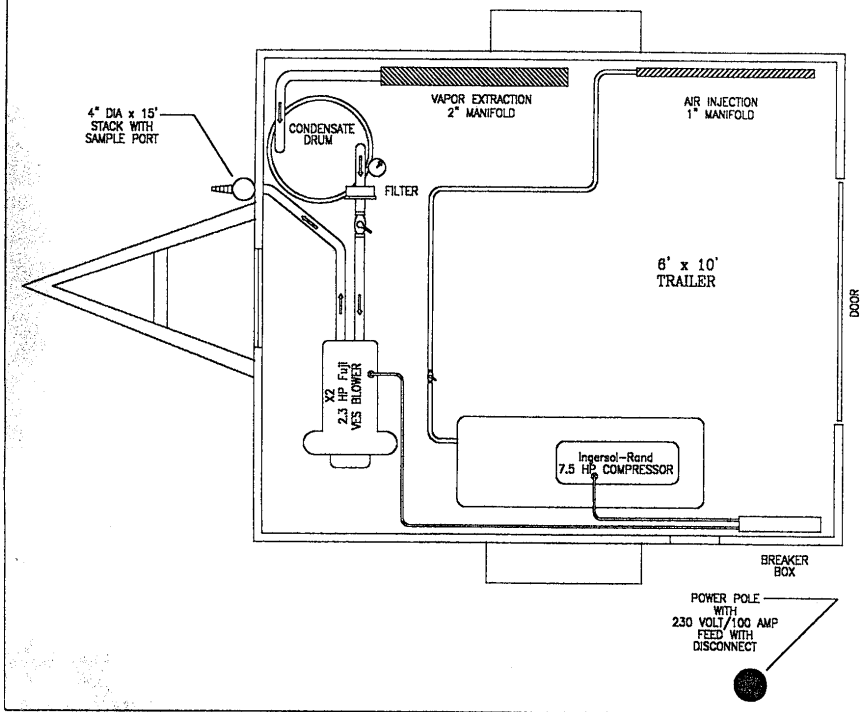
SITE ADDRESS: Crawford's Country Store, SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

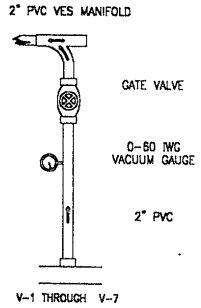
PROJECT NO.: DHE-12335

DRAWING DATE: 1/12/2000

DRAWN BY: J.Driscoll

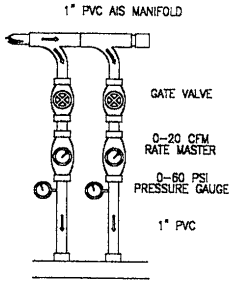
FIGURE NO.: 5.0




VAPOR EXTRACTION SYSTEM MANIFOLD

NO SCALE




AIR INJECTION SYSTEM MANIFOLD

NO SCALE

H2O ENVIRONMENTAL, INC.
ASSESSMENT AND REMEDIATION SPECIALISTS
130 CENTRUM DR., SUITE 3B IRMO, SC 29063
803-749-1080 FAX 803-749-9911

Not To Scale

PREPARED FOR D H E C

CRAWFORD'S COUNTRY STORE
SCDHEC SITE 12335
5820 HIGHWAY 28 NORTH
ABBEVILLE, SOUTH CAROLINA

NORTH

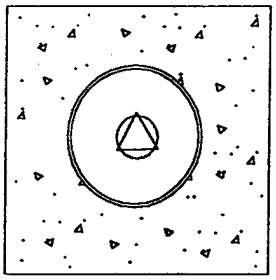
DRAWN BY
CHECKED BY
PROJECT MNGR

DATE DRAWN 1/7/00

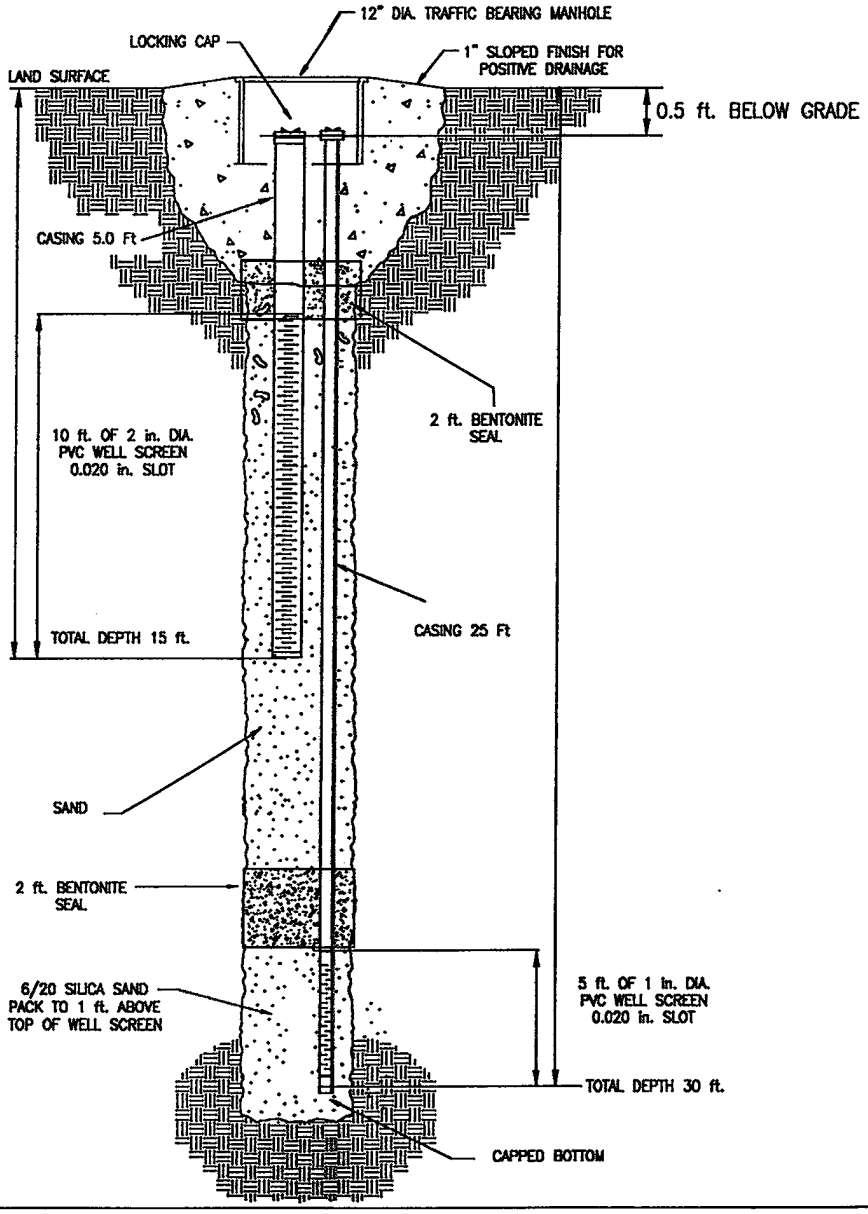
JOB NUMBER DHE-12335

FIGURE NUMBER 6.0

REMEDIATION SYSTEM TRAILER LAYOUT/MANIFOLD



2 ft x 2ft.
CONCRETE PAD




SCALE: NOT TO SCALE

H2 ENVIRONMENTAL, INC.
ASSESSMENT AND REMEDIATION SPECIALISTS

PREPARED FOR: Crawford's Country Store

SITE ADDRESS:
SCDHEC SITE 12335
5870 Highway 28 North
ABBEVILLE, SOUTH CAROLINA

JOB DESIGNATION: DHE-12335

DRAWN BY:

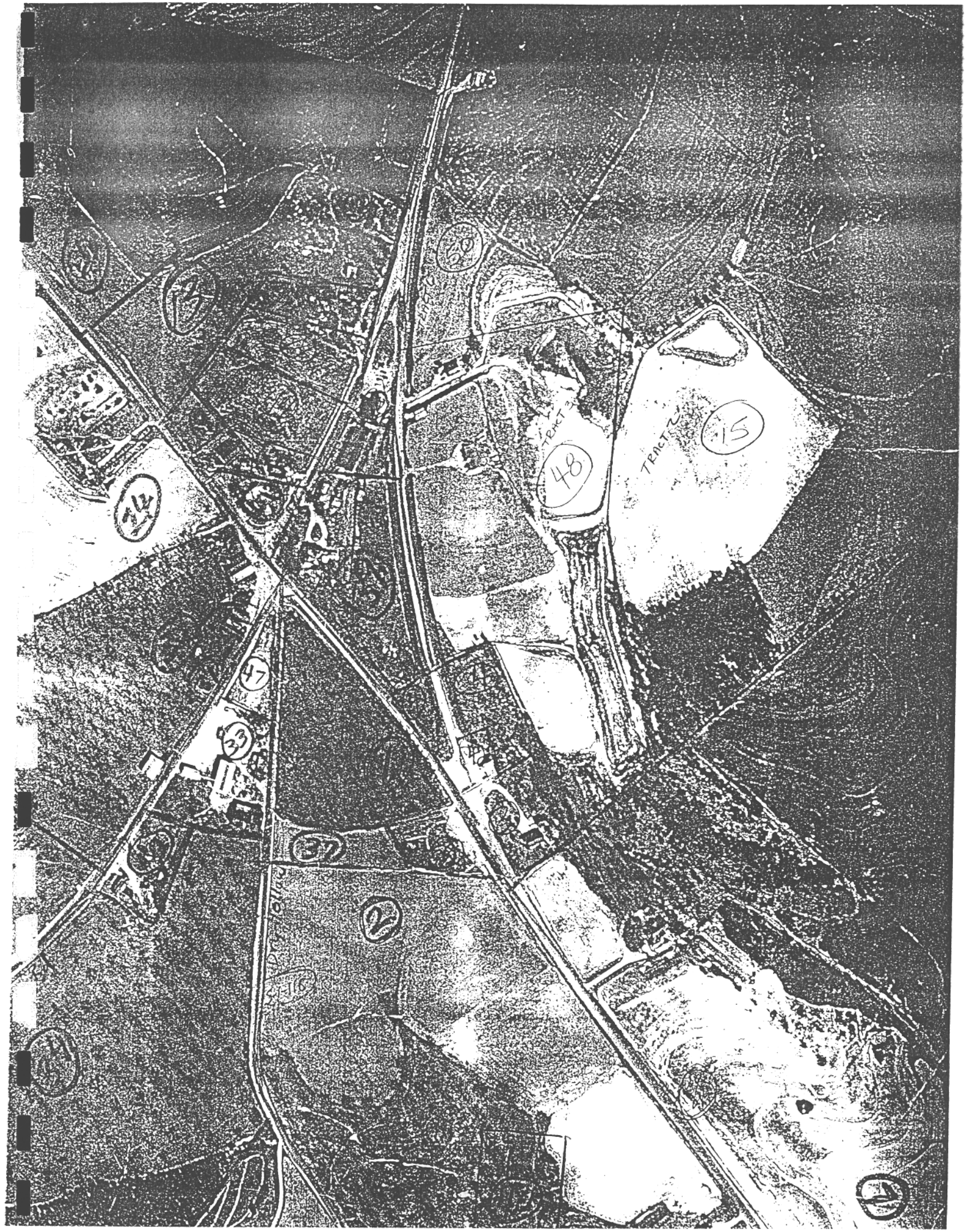
DATE DRAWN: 02/20/99

FIGURE NUMBER: 7.0

FIGURE TITLE: SPARGE AND VAPOR EXTRACTION WELL

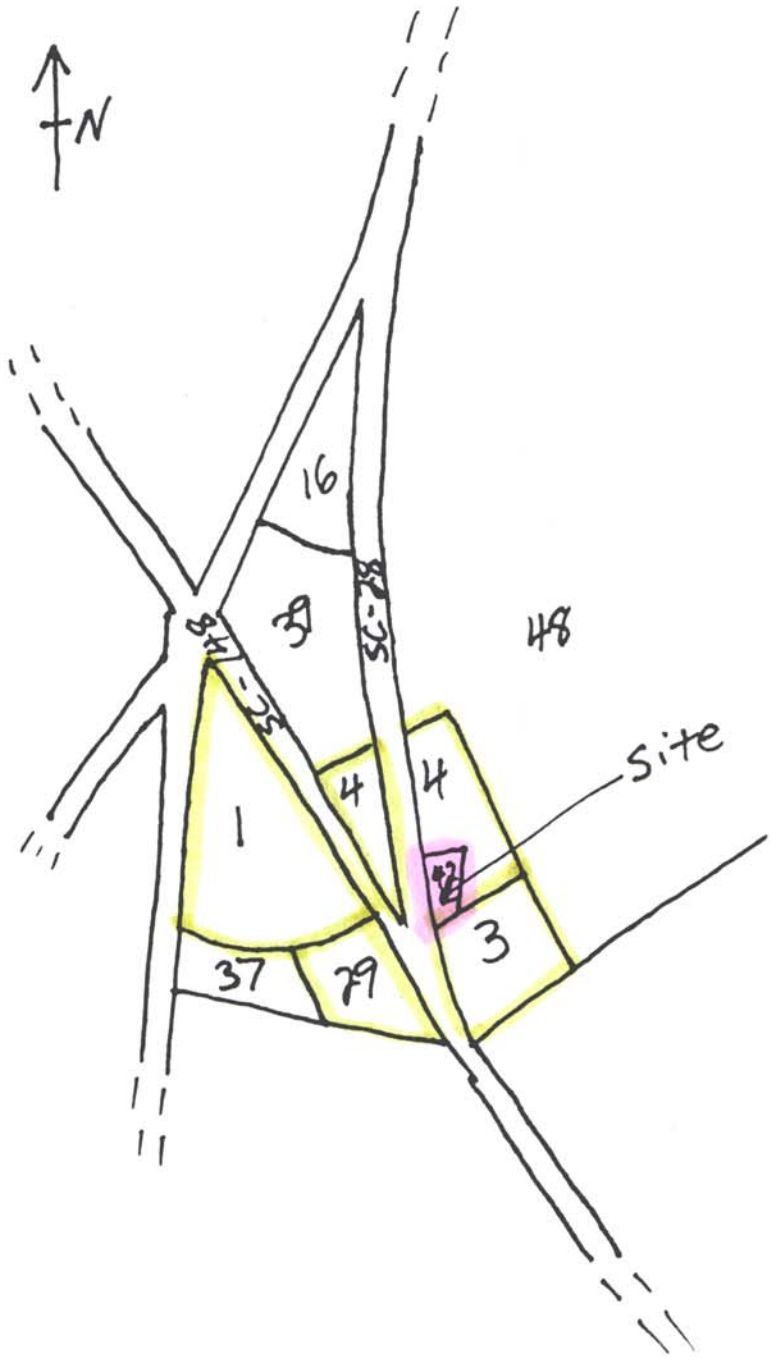
**Adjacent Property Owners**
**Site # 12335**

| Owner | Address | Tax Map Number |
|---|---|---|
| Amanda W. Patterson | RT 2<br>Iva, South Carolina 29655 | 1-4W-144R |
| H. Franklin Crawford | 31 Turtle Point<br>Abbeville, SC 29620 | 3-4W-144R |
| H. Franklin Crawford | 31 Turtle Point<br>Abbeville, SC 29620 | 4-4W-144R |
| Sally Hughes | P.O Box 124<br>Abbeville, SC 29620 | 29-4W-144R |
| David G. Forrester | Rte 2<br>Iva, SC 29655 | 39-4W-144R |
| **SITE**<br>**H. Franklin Crawford** | **31 Turtle Point**<br>**Abbeville, SC 29620** | **42-4W-144R** |
| David G. Forrester | Rte 2<br>Iva, SC 29655 | 48-4W-144R |


TRACT 48
TRACT 15

Abbeyville County
MAP # 4W-144R

Crawford's Country Store
Lot: 42
DHEC # 12335



Bond No. 6149406

AIA Document A311

# Performance Bond

KNOW ALL MEN BY THESE PRESENTS, that:

H2O ENVIRONMENTAL INC
1061 W OAKLAND PARK BLVD, FORT LAUDERDALE, FL 33311

as Principal, hereinafter called Contractor. and
Gulf Insurance Company, St. Louis, MO , as Surety, hereinafter called Surety, hereinafter called Surety, are held and firmly bound unto

SOUTH CAROLINA DEPT OF HEALTH & ENVIRONMENTAL CONT
BUR. OF SOLID & HAZ. WSTE MGMT, COLUMBIA, SC 29201

as Obligee, hereinafter called Owner, in the amount of:
One Hundred Seventeen Thousand and 00/100 Dollars ($117,000)

for the payment whereof Contractor and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

Contractor has by written agreement dated February 2, 2000, entered into a contract with Owner for
Crawfords County Stone, 5870 Hwy 28 N. Abbeville, SC

in accordance with Drawings and Specifications prepared by

which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

Bond No. 6149406

# PERFORMANCE BOND

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Contractor shall promptly and faithfully perform said Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

The surety hereby waives notice of any alteration or extension of time made by the Owner.

Whenever Contractor shall be, and declared by Owner to be in default under the Contract, the Owner having performed Owner's obligations thereunder, the Surety may promptly remedy the default, or shall promptly

1) Complete the Contract in accordance with its terms and conditions, or

2) Obtain a bid or bids for completing the Contract in accordance with its terms and conditions, and upon determination by surety of the lowest responsible bidder, or, if the Owner elects, upon determination by the Owner and the Surety jointly of the lowest responsible bidder, arrange for a contract between such bidder and Owner, and make available as Work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the amount set forth in the first paragraph hereof. The term 'balance of the contract price', as used in this paragraph, shall mean the total amount payable by Owner to Contractor under the Contract and any amendments thereto, less the amount properly paid by Owner to Contractor.

Any suit under this bond must be instituted before the expiration of two (2) years from the date on which final payment under the Contract falls due.

No right of action shall accrue on this bond to or for the use of any person or corporation other than the Owner named herein or the heirs, executors, administrators or successors of the Owner.

Signed and sealed this 16th day of Febnuary, 2000

(Witness)

H20 Environmental, Inc.
(Company Name) (Seal)

(By:) CEO (Title)

(Witness)

Gulf Insurance Company
(Seal)

(By:) Karen LoConti-Diaz (Atty in Fact)

Countersigned by a licensed resident agent
of the State of South Carolina
Raymond E. Cobb, Jr.
Raymond E. Cobb, Jr.

Bond No. 6149406

AIA Document A311

# Labor and Material Payment Bond

THIS BOND IS ISSUED SIMULTANEOUSLY WITH PERFORMANCE BOND IN FAVOR OF THE OWNER CONDITIONED ON THE FULL AND FAITHFUL PERFORMANCE OF THE CONTRACT

KNOW ALL MEN BY THESE PRESENTS, that:

H2O ENVIRONMENTAL INC
1061 W OAKLAND PARK BLVD, FORT LAUDERDALE, FL 33311

as Principal, hereinafter called the Principal, and Gulf Insurance Company, St. Louis, MO as Surety, hereinafter called Surety, hereinafter called Surety, are held and firmly bound unto

SOUTH CAROLINA DEPT OF HEALTH & ENVIRONMENTAL CONT
BUR. OF SOLID & HAZ. WSTE MGMT, COLUMBIA, SC 29201

as Obligee, hereinafter called Owner, for the use and benefit of claimants as hereinbelow defined, in the amount of:

One Hundred Seventeen Thousand and 00/100 Dollars ($117,000.00)

for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS,

Principal has by written agreement dated February 2, 2000, entered into a contract with Owner for

Crawfons County Stone, 5870 Hwy 28 N., Abbeville, SC

In accordance with Drawings and Specifications prepared by

which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

Bond No. 6149406

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A claimant is defined as one having a direct contract with the Principal or with a Subcontractor of the Principal for labor, material, or both, used or reasonably required for use in the performance of the Contract, labor and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment directly applicable to the Contract.

2. The above named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such claimant, may sue on this bond for the use of such claimant, prosecute the suit to final judgement for such sum or sums as may be justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any costs or expenses of any such suit.

3. No suit or action shall be commenced hereunder by any claimant:

a) Unless claimant, other than one having a direct contract with the Principal, shall have given written notice to any two of the following: the Principal, the Owner, or the Surety above named, within ninety (90) days after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner, or Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the state in which the aforesaid project is located, save that such service need not be made by a public officer.

b) After the expiration of one (one) year following the date on which the Principal ceased Work on said Contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

c) Other than in a state court of competent jurisdiction in and for the county or other political subdivision of the state in which the Project, or any part thereof, is situated, or in the United States District Court for the district in which the Project, or any part thereof, is situated, and not elsewhere.

4. The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.

Signed and sealed this day of

(Witness)

H20 Environmental, Inc.
(Company Name) (Seal)

(By:) CEO (Title)

(Witness)

Gulf Insurance Company
(Seal)

(By: Karen LoConti-Diaz (Atty in Fact)

Countersigned by a licensed resident agent of the State of South Carolina

By: Raymond E. Cobb Jr.

Raymond E. Cobb, Jr

# GULF INSURANCE COMPANY
## ST. LOUIS, MISSOURI
## POWER OF ATTORNEY

BOND NUMBER AE 6149406

PRINCIPAL: NAME, ADDRESS CITY, STATE, ZIP

H20 Environmental, Inc.
1061 W. Oakland Park Blvd.
Ft. Lauderdale, FL 33311

EFFECTIVE DATE: 2/16/2000

CONTRACT AMOUNT: $ 117,000.00

BOND AMOUNT: $ 117,000.00

RIGINALS OF THIS POWER OF ATTORNEY ARE PRINTED ON BLUE FETY PAPER WITH TEAL INK. DUPLICATES SHALL HAVE THE ME FORCE AND EFFECT AS AN ORIGINAL ONLY WHEN ISSUED IN CONJUNCTION WITH THE ORIGINAL.

KNOWN ALL MEN BY THESE PRESENTS, That the Gulf Insurance Company, a corporation duly organized under the laws of the State of Missouri, having its ncipal office in the city of Irving, Texas, pursuant to the following resolution, opted by the Finance & Executive Committee of the Board of Directors of the said Company on the 10th day of August, 1993, to wit:

"RESOLVED, that the President, Executive Vice President or any Senior Vice sident of the Company shall have authority to make, execute and deliver a Power Attorney constituting as Attorney-in-Fact, such persons, firms, or corporations as y be selected from time to time, and any such Attorney-in-Fact may be removed and the authority granted him revoked by the President, or any Executive Vice President, or any Senior Vice President, or by the Board of Directors or by the iance and Executive Committee of the Board of Directors.

RESOLVED, that nothing in this Power of Attorney shall be construed as a grant authority to the attorney(s)-in-fact to sign, execute, acknowledge, deliver or otherwise issue a policy or policies of insurance on behalf of Gulf Insurance Company.

RESOLVED, that the signature of the President, Executive Vice President or Senior Vice President, and the Seal of the Company may be affixed to any such wer of Attorney or any certificate relating thereto by facsimile, and any such wers so executed and certified by facsimile signature and facsimile seal shall be valid and binding upon the Company in the future with respect to any bond and documents relating to such bonds to which they are attached."

If Insurance Company does hereby make, constitute and appoint

**~~~~ Karen LoConti-Diaz ~~~~**

*Boca Raton, Florida*

its true and lawful attorney(s)-in-fact, with full power and authority hereby conferred in its name, place and stead, to sign, execute, acknowledge and deliver in its alf, as surety, any and all bonds and undertakings of suretyship, and to bind Gulf Insurance Company thereby as fully and to the same extent as if any bonds, undertngs and documents relating to such bonds and/or undertakings were signed by the duly authorized officer of the Gulf Insurance Company and all the acts of said orney(s)-in-fact, pursuant to the authority herein given, are hereby ratified and confirmed.

The obligation of the Company shall not exceed one million (1,000,000) dollars.

IN WITNESS WHEREOF, the Gulf Insurance Company has caused these presents to be signed by any officer of the Company and its Corporate Seal to hereto affixed.

GULF INSURANCE COMPANY

Christopher E. Watson
President

TE OF NEW YORK )
) SS
UNTY OF KINGS )

On the 27th day of October, 1999 A.D., before me came Christopher E. Watson, known to me personally who being by me duly sworn, did depose and ; that he resides in the County of Westchester, State of New York; that he is the President of the Gulf Insurance Company, the corporation described in which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instruments is such corporate seal; t it was so affixed by order of the Board of Directors of said corporation and that he signed his name, thereto by like order.

DAVID JAFFA
Notary Public, State of New York
No. 02JA4958634
Qualified in Kings County
Commission Expires November 13, 2001

TE OF NEW YORK )
) SS
COUNTY OF NEW YORK )

I, the undersigned, Executive Vice President of the Gulf Insurance Company, a Missouri Corporation, DO HEREBY CERTIFY that the foregoing and ched POWER OF ATTORNEY remains in full force.

Signed and Sealed at the City of New York.

Dated the 16th day of Febnuary, 2000

Lawrence P. Minniter
Executive Vice President

36149406 *1044725*

8016-AE (11/99)

RECEIVED

MAY 19 2000

Bureau of Underground
Storage Tank Management

May 17, 2000

Mr. Reed Corley, P.G.
Underground Storage Tank Program
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: Initial Groundwater Sampling Results
Crawford's Grocery
5870 Highway 28 North
Abbeville (Antreville), South Carolina
SCDHEC Site ID # 12335

Dear Mr. Corley:

Attached please find two (2) copies of the initial ground water monitoring results for the above referenced facility. Monitoring wells MW-4 through MW-9 and MW-11 through MW-17 and water wells CP-WW and CLS-WW were sampled for BTEX, MTBE and naphthalene on April 26, 2000. Figure 1.0 illustrates groundwater elevations and flow direction and Figure 2.0 depicts the current groundwater quality, both maps are included as Attachment A. A summary of field measurements, water table elevations, and ground water analytical results have been provided as Tables 1, 2 and 3, respectively, in Attachment B. The concentrations of chemicals of concern appear to be similar to that of the groundwater samples collected on August 5, 1999. The laboratory analytical reports are included as Attachment C.

Product recovery efforts have been conducted on a regular basis since the initial sampling. System construction and implementation are currently being conducted at the facility and should be completed by May 31, 2000. Should you have any questions or require any additional information, please do not hesitate to contact me at (803) 749-4080.

UST
414
DOCKETING

Sincerely,

**$H_2O$ Environmental, Inc.**
Class I Site Rehabilitation Contractor No. 32

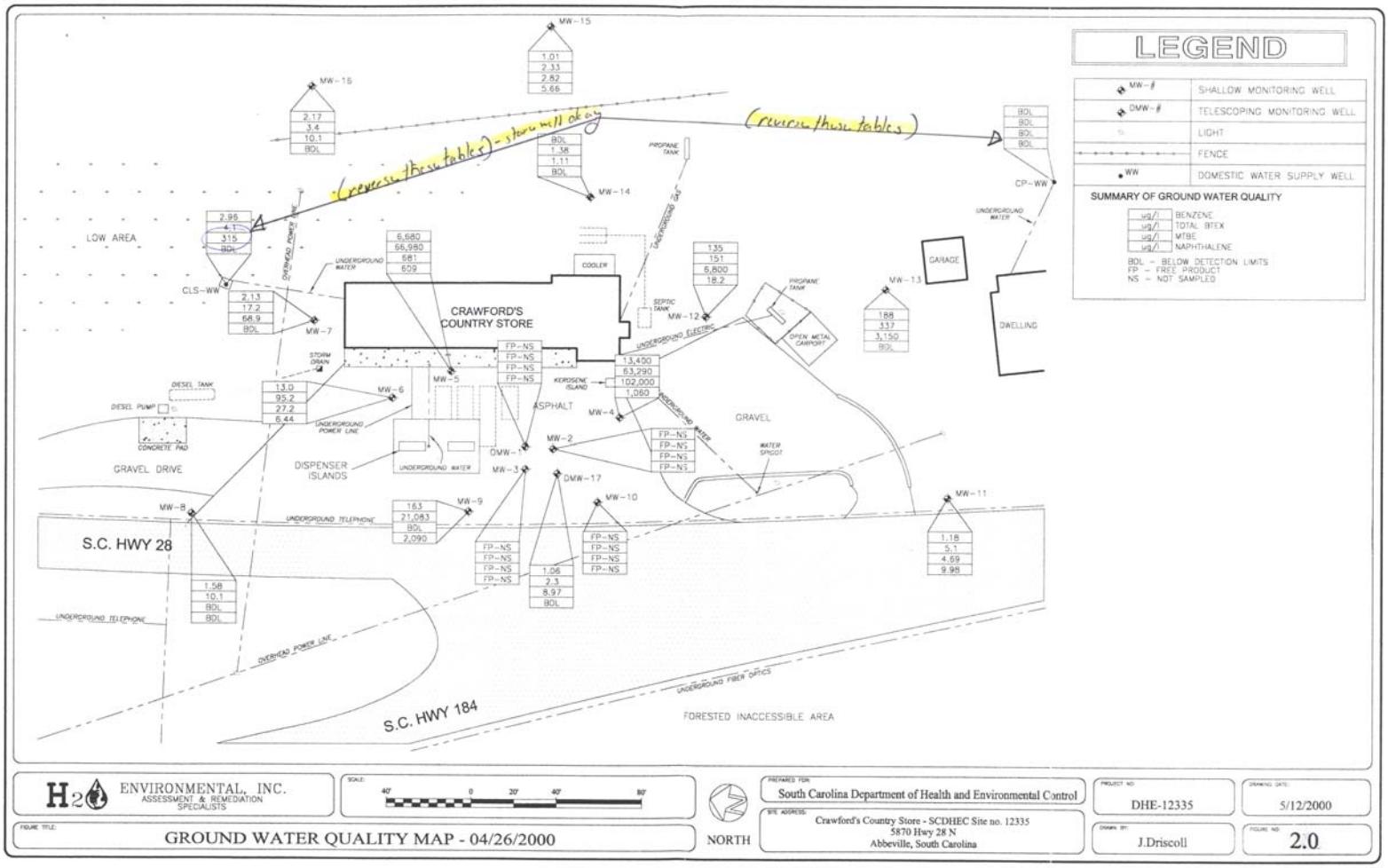
Noal Hudson
Project Manager

Richard D. Gillespie, P.G.
Senior Geologist 5-17-00
License Number 2199

Attachments

Attachment A

Figures




H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site no. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 5/12/2000

DRAWN BY: J.Driscoll

FIGURE NO: 2.0

FIGURE TITLE: GROUND WATER QUALITY MAP - 04/26/2000

Attachment B

Tables

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | | 17.95 | 22' | 2" | 2.0 | | Free Product | | |
| | 4/26/00 | 15.68 | 22' | 2" | 3.1 | | Free Product | | |
| MW-2 | | 19.19 | 25' | 2" | 2.8 | | Free Product | | |
| | 4/26/00 | 15.80 | 25' | 2" | 4.5 | | Free Product | | |
| MW-3 | | 17.96 | 25' | 2" | 3.4 | | Free Product | | |
| | 4/26/00 | 15.73 | 25' | 2" | 4.5 | | Free Product | | |
| MW-4 | | 17.59 | 25' | 2" | 3.7 | 4.3 | 75.7 | 2.06 | 21.0 |
| | 4/26/00 | 16.51 | 25' | 2" | 4.2 | 6.0 | 0.78 | 1.82 | 20.2 |
| MW-5 | | 15.95 | 25' | 2" | 4.4 | 4.5 | 111.8 | 1.65 | 21.0 |
| | 4/26/00 | 14.35 | 25' | 2" | 5.2 | 6.2 | 0.92 | 2.73 | 19.4 |
| MW-6 | | 15.44 | 25' | 2" | 4.7 | 4.6 | 96 | 2.35 | 22.0 |
| | 4/26/00 | 13.65 | 25' | 2" | 5.6 | 6.1 | 0.92 | 1.72 | 18.6 |
| MW-7 | | 15.41 | 25' | 2" | 4.7 | 4.6 | 92.8 | 2.74 | 19.0 |
| | 4/26/00 | 13.54 | 25' | 2" | 5.6 | 6.2 | 0.91 | 2.46 | 17.4 |
| MW-8 | | 14.59 | 25' | 2" | 5.1 | 4.9 | 45.4 | 3.01 | 21.0 |
| | 4/26/00 | 11.56 | 25' | 2" | 6.6 | 6.3 | 0.72 | 2.06 | 18.4 |
| MW-9 | | 16.74 | 25' | 2" | 4.0 | 4.9 | 57.2 | 1.47 | 22.0 |
| | 4/26/00 | 15.09 | 25' | 2" | 4.8 | 5.9 | 0.72 | 1.45 | 20.4 |
| MW-10 | | 18.06 | 25' | 2" | 3.4 | | Free Product | | |
| | 4/26/00 | 15.75 | 25' | 2" | 4.5 | | Free Product | | |
| MW-11 | | 15.60 | 25' | 2" | 4.6 | 4.8 | 42.7 | 6.38 | 22.0 |
| | 4/26/00 | 13.65 | 25' | 2" | 5.6 | 6.2 | 0.6 | 4.48 | 20.8 |
| MW-12 | | 17.33 | 25' | 2" | 3.8 | 4.6 | 129.2 | 2.09 | 19.0 |
| | 4/26/00 | 16.06 | 25' | 2" | 4.4 | 6.3 | 1.03 | 2.9 | 18.5 |
| MW-13 | | 21.26 | 25' | 2" | 1.8 | 4.2 | 51.7 | 2.32 | 18.0 |
| | 4/26/00 | 20.02 | 25' | 2" | 2.4 | 6.3 | 0.62 | 3.00 | 18.5 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-14 | | 7.96 | 25' | 2" | 8.3 | 5.0 | 312 | 0.80 | 19.0 |
| | 4/26/00 | 6.46 | 25' | 2" | 9.1 | 6.1 | 1.56 | 1.72 | 15.5 |
| MW-15 | | 6.28 | 25' | 2" | 9.2 | 4.8 | 86.5 | 0.87 | 18.0 |
| | 4/26/00 | 4.75 | 25' | 2" | 9.9 | 6.5 | 0.6 | 3.32 | 16.2 |
| MW-16 | | 11.22 | 25' | 2" | 6.7 | 4.9 | 49 | 0.79 | 18.0 |
| | 4/26/00 | 9.50 | 25' | 2" | 7.6 | 6.5 | 0.61 | 1.66 | 15.5 |
| MW-17 | | 16.16 | 75' | 2" | 28.8 | 5.6 | 90.8 | 2.76 | 20.5 |
| | 4/26/00 | 16.8 | 75' | 2" | 28.5 | 6.4 | 0.86 | 6.1 | 20.8 |

NOTES:
NS - Not sampled
Temperature in Degrees Celcius
Dissolved Oxygen in mg/L
Depth to Water and Depth to bottom in units of feet
Well volumes (Gallons)
Specific Conductivity (umhos/cm)

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| OMW-1 | Dec-97 | 99.82 | 17.13 | - | 82.69 |
| | Aug-99 | | 17.95 | 1.05 | 81.87 |
| | Apr-00 | | 15.68 | FP | 84.14 |
| MW-2 | Dec-97 | 99.83 | 17.43 | - | 82.40 |
| | Aug-99 | | 19.19 | 2.29 | 80.64 |
| | Apr-00 | | 15.80 | FP | 84.03 |
| MW-3 | Dec-97 | 99.98 | 17.00 | - | 82.98 |
| | Aug-99 | | 17.96 | 1.01 | 82.02 |
| | Apr-00 | | 15.73 | FP | 84.25 |
| MW-4 | Dec-97 | 99.59 | 17.60 | - | 81.99 |
| | Aug-99 | | 17.59 | - | 82.00 |
| | Apr-00 | | 16.51 | - | 83.08 |
| MW-5 | Dec-97 | 99.42 | 15.04 | - | 84.38 |
| | Aug-99 | | 15.95 | - | 83.47 |
| | Apr-00 | | 14.35 | - | 85.07 |
| MW-6 | Dec-97 | 99.47 | 14.37 | - | 85.10 |
| | Aug-99 | | 15.44 | - | 84.03 |
| | Apr-00 | | 13.65 | - | 85.82 |
| MW-7 | Dec-97 | 99.47 | 13.96 | - | 85.51 |
| | Aug-99 | | 15.41 | - | 84.06 |
| | Apr-00 | | 13.54 | - | 85.93 |
| MW-8 | Dec-97 | 102.42 | 12.53 | - | 89.89 |
| | Aug-99 | | 14.59 | - | 87.83 |
| | Apr-00 | | 11.56 | - | 90.86 |
| MW-9 | Dec-97 | 100.53 | 16.17 | - | 84.36 |
| | Aug-99 | | 16.74 | - | 83.79 |
| | Apr-00 | | 15.09 | - | 85.44 |
| MW-10 | Dec-97 | 99.65 | 17.40 | - | 82.25 |
| | Aug-99 | | 18.06 | 1.01 | 81.59 |
| | Apr-00 | | 15.75 | FP | 83.90 |
| MW-11 | Dec-97 | 96.47 | 15.74 | - | 80.73 |
| | Aug-99 | | 15.60 | - | 80.87 |
| | Apr-00 | | 13.65 | - | 82.82 |
| MW-12 | Dec-97 | 98.63 | 17.03 | - | 81.60 |
| | Aug-99 | | 17.33 | - | 81.30 |
| | Apr-00 | | 16.06 | - | 82.57 |
| MW-13 | Dec-97 | 100.80 | 21.05 | - | 79.75 |
| | Aug-99 | | 21.26 | - | 79.54 |
| | Apr-00 | | 20.02 | - | 80.78 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-14 | Dec-97 | 89.38 | 7.27 | - | 82.11 |
| | Aug-99 | | 7.96 | - | 81.42 |
| | Apr-00 | | 6.46 | | 82.92 |
| MW-15 | Dec-97 | 87.33 | 5.10 | - | 82.23 |
| | Aug-99 | | 6.28 | - | 81.05 |
| | Apr-00 | | 4.75 | - | 82.58 |
| MW-16 | Dec-97 | 93.74 | 9.69 | - | 84.05 |
| | Aug-99 | | 11.22 | - | 82.52 |
| | Apr-00 | | 9.50 | - | 84.24 |
| DMW-17 | Dec-97 | 100.08 | 15.53 | - | 84.55 |
| | Aug-99 | | 16.16 | - | 83.92 |
| | Apr-00 | | 16.80 | - | 83.28 |

**Notes:**
TOC - Top-of-Casing elevation refrenced to common datum.
NM - Not measured.
All measurments in units of feet.
- = No Data

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| OMW-1 | 1-Dec-97 | 14.9 | 85.5 | 5.2 | 24.8 | 130 | 96 | BDL |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-2 | 1-Dec-97 | 9,900 | 42,300 | 2,040 | 12,100 | 66,340 | 242,000 | 71.2 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-3 | 1-Dec-97 | 9,820 | 54,500 | 2,160 | 11,900 | 78,380 | 81,200 | 445 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-4 | 1-Dec-97 | 8,140 | 21,000 | 1,510 | 11,500 | 42,150 | 215,000 | 813 |
| | 5-Aug-99 | 14,200 | 34,600 | 2,750 | 15,900 | 67,450 | 109,000 | <5 |
| | 26-Apr-00 | 13,400 | 33,200 | 3,420 | 13,270 | 63,290 | 102,000 | 1,060 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | <5 |
| MW-5 | 1-Dec-97 | 5,930 | 47,600 | 2,100 | 12,600 | 68,230 | BDL | 125 |
| | 5-Aug-99 | 6,400 | 61,600 | 2,460 | 12,100 | 82,560 | 410 | 335 |
| | 26-Apr-00 | 6,680 | 48,300 | 2,390 | 9,610 | 66,980 | 681 | 609 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-6 | 1-Dec-97 | 5.5 | 137 | 6.0 | 149 | 297.5 | BDL | BDL |
| | 5-Aug-99 | 4.1 | 1.1 | 3.7 | 16.7 | 25.6 | 5 | BDL |
| | 26-Apr-00 | 13.0 | 19.2 | 15.0 | 48.0 | 95.2 | 27.2 | 6.44 |
| MW-7 | 1-Dec-97 | 1.1 | 1.7 | BDL | 1.1 | 3.9 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 41 | <1 |
| | 26-Apr-00 | 2.13 | 13.5 | BDL | 1.59 | 17.2 | 68.9 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-8 | 1-Dec-97 | BDL | 2.4 | 1.2 | 5.4 | 9.0 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 1.58 | 8.53 | BDL | BDL | 10.1 | BDL | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-9 | 1-Dec-97 | 77 | 14,000 | 2,390 | 20,700 | 37,167 | 114 | 384 |
| | 5-Aug-99 | 110 | 4,280 | 2,450 | 17,000 | 23,840 | 150 | <500 |
| | 26-Apr-00 | 163 | 2,640 | 3,520 | 14,760 | 21,083 | BDL | 2,090 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-10 | 1-Dec-97 | 6,220 | 46,300 | 2,320 | 14,800 | 69,640 | 938 | 542 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-11 | 1-Dec-97 | 1.4 | 3.4 | BDL | 4.7 | 9.5 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 7 | <5 |
| | 26-Apr-00 | 1.18 | 3.96 | BDL | BDL | 5.1 | 4.69 | 9.98 |
| SSTL | | <1 | <1 | <1 | <1 | - | 7 | <5 |
| MW-12 | 1-Dec-97 | 7,970 | 382 | 266 | 1,540 | 10,158 | 99,900 | 119 |
| | 5-Aug-99 | 5,000 | 260 | <200 | <200 | 5,260 | 41,200 | <1000 |
| | 26-Apr-00 | 135 | 4.51 | BDL | 11.0 | 151 | 6,800 | 18.2 |
| SSTL | | 5 | 260 | <200 | <200 | - | 40 | 25 |
| MW-13 | 1-Dec-97 | BDL | 1.4 | BDL | 1.6 | 3 | 82.3 | BDL |
| | 5-Aug-99 | 3 | <1 | <1 | <1 | 3 | 604 | <5 |
| | 26-Apr-00 | 188 | 149 | BDL | BDL | 337 | 3,150 | BDL |
| SSTL | | 3.0 | <1 | <1 | <1 | 3 | 40 | <5 |
| MW-14 | 1-Dec-97 | 1.1 | 1.4 | BDL | 2.7 | 5 | 76.5 | BDL |
| | 5-Aug-99 | 57 | 7 | 1 | 23 | 88 | 606 | 5 |
| | 26-Apr-00 | BDL | 1.38 | BDL | BDL | 1.38 | 1.11 | BDL |
| SSTL | | 5 | 7 | 1 | 23 | - | 40 | 5 |
| MW-15 | 1-Dec-97 | 1.0 | 1.6 | BDL | 2.5 | 5 | BDL | BDL |
| | 5-Aug-99 | 3 | 6 | 1 | 6 | 16 | 27 | <5 |
| | 26-Apr-00 | 1.01 | 1.32 | BDL | BDL | 2.33 | 2.82 | 5.66 |
| SSTL | | 3 | 6 | 1 | 6 | - | 27 | <5 |
| MW-16 | 1-Dec-97 | BDL | 1.2 | BDL | 1.3 | 2.5 | BDL | BDL |
| | 5-Aug-99 | 2.2 | 8.8 | 1.6 | 7.1 | 19.7 | 4 | BDL |
| | 26-Apr-00 | 2.17 | 1.27 | BDL | BDL | 3.4 | 10.1 | BDL |
| DMW-17 | 1-Dec-97 | 1.6 | 3.8 | 2.3 | 12.7 | 20.3 | BDL | BDL |
| | 5-Aug-99 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 26-Apr-00 | 1.06 | 1.24 | BDL | BDL | 2.3 | 8.97 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | - | <1 | <1 |

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| CLS-WW | 1-Dec-97 | BDL | 1.2 | BDL | BDL | 1.2 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 2.96 | 1.09 | BDL | BDL | 4.1 | 315 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | - | <1 | <1 |
| CP-WW | 1-Dec-97 | 81.3 | 1.1 | BDL | 9.6 | 92 | 34.5 | BDL |
| | 5-Aug-99 | 81 | 1 | <1 | 10 | 92 | 35 | <5 |
| | 26-Apr-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | <1 | <1 | 10 | - | 35 | <5 |

Notes:

All results reported in parts per billion (ug/L) unless otherwise noted.

SSTL = Site specific target levels referenced in bid

FP = Free Product; NS = Not Sampled

BDL = Below detecatable Levels

Total BTEX = Summation of benzene, toluene, ethylbenzene and xylenes

MTBE = Methyl-tert-buytl-ether

Attachment C

Laboratory Analytical Report
and Chain of Custody Form

# ACCESS ANALYTICAL, INC.

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


May 1, 2000
Report # 4001347
Order # 38445
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's

Sample I.D.: MW-4
Collected: 04/26/00 00:00
Received: 04/28/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 102000 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:16 | PMD |
| Benzene | 13400 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:16 | PMD |
| Toluene | 33200 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:16 | PMD |
| Ethylbenzene | 3420 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:16 | PMD |
| m & p-Xylene | 6680 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:16 | PMD |
| o-Xylene | 6590 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:16 | PMD |
| Naphthalene | 1060 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:16 | PMD |
| SURROGATE: Toluene-D8 | 105.25% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 108.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 93.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

RECEIVED MAY 0 5 2000

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


May 1, 2000
Report # 4001347
Order # 38446
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's

Sample I.D.: MW-5
Collected: 04/26/00 00:00
Received: 04/28/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 681 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:17 | PMD |
| Benzene | 6680 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:17 | PMD |
| Toluene | 48300 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:17 | PMD |
| Ethylbenzene | 2390 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:17 | PMD |
| m & p-Xylene | 4660 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:17 | PMD |
| o-Xylene | 4950 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:17 | PMD |
| Naphthalene | 609 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:17 | PMD |
| SURROGATE: Toluene-D8 | 106.25% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 117.50% | | | | | | |
| SURROGATE: Dibromofluoromethane | 100.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


May 1, 2000
Report # 4001347
Order # 38447
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's

Sample I.D.: MW-6
Collected: 04/26/00 00:00
Received: 04/28/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 27.2 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 08:56 | SS |
| Benzene | 13.0 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 08:57 | SS |
| Toluene | 19.2 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 08:57 | SS |
| Ethylbenzene | 15.0 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 08:57 | SS |
| m & p-Xylene | 30.1 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 08:57 | SS |
| o-Xylene | 17.9 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 08:57 | SS |
| Naphthalene | 6.44 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 08:57 | SS |
| SURROGATE: Toluene-D8 | 100.25% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 112.75% | | | | | | |
| SURROGATE: Dibromofluoromethane | 99.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


May 1, 2000
Report # 4001347
Order # 38448
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's

Sample I.D.: MW-7
Collected: 04/26/00 00:00
Received: 04/28/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 68.6 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 10:58 | FS |
| Benzene | 2.13 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 10:58 | FS |
| Toluene | 13.5 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 10:58 | FS |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 10:58 | FS |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 13:10 | FS |
| o-Xylene | 1.59 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 10:58 | FS |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 10:59 | FS |
| SURROGATE: Toluene-D8 | 102.50% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 116.50% | | | | | | |
| SURROGATE: Dibromofluoromethane | 96.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


May 1, 2000
Report # 4001347
Order # 38449
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's

Sample I.D.: MW-8
Collected: 04/26/00 00:00
Received: 04/28/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 11:01 | FS |
| Benzene | 1.58 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 11:00 | FS |
| Toluene | 8.53 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 11:01 | FS |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 11:01 | FS |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 11:01 | FS |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 11:01 | FS |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 11:01 | FS |
| SURROGATE: Toluene-D8 | 102.25% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 111.75% | | | | | | |
| SURROGATE: Dibromofluoromethane | 98.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


May 1, 2000
Report # 4001347
Order # 38450
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's

Sample I.D.: MW-9
Collected: 04/26/00 00:00
Received: 04/28/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 100 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 100.000 | 04/28/2000 | 04/28/2000 11:03 | FS |
| Benzene | 163 | ug/L | 5030/8260B | 100.000 | 04/28/2000 | 04/28/2000 11:03 | FS |
| Toluene | 2640 | ug/L | 5030/8260B | 100.000 | 04/28/2000 | 04/28/2000 11:04 | FS |
| Ethylbenzene | 3520 | ug/L | 5030/8260B | 100.000 | 04/28/2000 | 04/28/2000 11:04 | FS |
| m & p-Xylene | 6990 | ug/L | 5030/8260B | 100.000 | 04/28/2000 | 04/28/2000 11:04 | FS |
| o-Xylene | 7770 | ug/L | 5030/8260B | 100.000 | 04/28/2000 | 04/28/2000 11:04 | FS |
| Naphthalene | 2090 | ug/L | 5030/8260B | 100.000 | 04/28/2000 | 04/28/2000 11:04 | FS |
| SURROGATE: Toluene-D8 | 101.00% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 114.50% | | | | | | |
| SURROGATE: Dibromofluoromethane | 96.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


May 1, 2000
Report # 4001347
Order # 38451
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's

Sample I.D.: MW-11
Collected: 04/26/00 00:00
Received: 04/28/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 4.69 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:41 | FS |
| Benzene | 1.18 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:41 | FS |
| Toluene | 3.96 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:41 | FS |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:42 | FS |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:42 | FS |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:42 | FS |
| Naphthalene | 9.98 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:41 | FS |
| SURROGATE: Toluene-D8 | 101.75% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 115.75% | | | | | | |
| SURROGATE: Dibromofluoromethane | 93.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


May 1, 2000
Report # 4001347
Order # 38452
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's

Sample I.D.: MW-12
Collected: 04/26/00 00:00
Received: 04/28/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 6800 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:19 | PMD |
| Benzene | 135 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:19 | PMD |
| Toluene | 4.51 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:19 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:19 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:19 | PMD |
| o-Xylene | 11.0 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:19 | PMD |
| Naphthalene | 18.2 | ug/L | 5030/8260B | 1.000 | 04/28/2000 | 04/28/2000 09:19 | PMD |
| SURROGATE: Toluene-D8 | 103.75% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 110.75% | | | | | | |
| SURROGATE: Dibromofluoromethane | 98.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


May 1, 2000
Report # 4001347
Order # 38453
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's

Sample I.D.: MW-13
Collected: 04/26/00 00:00
Received: 04/28/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 3150 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:31 | FS |
| Benzene | 188 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:31 | FS |
| Toluene | 149 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:31 | FS |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:32 | FS |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:32 | FS |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:32 | FS |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:32 | FS |
| SURROGATE: Toluene-D8 | 95.75% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 112.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 100.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


May 1, 2000
Report # 4001347
Order # 38455
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's

Sample I.D.: MW-14
Collected: 04/26/00 00:00
Received: 04/28/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 1.11 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:22 | FS |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:23 | FS |
| Toluene | 1.38 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:22 | FS |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:23 | FS |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:23 | FS |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:23 | FS |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:23 | FS |
| SURROGATE: Toluene-D8 | 102.25% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 109.75% | | | | | | |
| SURROGATE: Dibromofluoromethane | 101.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


May 1, 2000
Report # 4001347
Order # 38456
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's

Sample I.D.: MW-15
Collected: 04/26/00 00:00
Received: 04/28/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 2.82 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:43 | FS |
| Benzene | 1.01 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:43 | FS |
| Toluene | 1.32 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:44 | FS |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:44 | FS |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:44 | FS |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:44 | FS |
| Naphthalene | 5.66 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:44 | FS |
| SURROGATE: Toluene-D8 | 99.50% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 114.50% | | | | | | |
| SURROGATE: Dibromofluoromethane | 98.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
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Company Representative

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


May 1, 2000
Report # 4001347
Order # 38458
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's

Sample I.D.: MW-16
Collected: 04/26/00 00:00
Received: 04/28/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 10.1 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:45 | FS |
| Benzene | 2.17 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:45 | FS |
| Toluene | 1.27 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:46 | FS |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:47 | FS |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:47 | FS |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:47 | FS |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:47 | FS |
| SURROGATE: Toluene-D8 | 98.25% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 112.75% | | | | | | |
| SURROGATE: Dibromofluoromethane | 95.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
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Company Representative

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


May 1, 2000
Report # 4001347
Order # 38460
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's

Sample I.D.: MW-17
Collected: 04/26/00 00:00
Received: 04/28/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 8.97 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:47 | FS |
| Benzene | 1.06 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:48 | FS |
| Toluene | 1.24 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:48 | FS |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:48 | FS |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:48 | FS |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:48 | FS |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:48 | FS |
| SURROGATE: Toluene-D8 | 100.25% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 116.25% | | | | | | |
| SURROGATE: Dibromofluoromethane | 94.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
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Company Representative

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


May 1, 2000
Report # 4001347
Order # 38461
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's

Sample I.D.: CP-WW
Collected: 04/26/00 00:00
Received: 04/28/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 315 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:25 | FS |
| Benzene | 2.96 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:25 | FS |
| Toluene | 1.09 | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:26 | FS |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:27 | FS |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:27 | FS |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:27 | FS |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:27 | FS |
| SURROGATE: Toluene-D8 | 98.00% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 115.25% | | | | | | |
| SURROGATE: Dibromofluoromethane | 99.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
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Company Representative

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


May 1, 2000
Report # 4001347
Order # 38463
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's

Sample I.D.: CLS-WW
Collected: 04/26/00 00:00
Received: 04/28/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:52 | FS |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:52 | FS |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:52 | FS |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:52 | FS |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:52 | FS |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:52 | FS |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/29/2000 | 04/29/2000 09:52 | FS |
| SURROGATE: Toluene-D8 | 98.50% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 113.75% | | | | | | |
| SURROGATE: Dibromofluoromethane | 96.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by Precision Environmental Laboratory, Inc.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

# Access Analytical - Chain of Custody Record

Project Submission #: _____ PO #: _____

Company Name: H2O Env.

Address:

City: State: Zip:

Project Name: Crawford's

Report To: N. Hudson

REQUESTED LAB ANALYSIS:

PARAMETER: BTEX/MTBE 8021

| Sample Label | Date Collected | Time Collected | Matr | # of Cont | | NOTES / COMMENTS |
|---|---|---|---|---|---|---|
| MW-15 | 4/26 | | GW | 2 | X | 38456 |
| MW-16 | | | | | X | 38458 |
| MW-17 | | | | | X | 38460 |
| CP-WW | | | | | X | 38461 |
| CLS-WW | | | | | X | 38463 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

ACCESS ANALYTICAL, INC.

1248 Lake Murray Blvd.
Irmo, SC 29063

Phone: (803) 781-4243
Fax: 781-4303
Toll Free (888) 315-4243

**Turnaround Time Requested:**

✓ Std. *(5-7 Bus. days)*

___ RUSH*

*Date Required: _____

Samples Reed on Ice?

✓ Yes

___ No

Project Location:

✓ SC

___ NC

___ Other _____ (specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| [signature] | 4/26 | 15:30 | Cheryl Bass |
| Cheryl Bass | 4/27/00 | 16:00 | FEDEX |
| FEDEX | | | |

Original Copy · Returned w/Report
Yellow Copy · Access Analytical Copy
Pink Copy · Client Copy

# Access Analytical - Chain of Custody Record

Project Submission #: 00/04 – 1347 — 0 – 38445/38463 PO #:

Company Name: H2O Env.

Address:

City: State: Zip:

Project Name: Crawford's

Report To: N. Hudson

REQUESTED LAB ANALYSIS:

PARAMETER: BTEX/MTBE/Naph

| Sample Label | Date Collected | Time Collected | Matr | # of Cont | NOTES / COMMENTS |
|---|---|---|---|---|---|
| mw-4 | 4/26 | | GW | 2 | 38445 |
| mw-5 | | | | | 38446 |
| mw-6 | | | | | ~~38447~~ 38447 |
| mw-7 | | | | | 38448 |
| mw-8 | | | | | 38449 |
| mw-9 | | | | | 38450 |
| mw-11 | | | | | 38451 |
| mw-12 | | | | | 38452 |
| mw-13 | | | | | 38453 |
| mw-14 | | | | | 38455 |

**Turnaround Time Requested:**

✓ Std. (5-7 Bus. days)

___ RUSH*

*Date Required: _____

Samples Recd on Ice?

✓ Yes

___ No

Project Location:

✓ SC

___ NC

___ Other _____ (specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| [signature] | 4/26 | 15:30 | Cheryl Barr |
| Cheryl Barr | 4/27/00 | 16:00 | FEDEX |
| FEDEX | 04/28/00 | 0930 | [signature] 572 |

Access Analytical, Inc.
1248 Lake Murray Blvd.
Irmo, SC 29063
Phone: (803) 781-4243
Fax: 781-4303
Toll Free (888) 315-4243

Original Copy - Returned w/Report
Yellow Copy - Access Analytical Copy
Pink Copy - Client Copy

SVE-1 AS-1

DHEC
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 734-5300

1. LOCATION OF WELL:
County: ABBEVILLE System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location:
Sketch Map:

SEE SITE MAP ON BACK

2. CUTTING SAMPLES: ☐ Yes ☒ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| ORANGE SILT | 0 | 30' |

UST DOCKETING 272 Tech

RECEIVED
JUN 5 2000
PRIVATE WELL SECTION

*Indicate Water Bearing Zones
(Use a 2nd sheet if needed)

3. REMARKS: 1" AIR SPARGE WELL & 2" VAPOR WELL IN SAME BORE HOE

4. OWNER OF WELL: CRAWFORD COUNTRY STORE
Address: HWY 28 ANTREVILLE, S.C.
Telephone No.:
Engineer: H2O ENVIRONMENTAL INC.
Address: 130 CENTRUM DRIVE 'SUITE 3B IRMO, SOUTH CAROLINA 29063
Telephone No.: (803) 749-4080

5. WELL DEPTH (completed) 1" x 30' 2" x 15' ft. Date Started: 5/22/00 Date Completed: 5/22/00

6. ☐ Mud Rotary ☐ Jetted ☒ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply–Permit No. ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☐ Monitor Well ☐ AIR SPARGE VAPOR

8. CASING: ☒ Threaded ☐ Welded
Diam.: 1" & 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
1" 0 in. to 25' ft. depth
2" 0 in. to 5' ft. depth
Height: Above/Below Surface ft.
Weight lb./ft.
Drive Shoe? ☐ Yes ☐ No

9. SCREEN
Type: PVC Diam.: 1" & 2"
Slot/Gauge: 0.20 Length: 5' & 10'
Set Between 1" 25' ft. and 30' ft.
2" 5' ft. and 15' ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☒ No

10. STATIC WATER LEVEL 15' ft. below land surface after 24 hours

11. PUMPING LEVEL Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

12. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

13. ARTIFICIAL FILTER (gravel pack) ☒ Yes ☐ No
Installed from 1" 24' TO 30' ft. to 2" 3' TO 15' ft.
Effective size 6/20 Uniformity Coefficient

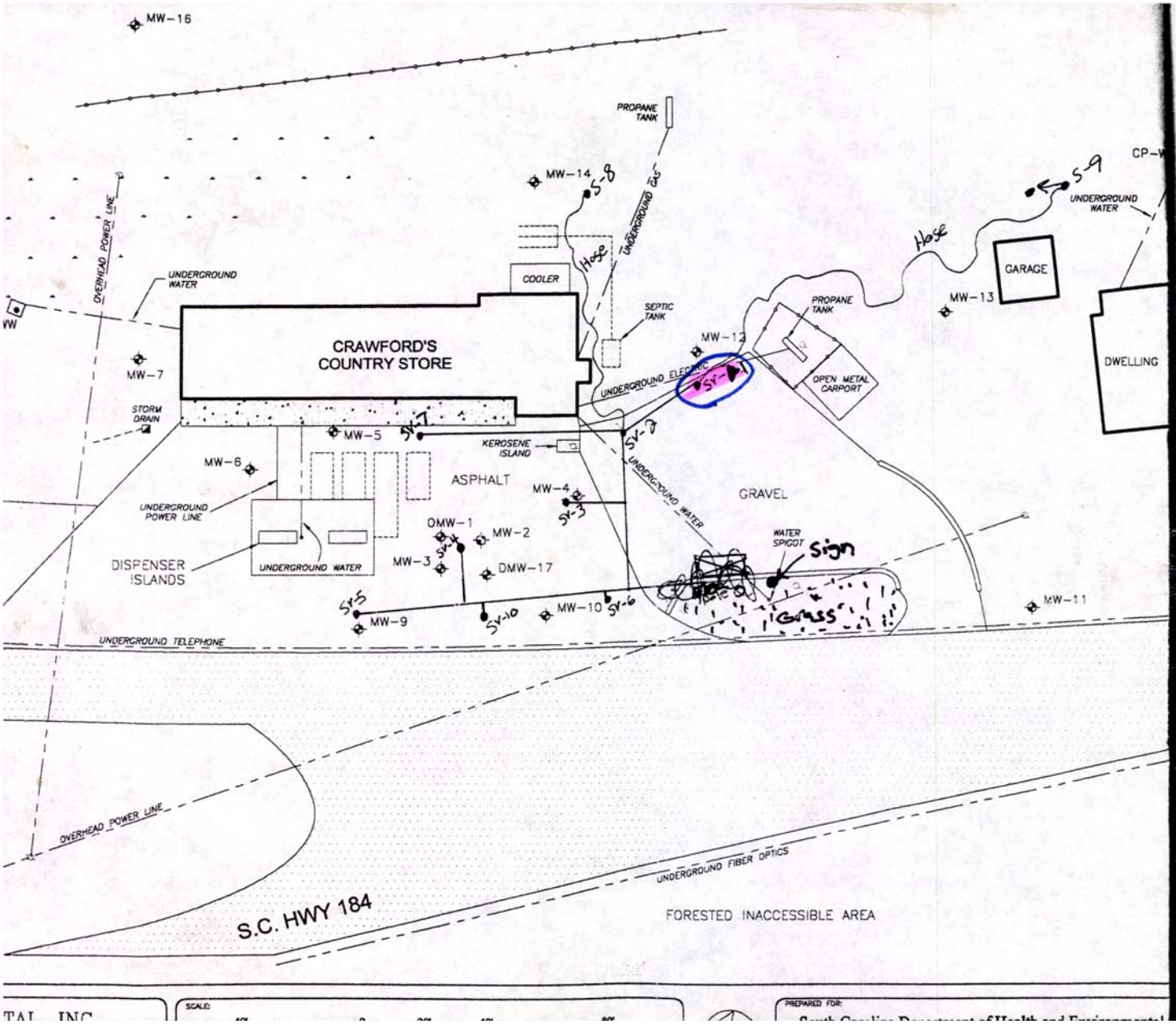
14. WELL GROUTED? ☒ Yes ☐ No
☒ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 0 ft. to 3' ft.

15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☐ No Amount:

16. PUMP: Date installed: ☐ Not installed
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: SAED ACCO Date: 5/26/00
Address: 10401 JOHN PRICE RD. CHARLOTTE N.C.
Signed: Authorized Representative Cert. No.: 1477

DHEC 1903 (10/96) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)


MW-16
PROPANE TANK
MW-14
SV-8
SV-9
UNDERGROUND GAS
UNDERGROUND WATER
Hose
OVERHEAD POWER LINE
UNDERGROUND WATER
COOLER
SEPTIC TANK
GARAGE
MW-13
PROPANE TANK
MW-12
CRAWFORD'S COUNTRY STORE
MW-7
UNDERGROUND ELECTRIC
SV-1
OPEN METAL CARPORT
DWELLING
STORM DRAIN
MW-5
SV-7
SV-2
KEROSENE ISLAND
MW-6
ASPHALT
GRAVEL
MW-4
SV-3
UNDERGROUND WATER
UNDERGROUND POWER LINE
OMW-1
MW-2
WATER SPIGOT
Sign
DISPENSER ISLANDS
UNDERGROUND WATER
MW-3
SV-4
DMW-17
SV-5
MW-9
SV-10
MW-10
SV-6
MW-11
UNDERGROUND TELEPHONE
OVERHEAD POWER LINE
UNDERGROUND FIBER OPTICS
S.C. HWY 184
FORESTED INACCESSIBLE AREA

SVE-2 AS-2

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 734-5300

**1. LOCATION OF WELL:**
County: ABBEVILLE System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location: (see owner address)

Sketch Map:
SEE site MAP ON BACK

**2. CUTTING SAMPLES:** ☐ Yes ☒ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| ORANGE SILT | 0 | 30' |

*Indicate Water Bearing Zones
(Use a 2nd sheet if needed)

RECEIVED
JUN 5 2000
PRIVATE WELL SECTION

**3. REMARKS:** 1" AIR SPARGE well & 2" VAPOR well IN SAME BORE HOLE

**4. OWNER OF WELL:** CRAWFORDS COUNTRY STORE
Address: HWY 28 ANTREVILLE, S.C.
Telephone No.:
Engineer: H2O ENVIRONMENTAL, INC.
Address: 130 CENTRUM DRIVE SUITE 3B IRMO SOUTH CAROLINA 29063
Telephone No.: (803) 749-4080

**5. WELL DEPTH (completed)** 1"x30', 2"x15' ft.
Date Started: 5/22/00
Date Completed: 5/22/00

**6.** ☐ Mud Rotary ☐ Jetted ☒ Bored ☐ Dug
☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. USE:**
☐ Domestic ☐ Public Supply–Permit No. ____ ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☐ Monitor Well ☐ AIR SPARGE VAPOR

**8. CASING:** ☒ Threaded ☐ Welded
Diam.: 1" & 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
1" 0 in. to 25' ft. depth
2" 0 in. to 5' ft. depth
Height: Above/Below Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**9. SCREEN**
Type: PVC Diam.: 1" & 2"
Slot/Gauge: 0.20 Length: 5' & 10'
Set Between: 1" 0 ft. and 25' ft.; 2" 0 ft. and 5' ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☒ No

**10. STATIC WATER LEVEL**
15' ft. below land surface after 24 hours

**11. PUMPING LEVEL Below Land Surface.**
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

**12. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**13. ARTIFICIAL FILTER (gravel pack)** ☒ Yes ☐ No
Installed from (1") 24' TO 30' ft. to (2") 03' to 15' ft.
Effective size 6/20 Uniformity Coefficient

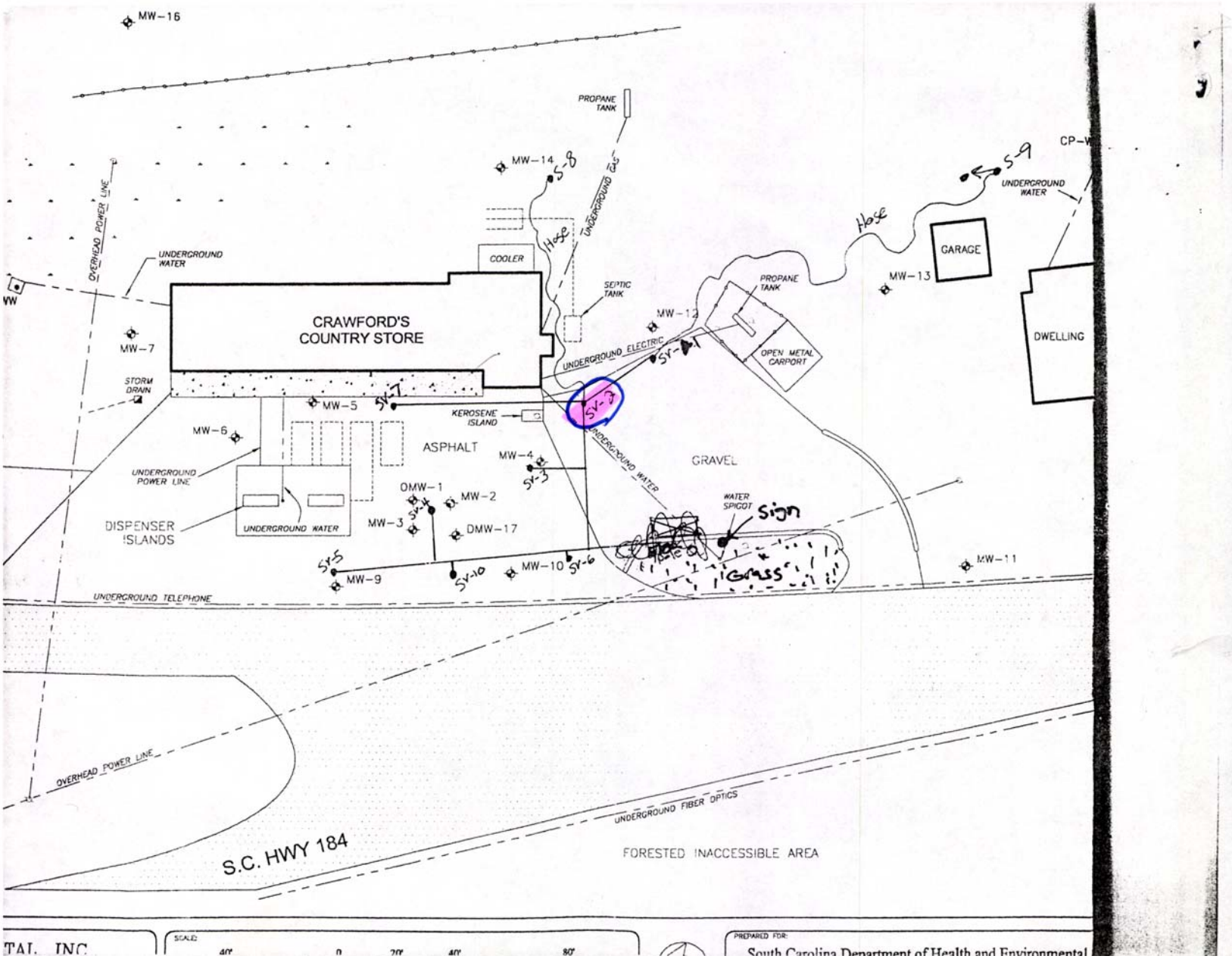
**14. WELL GROUTED?** ☒ Yes ☐ No
☒ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 0 ft. to 3' ft.

**15. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
____ Type well disinfected ☐ Yes Type: ____
upon completion ☐ No Amount: ____

**16. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.: ____
H.P. ____ Volts ____ Length of drop pipe ____ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**17. WATER WELL CONTRACTOR'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: SAEDACCO Date: 5/26/00
Address: 10401 JOHN PRICE RD. CHARLOTTE N.C.
Signed: Robert L. M[illegible] Cert. No.: 1472
Authorized Representative

DHEC 1903 (10/96) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)




TAL, INC

SCALE: 40' 0 20' 40' 80'

PREPARED FOR: South Carolina Department of Health and Environmental

SVE-3 AS-3

DHEC
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 734-5300

1. LOCATION OF WELL:
County: ABBEVILLE System Name:

Latitude: Longitude:

Distance and Direction from Road Intersections:

Street Address & City of Well Location:

Sketch Map:

see site MAP ON BACK

2. CUTTING SAMPLES: ☐ Yes ☒ No

Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| ORANGE SILT | 0 | 30' |

*Indicate Water Bearing Zones

(Use a 2nd sheet if needed)

3. REMARKS: 1" AIR SPARG well AND 2" VAPOR well IN SAME BORE HOE

RECEIVED
JUN 5 2000
PRIVATE WELL SECTION

4. OWNER OF WELL: CRAWFORDS COUNTRY STORE
Address: HWY 28 ANTREVILLE, S.C.
Telephone No.:

Engineer: H2O ENVIRONMENTAL, INC.
Address: 130 CENTRUM DRIVE SUITE 3B IEMO, S.C. 29063
Telephone No.: (803) 749-4080

5. WELL DEPTH (completed) 1"x 30' 2"x 15' ft. Date Started: 5/22/00 Date Completed: 5/22/00

6. ☐ Mud Rotary ☐ Jetted ☒ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply–Permit No. _____ ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☐ Monitor Well ☐ AIR SPARGE VAPOR

8. CASING: ☒ Threaded ☐ Welded
Diam.: 1" & 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
1" 0 in. to 25' ft. depth
2" 0 in. to 5' ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

9. SCREEN
Type: PVC Diam.: 1" & 2"
Slot/Gauge: 0.20 Length: 5' & 10'
Set Between: 1" 25' ft. and 30' ft.
2" 5' ft. and 15' ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☒ No

10. STATIC WATER LEVEL
15' ft. below land surface after 24 hours

11. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

12. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

13. ARTIFICIAL FILTER (gravel pack) ☒ Yes ☐ No
Installed from 1" 24'~~15~~ 30' ft. to 2" 3' TO 15' ft.
Effective size _____ Uniformity Coefficient _____

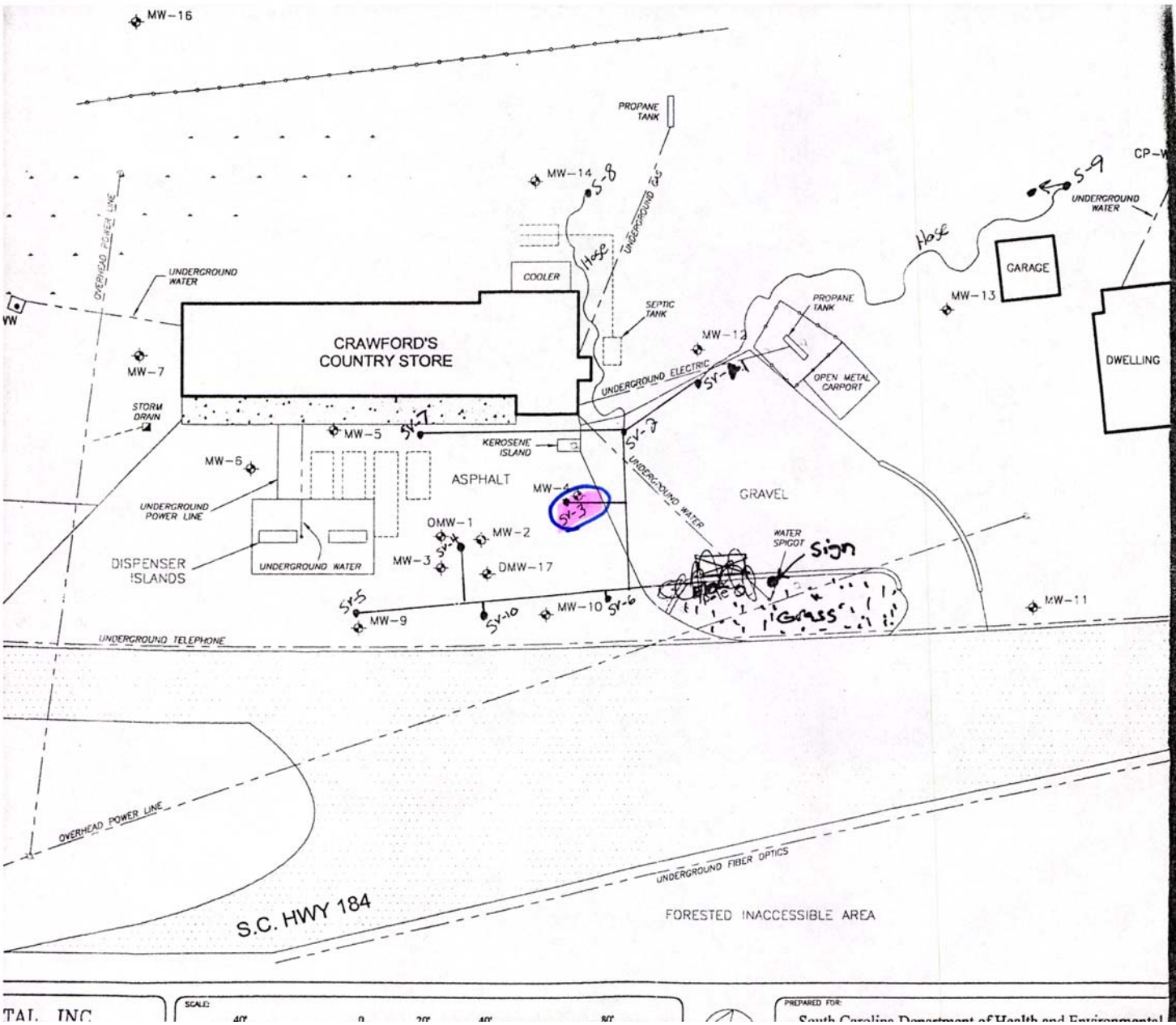
14. WELL GROUTED? ☒ Yes ☐ No
☒ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other _____
Depth: From 0 ft. to 3' ft.

15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
_____ Type well disinfected ☐ Yes Type: _____
upon completion ☐ No Amount: _____

16. PUMP: Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: SAEDACCO Date: 5/26/00
Address: 10401 JOHN PRICE RD. CHARLOTTE, N.C.
Signed: _____ Cert. No.: 1472
Authorized Representative

DHEC 1903 (10/96) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)




TAL, INC

SCALE: 40' 0 20' 40' 80'

PREPARED FOR: South Carolina Department of Health and Environmental

SVE-4 AS-4

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 734-5300

1. LOCATION OF WELL:
County: ABBEVILLE System Name:

Latitude: Longitude:

Distance and Direction from Road Intersections:

Street Address & City of Well Location:

Sketch Map:

SEE MAP ON BACK

2. CUTTING SAMPLES: ☐ Yes ☒ No

Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| ORANGE SILT | 0 | 30' |
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RECEIVED
JUN 5 2000
PRIVATE WELL SECTION

*Indicate Water Bearing Zones

(Use a 2nd sheet if needed)

3. REMARKS: 1" AIR SPARGE WELL AND 2" VAPOR WELL IN SAME BORE HOLE

4. OWNER OF WELL: CRAWFORDS COUNTRY STORE
Address: HWY 28 ANTREVILLE, S.C.

Telephone No.:

Engineer: H2O ENVIRONMENTAL, INC.
Address: 130 CENTRUM DRIVE Suite 3B IRMO, S.C.

Telephone No.: (803) 749-4080

5. WELL DEPTH (completed) 1"x 30' 2"x 15' ft.
Date Started: 5/22/00
Date Completed: 5/22/00

6. ☐ Mud Rotary ☐ Jetted ☒ Bored ☐ Dug
☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply–Permit No. ______ ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☐ Monitor Well ☐ AIR SPARGE VAPOR

8. CASING: ☒ Threaded ☐ Welded
Diam.: 1" & 2"
Type: ☒ PVC ☐ Galvanized
☐ Steel ☐ Other
1" 0 in. to 25' ft. depth
2" 0 in. to 5' ft. depth

Height: Above/Below
Surface ______ ft.
Weight ______ lb./ft.
Drive Shoe? ☐ Yes ☐ No

9. SCREEN
Type: PVC Diam.: 1" & 2"
Slot/Gauge: 0.20 Length: 5' & 10'
Set Between: 1" 0 ft. and 25' ft.
2" 0 ft. and 5' ft.
**NOTE: MULTIPLE SCREENS USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☒ No

10. STATIC WATER LEVEL
15' ft. below land surface after 24 hours

11. PUMPING LEVEL Below Land Surface.
______ ft. after ______ hrs. Pumping ______ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

12. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

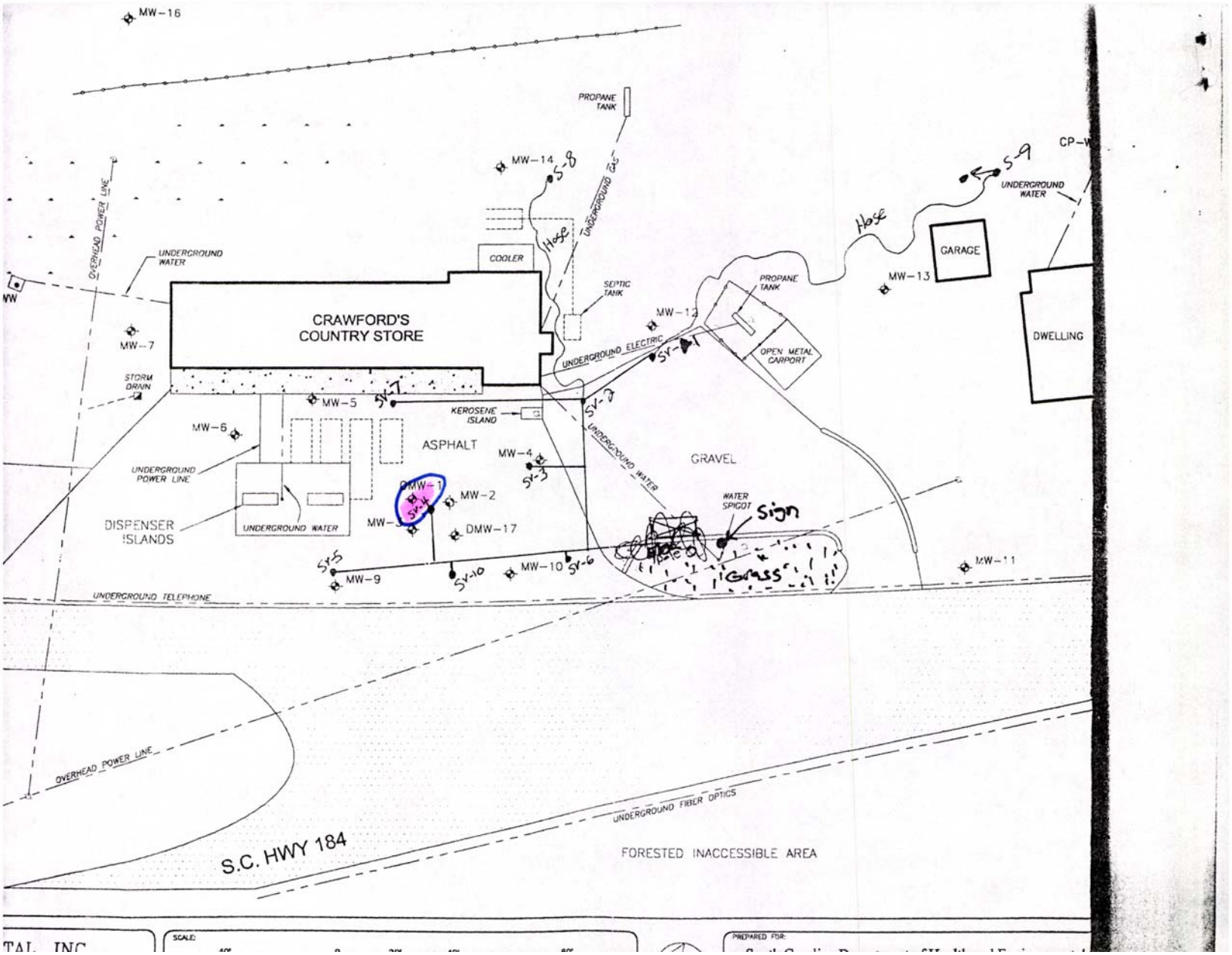
13. ARTIFICIAL FILTER (gravel pack) ☒ Yes ☐ No
Installed from 1" 23' TO 25' ft. to 2" 3' TO 15' ft.
Effective size 6/20 Uniformity Coefficient

14. WELL GROUTED? ☒ Yes ☐ No
☒ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 0 ft. to 3' ft.

15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ____ ft. ____ direction
______ Type well disinfected ☐ Yes Type: ______
upon completion ☐ No Amount: ______

16. PUMP: Date installed: ______ Not installed ☐
Mfr. Name: ______ Model No.: ______
H.P. ______ Volts ______ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: SAEDACCO Date: 5/26/00
Address: 10401 JOHN PRICE RD. CHARLOTTE, N.C.
Signed: [signature] Cert. No. 1472
Authorized Representative


MW-16
PROPANE TANK
MW-14
S-8
S-9
CP-W
UNDERGROUND WATER
OVERHEAD POWER LINE
UNDERGROUND WATER
COOLER
Hose
UNDERGROUND GAS
GARAGE
MW-13
SEPTIC TANK
PROPANE TANK
CRAWFORD'S COUNTRY STORE
MW-12
DWELLING
MW-7
UNDERGROUND ELECTRIC
SV-1
OPEN METAL CARPORT
STORM DRAIN
MW-5
SV-7
SV-2
KEROSENE ISLAND
MW-6
ASPHALT
GRAVEL
MW-4
SV-4
SV-3
UNDERGROUND WATER
UNDERGROUND POWER LINE
DMW-1
MW-2
WATER SPIGOT
Sign
DISPENSER ISLANDS
UNDERGROUND WATER
MW-3
DMW-17
SV-5
MW-9
SV-10
MW-10
SV-6
MW-11
UNDERGROUND TELEPHONE
OVERHEAD POWER LINE
UNDERGROUND FIBER OPTICS
S.C. HWY 184
FORESTED INACCESSIBLE AREA

SVE-5 AS-5

DHEC
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803) 734-5300

**1. LOCATION OF WELL:**
County: ABBEVILLE System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:

Street Address & City of Well Location:

Sketch Map:
SEE MAP ON BACK

**2. CUTTING SAMPLES:** ☐ Yes ☒ No

Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| ORANGE SILT | 0 | 30' |

RECEIVED
JUN 5
PRIVATE WELL SECTION

*Indicate Water Bearing Zones
(Use a 2nd sheet if needed)

**3. REMARKS:** 1" AIR SPARGE WELL AND 2" VAPOR WELL IN SAME BORE HOE

**4. OWNER OF WELL:** CRAWFORDS COUNTRY STORE
Address: HWY 28
ANTREVILLE, S.C.
Telephone No.:

Engineer: H2O ENVIRONMENTAL, INC.
Address: 130 CENTRUM DRIVE SUITE 3B
IRMO, S.C.
Telephone No.: (803) 749-4080

**5. WELL DEPTH (completed)** 1" x 30' 2" x 15' ft.
Date Started: 5/23/00
Date Completed: 5/23/00

**6.** ☐ Mud Rotary ☐ Jetted ☒ Bored ☐ Dug
☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. USE:**
☐ Domestic ☐ Public Supply–Permit No. ____ ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☐ Monitor Well ☒ AIR SPARGE VAPOR

**8. CASING:** ☒ Threaded ☐ Welded
Diam.: 1" & 2"
Type: ☒ PVC ☐ Galvanized
☐ Steel ☐ Other
1" 0 in. to 25' ft. depth
2" 0 in. to 5' ft. depth

Height: Above/Below
Surface ____ ft.
Weight ____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**9. SCREEN**
Type: PVC Diam.: 1" & 2"
Slot/Gauge: 0.20 Length: 5' & 10'
Set Between: 1" 25 ft. and 30' ft. **NOTE: MULTIPLE SCREENS**
2" 5' ft. and 15' ft. **USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☒ No

**10. STATIC WATER LEVEL**
15' ft. below land surface after 24 hours

**11. PUMPING LEVEL Below Land Surface.**
____ ft. after ____ hrs. Pumping ____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

**12. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**13. ARTIFICIAL FILTER (gravel pack)** ☒ Yes ☐ No
Installed from 1" 23' TO 30' ft. to 2" 3' TO 15' ft.
Effective size 6/20 Uniformity Coefficient

**14. WELL GROUTED?** ☒ Yes ☐ No
☒ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 0 ft. to 3' ft.

**15. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
____ Type well disinfected ☐ Yes Type:
upon completion ☐ No Amount:

**16. PUMP:** Date installed: ____ Not installed ☐
Mfr. Name: ____ Model No.:
H.P. ____ Volts ____ Length of drop pipe ___ ft. Capacity ____ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**17. WATER WELL CONTRACTOR'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: SAEDACCO Date: 5/26/00
Address: 10401 JOHN PRICE RD. CHARLOTTE, N.C.
Signed: Robert L. Mir[illegible] Cert. No.: 1472
Authorized Representative

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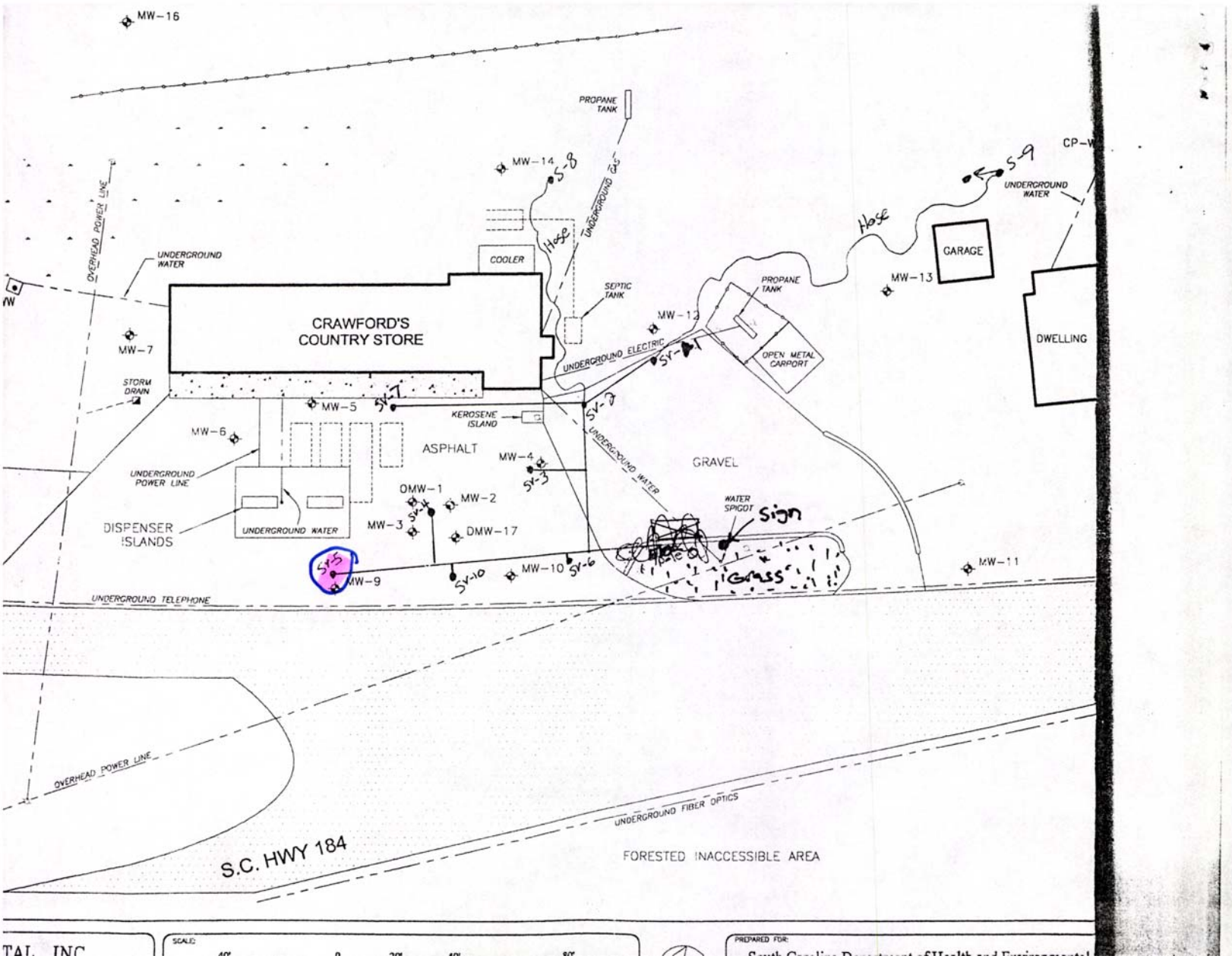
MW-16
PROPANE TANK
MW-14
SV-8
SV-9
CP-W
UNDERGROUND GAS
UNDERGROUND WATER
Hose
OVERHEAD POWER LINE
UNDERGROUND WATER
COOLER
GARAGE
SEPTIC TANK
PROPANE TANK
MW-13
MW-12
CRAWFORD'S COUNTRY STORE
DWELLING
MW-7
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MW-5
SV-7
SV-2
KEROSENE ISLAND
MW-6
ASPHALT
GRAVEL
MW-4
SV-4
UNDERGROUND WATER
UNDERGROUND POWER LINE
OMW-1
MW-2
WATER SPIGOT
Sign
DISPENSER ISLANDS
UNDERGROUND WATER
MW-3
SV-5
DMW-17
SV-5
MW-9
SV-10
MW-10
SV-6
MW-11
Grass
UNDERGROUND TELEPHONE
OVERHEAD POWER LINE
UNDERGROUND FIBER OPTICS
S.C. HWY 184
FORESTED INACCESSIBLE AREA

SVE-6 AS-6

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 734-5300

1. LOCATION OF WELL:
County: ABBEVILLE System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location:
Sketch Map:

SEE MAP ON BACK

2. CUTTING SAMPLES: ☐ Yes ☒ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| ORANGE SILT | 0 | 30' |
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*Indicate Water Bearing Zones
(Use a 2nd sheet if needed)

3. REMARKS: 1" AIR SPARGE well AND 2" VAPOR well IN SAME BORE HOE

RECEIVED
JUN 5 2000
PRIVATE WELL SECTION

4. OWNER OF WELL: CRAWFORDS COUNTRY STORE
Address: HWY 28
ANTREVILLE, S.C.
Telephone No.:
Engineer: H2O ENVIRONMENTAL INC.
Address: 130 CENTRUM DRIVE Suite 3B
IEMO, S.C.
Telephone No.: (803) 749-4080

5. WELL DEPTH (completed) 1"x 30' 2"x 15' ft. Date Started: 5/23/00
Date Completed: 5/23/00

6. ☐ Mud Rotary ☐ Jetted ☒ Bored ☐ Dug
☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply–Permit No. ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☐ Monitor Well ☐ AIR SPARGE VAPOR

8. CASING: ☒ Threaded ☐ Welded
Diam.: 1" & 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
1" 0 in. to 25' ft. depth
2" 0 in. to 5' ft. depth
Height: Above/Below Surface ft.
Weight lb./ft.
Drive Shoe? ☐ Yes ☐ No

9. SCREEN
Type: PVC Diam.: 1" & 2"
Slot/Gauge: 0.20 Length: 5' & 10'
Set Between 1" 25' ft. and 30' ft.
2" 5' ft. and 15' ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☒ No

10. STATIC WATER LEVEL
15 ft. below land surface after 24 hours

11. PUMPING LEVEL Below Land Surface.
ft. after hrs. Pumping G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

12. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

13. ARTIFICIAL FILTER (gravel pack) ☒ Yes ☐ No
Installed from 1" 23' TO 30' ft. to 2" 3' TO 15' ft.
Effective size Uniformity Coefficient

14. WELL GROUTED? ☒ Yes ☐ No
☒ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 0 ft. to 3' ft.

15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ft. direction
Type well disinfected ☐ Yes Type:
upon completion ☐ No Amount:

16. PUMP: Date installed: Not installed ☐
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: SAEDACCO Date: 5/26/00
Address: 1040 JOHN PRICE RD. CHARLOTTE N.C.
Signed: Authorized Representative Cert. No.: 1472

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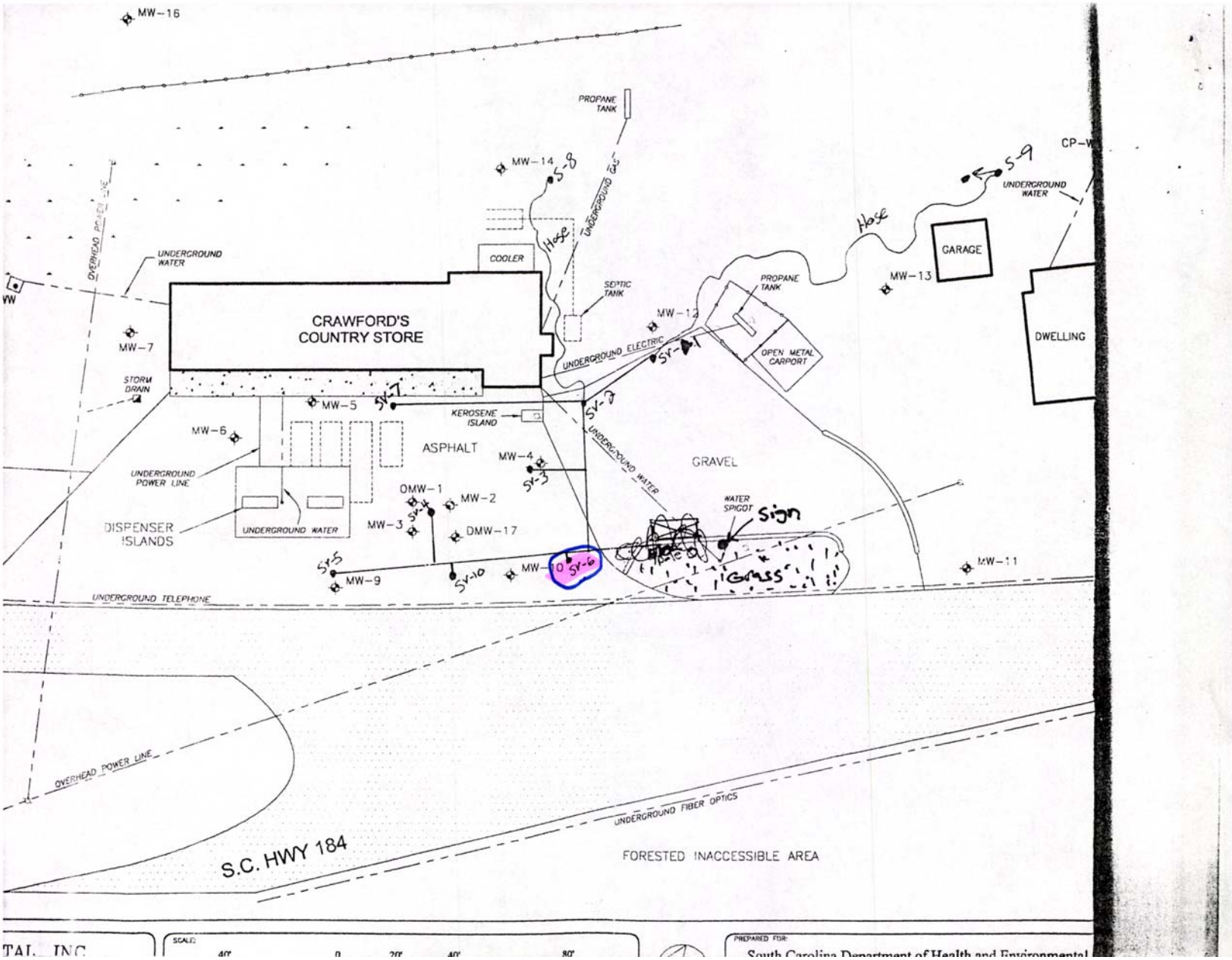
MW-16
PROPANE TANK
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MW-12
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MW-7
UNDERGROUND ELECTRIC
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SV-2
KEROSENE ISLAND
MW-6
ASPHALT
UNDERGROUND WATER
GRAVEL
MW-4
SV-3
UNDERGROUND POWER LINE
OMW-1
MW-2
WATER SPIGOT
Sign
DISPENSER ISLANDS
UNDERGROUND WATER
MW-3
SV-4
DMW-17
SV-5
MW-9
SV-10
MW-10
SV-6
GRASS
MW-11
UNDERGROUND TELEPHONE
OVERHEAD POWER LINE
UNDERGROUND FIBER OPTICS
S.C. HWY 184
FORESTED INACCESSIBLE AREA

SVE-1 AS-1

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 734-5300

1. LOCATION OF WELL:
County: ABBEVILLE System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location:
Sketch Map:

SEE MAP ON BACK

2. CUTTING SAMPLES: ☐ Yes ☒ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| ORANGE SILT | 0 | 30' |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

*Indicate Water Bearing Zones
(Use a 2nd sheet if needed)

3. REMARKS: 1" AIRSPARGE well AND 2" VAPOR well IS IN SAME BORE HOLE

RECEIVED
JUN 5 2000
PRIVATE WELL SECTION

4. OWNER OF WELL: CRAWFORDS COUNTRY STORE
Address: HWY 28 ANTREVILLE, S.C.
Telephone No.:
Engineer: H2O ENVIRONMENTAL, INC.
Address: 130 CENTRUM DRIVE, SUITE 3B IRMO, S.C.
Telephone No.: (803) 749-4080

5. WELL DEPTH (completed) 1"x 30 2"x 15' ft. Date Started: 5/23/00 Date Completed: 5/23/00

6. ☐ Mud Rotary ☐ Jetted ☒ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply–Permit No. _____ ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☐ Monitor Well ☐ AIRSPARGE VAPOR

8. CASING: ☒ Threaded ☐ Welded
Diam.: 1" & 2"
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
1" 0 in. to 25' ft. depth
2" 0 in. to 5' ft. depth
Height: Above/Below Surface _____ ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

9. SCREEN
Type: PVC Diam.: 1" & 2"
Slot/Gauge: 0.20 Length: 5' & 10'
Set Between: 1" 25' ft. and 30' ft.
2" 5' ft. and 15' ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☒ No

10. STATIC WATER LEVEL
15' ft. below land surface after 24 hours

11. PUMPING LEVEL Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

12. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

13. ARTIFICIAL FILTER (gravel pack) ☒ Yes ☐ No
Installed from 1" 23' TO 30' ft. to 2" 3' TO 15' ft.
Effective size _____ Uniformity Coefficient _____

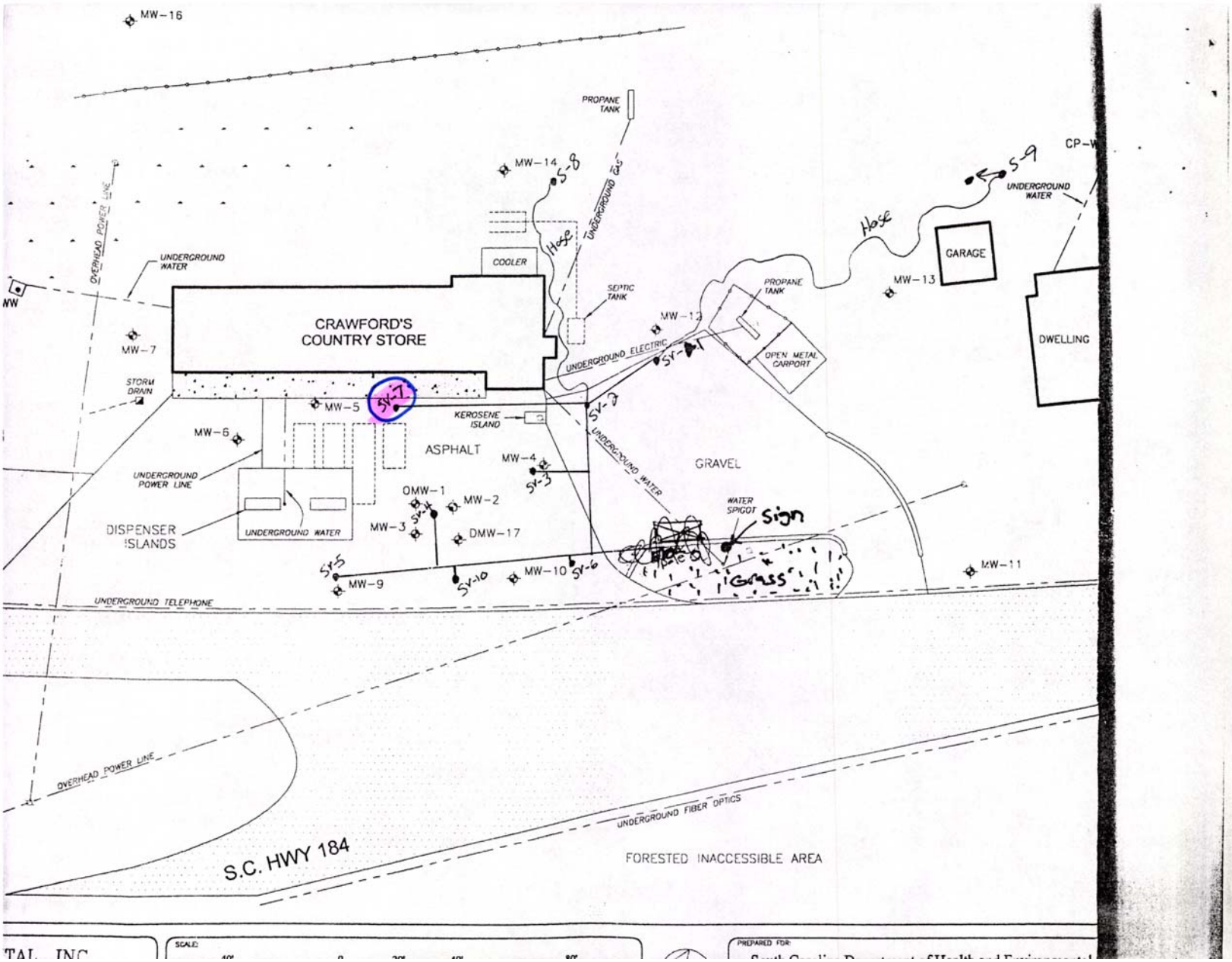
14. WELL GROUTED? ☒ Yes ☐ No
☒ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other _____
Depth: From 0 ft. to 3' ft.

15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: _____ ft. _____ direction
_____ Type well disinfected ☐ Yes Type: _____
upon completion ☐ No Amount: _____

16. PUMP: Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: SAEDACCO Date: 5/26/00
Address: 10401 JOHN PRICE RD. CHARLOTTE, N.C.
Signed: Robert L. Miller Cert. No. 1472
Authorized Representative

DHEC 1903 (10/96) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)


MW-16
PROPANE TANK
MW-14
S-8
S-9
UNDERGROUND GAS
UNDERGROUND WATER
Hose
GARAGE
MW-13
CP-W
OVERHEAD POWER LINE
UNDERGROUND WATER
COOLER
SEPTIC TANK
PROPANE TANK
MW-12
CRAWFORD'S COUNTRY STORE
MW-7
UNDERGROUND ELECTRIC
SV-1
OPEN METAL CARPORT
DWELLING
STORM DRAIN
MW-5
SV-2
KEROSENE ISLAND
SV-3
MW-6
ASPHALT
GRAVEL
UNDERGROUND POWER LINE
MW-4
SV-4
UNDERGROUND WATER
OMW-1
MW-2
WATER SPIGOT
Sign
DISPENSER ISLANDS
UNDERGROUND WATER
MW-3
SV-5
DMW-17
Grass
SV-5
MW-9
SV-10
MW-10
SV-6
MW-11
UNDERGROUND TELEPHONE
OVERHEAD POWER LINE
UNDERGROUND FIBER OPTICS
S.C. HWY 184
FORESTED INACCESSIBLE AREA

SVE-8 AS-8

DHEC
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803) 734-5300

1. LOCATION OF WELL:
County: ABBEVILLE System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location:
Sketch Map:

See MAP ON BACK

2. CUTTING SAMPLES: ☐ Yes ☒ No
Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| ORANGE SILT | 0 | 30 |

RECEIVED
JUN 5 2000
PRIVATE WELL SECTION

*Indicate Water Bearing Zones
(Use a 2nd sheet if needed)

3. REMARKS: 1" AIR SPARGE WELL AND 2" VAPOR WELL IS IN SAME BORE HOE

4. OWNER OF WELL: CRAWFORDS COUNTRY STORE
Address: HWY 28
ANTREVILLE, S.C.
Telephone No.:
Engineer: H2O ENVIRONMENTAL, INC.
Address: 130 CENTRUM DRIVE, SUITE 3B
IRMO, S.C. 29063
Telephone No.: (803) 749-4080

5. WELL DEPTH (completed) #1"x 25' 2"x 12' ft. Date Started: 5/23/00
Date Completed: 5/23/00

6. ☐ Mud Rotary ☐ Jetted ☒ Bored ☐ Dug
☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

7. USE:
☐ Domestic ☐ Public Supply–Permit No. ______ ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☐ Monitor Well ☐ AIR SPARGE VAPOR

8. CASING: ☒ Threaded ☐ Welded
Diam.: 1" & 2"
Type: ☒ PVC ☐ Galvanized
☐ Steel ☐ Other
1" 0 in. to 20' ft. depth
2" 0 in. to 2' ft. depth
Height: Above/Below Surface ______ ft.
Weight ______ lb./ft.
Drive Shoe? ☐ Yes ☐ No

9. SCREEN
Type: PVC Diam.: 1" & 2"
Slot/Gauge: 0.20 Length: 5' & 10'
Set Between: 1" 20' ft. and 25 ft. **NOTE: MULTIPLE SCREENS**
2" 2' ft. and 12' ft. **USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☒ No

10. STATIC WATER LEVEL
10' ft. below land surface after 24 hours

11. PUMPING LEVEL Below Land Surface.
______ ft. after ______ hrs. Pumping ______ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

12. WATER QUALITY
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

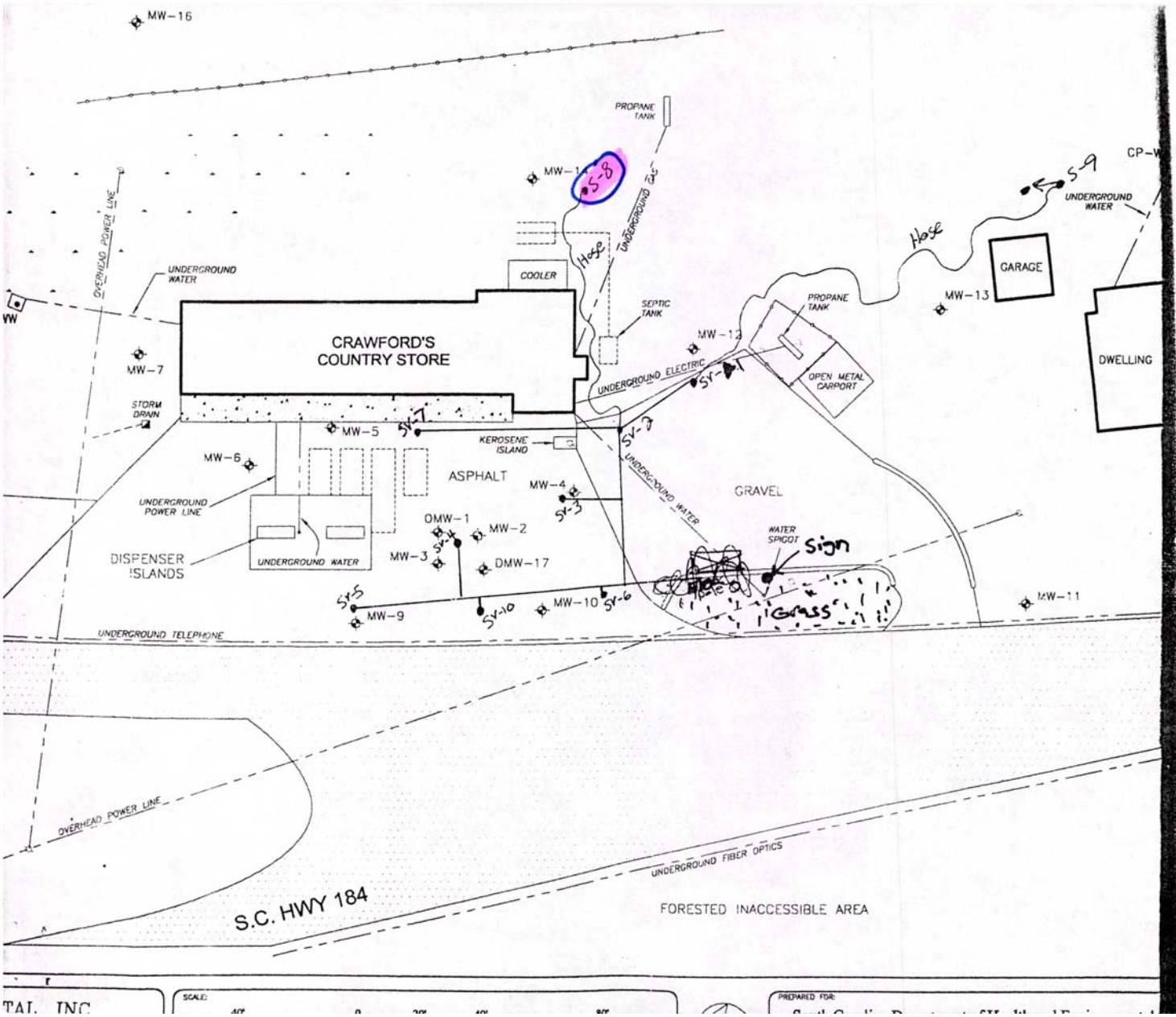
13. ARTIFICIAL FILTER (gravel pack) ☒ Yes ☐ No
Installed from 1" 18' TO 25' ft. to 2" 1' TO 12' ft.
Effective size 6/20 Uniformity Coefficient

14. WELL GROUTED? ☒ Yes ☐ No
☒ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 0 ft. to 1' ft.

15. NEAREST SOURCE OF POSSIBLE CONTAMINATION: ____ ft. ____ direction
______ Type well disinfected ☐ Yes Type:
upon completion ☐ No Amount:

16. PUMP: Date installed: ______ Not installed ☐
Mfr. Name: ______ Model No.:
H.P. ______ Volts ______ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

17. WATER WELL CONTRACTOR'S CERTIFICATION: This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: SAEDACCO Date: 5/26/00
Address: 10401 JOHN PRICE RD. CHARLOTTE, N.C.
Signed: [signature] Cert. No.: 1472
Authorized Representative


MW-16
PROPANE TANK
MW-1
SS-8
UNDERGROUND GAS
SS-9
UNDERGROUND WATER
CP-W
Hose
GARAGE
MW-13
OVERHEAD POWER LINE
UNDERGROUND WATER
COOLER
SEPTIC TANK
PROPANE TANK
MW-12
CRAWFORD'S COUNTRY STORE
MW-7
UNDERGROUND ELECTRIC
SV-1
OPEN METAL CARPORT
DWELLING
STORM DRAIN
MW-5
SV-7
SV-2
KEROSENE ISLAND
MW-6
ASPHALT
MW-4
SV-3
GRAVEL
UNDERGROUND WATER
UNDERGROUND POWER LINE
OMW-1
MW-2
WATER SPIGOT
Sign
DISPENSER ISLANDS
UNDERGROUND WATER
MW-3
SV-4
DMW-17
SV-5
MW-9
SV-10
MW-10
SV-6
MW-11
Grass
UNDERGROUND TELEPHONE
OVERHEAD POWER LINE
UNDERGROUND FIBER OPTICS
S.C. HWY 184
FORESTED INACCESSIBLE AREA
SCALE:
PREPARED FOR:

SVE-9 AS-9

DHEC
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803) 734-5300

**1. LOCATION OF WELL:**
County: ABBEVILLE System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:

Street Address & City of Well Location: (arrow to owner's address)

Sketch Map:
SEE MAP ON BACK

**2. CUTTING SAMPLES:** ☐ Yes ☒ No

Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| ORANGE SILT | 0 | 30' |

RECEIVED
JUN 5 [illegible]
PRIVATE WELL SECTION

*Indicate Water Bearing Zones
(Use a 2nd sheet if needed)

**3. REMARKS:** 1" AIR SPARGE WELL AND 2" VAPOR WELL IS IN SAME BORE HOLE

**4. OWNER OF WELL:** CRAWFORDS COUNTRY STORE
Address: HWY 28
ANTREVILLE, S.C.
Telephone No.:

Engineer: H2O ENVIRONMENTAL, INC.
Address: 130 CENTRUM DRIVE Suite 3B
IRMO, S.C. 29063
Telephone No.: (803) 749-4080

**5. WELL DEPTH (completed)** 1"x30' 2"x15' ft.
Date Started: 5/23/00
Date Completed: 5/23/00

**6.** ☐ Mud Rotary ☐ Jetted ☒ Bored ☐ Dug
☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. USE:**
☐ Domestic ☐ Public Supply–Permit No. ______ ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☐ Monitor Well ☐ AIR SPARGE VAPOR

**8. CASING:** ☒ Threaded ☐ Welded
Diam.: 1" & 2"
Type: ☒ PVC ☐ Galvanized
☐ Steel ☐ Other
1" 0 in. to 25' ft. depth
2" 0 in. to 5' ft. depth

Height: Above/Below
Surface ______ ft.
Weight ______ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**9. SCREEN**
Type: PVC Diam.: 1" & 2"
Slot/Gauge: 0.20 Length: 5' & 10'
Set Between: 1" 25' ft. and 30' ft.
2" 5' ft. and 15' ft.
**NOTE: MULTIPLE SCREENS USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☒ No

**10. STATIC WATER LEVEL**
15' ft. below land surface after 24 hours

**11. PUMPING LEVEL Below Land Surface.**
______ ft. after ______ hrs. Pumping ______ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield:

**12. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**13. ARTIFICIAL FILTER (gravel pack)** ☒ Yes ☐ No
Installed from 1" 23' TO 30' ft. to 2" 3' TO 15' ft.
Effective size 6/20 Uniformity Coefficient

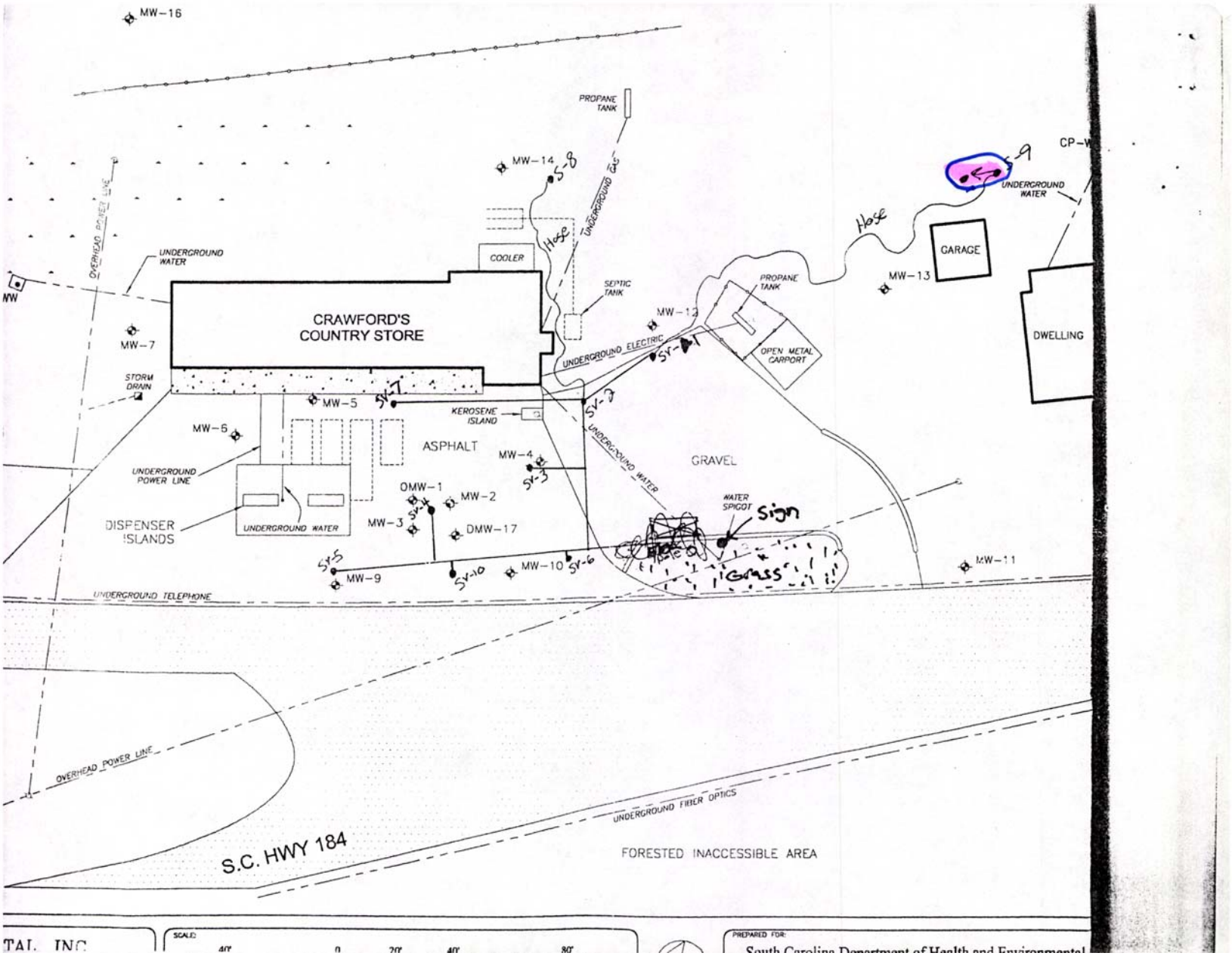
**14. WELL GROUTED?** ☒ Yes ☐ No
☒ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other
Depth: From 0 ft. to 3' ft.

**15. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ______ ft. ______ direction
______ Type well disinfected ☐ Yes Type:
upon completion ☐ No Amount:

**16. PUMP:** Date installed: ______ Not installed ☐
Mfr. Name: ______ Model No.:
H.P. ______ Volts ______ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine
☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**17. WATER WELL CONTRACTOR'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: SAEDACCO Date: 5/26/00
Address: 10404 JOHN PRICE RD. CHARLOTTE, N.C.
Signed: Robert L. Mi[signature] Cert. No.: 1472
Authorized Representative

DHEC 1903 (10/96) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)


MW-16
PROPANE TANK
MW-14
S-8
UNDERGROUND GAS
OVERHEAD POWER LINE
UNDERGROUND WATER
Hose
COOLER
SEPTIC TANK
CRAWFORD'S COUNTRY STORE
MW-7
STORM DRAIN
MW-5
SV-7
KEROSENE ISLAND
MW-6
ASPHALT
UNDERGROUND POWER LINE
MW-4
SV-3
GRAVEL
OMW-1
MW-2
DISPENSER ISLANDS
UNDERGROUND WATER
MW-3
DMW-17
SV-5
MW-9
SV-10
MW-10
SV-6
WATER SPIGOT
Sign
Grass
MW-11
UNDERGROUND TELEPHONE
OVERHEAD POWER LINE
S.C. HWY 184
UNDERGROUND FIBER OPTICS
FORESTED INACCESSIBLE AREA
MW-12
SV-1
UNDERGROUND ELECTRIC
PROPANE TANK
OPEN METAL CARPORT
S-9
CP-W
UNDERGROUND WATER
Hose
GARAGE
MW-13
DWELLING
SCALE:
40'
0
20'
40'
80'
PREPARED FOR:
South Carolina Department of Health and Environmental

SVE-10 AS-10

DHEC — PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water

2600 Bull Street, Columbia, SC 29201-1708; (803) 734-5300

**1. LOCATION OF WELL:**

County: ABBEVILLE System Name:

Latitude: Longitude:

Distance and Direction from Road Intersections:

Street Address & City of Well Location:

Sketch Map:

See MAP ON BACK

**4. OWNER OF WELL:** CRAWFORDS COUNTRY STORE

Address: HWY 28 ANTREVILLE, S.C.

Telephone No.:

Engineer: H2O ENVIRONMENTAL, INC.

Address: 130 CENTRUM DRIVE Suite 3B IRMO, S.C. 29063

Telephone No.: (803) 749-4080

**5. WELL DEPTH (completed)** ______ ft. Date Started: 5/23/00 Date Completed: 5/23/00

**6.** ☐ Mud Rotary ☐ Jetted ☒ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. USE:** ☐ Domestic ☐ Public Supply–Permit No. ______ ☐ Industry ☐ Irrigation ☐ Air Conditioning ☐ Commercial ☐ Test Well ☐ Monitor Well ☐ AIR SPARGE VAPOR

**8. CASING:** ☒ Threaded ☐ Welded

Diam.: 1" & 2"

Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other

1" 0 in. to 25' ft. depth

2" 0 in. to 5' ft. depth

Height: Above/Below Surface ______ ft.

Weight ______ lb./ft.

Drive Shoe? ☐ Yes ☐ No

**2. CUTTING SAMPLES:** ☐ Yes ☒ No

Geophysical Logs: ☐ Yes (please enclose) ☒ No

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| ORANGE SILT | 0 | 30' |
| | | |

*Indicate Water Bearing Zones

(Use a 2nd sheet if needed)

**9. SCREEN**

Type: PVC Diam.: 1" & 2"

Slot/Gauge: 0.20 Length: 5' & 10'

Set Between: 1" 25' ft. and 30' ft.

2" 5' ft. and 15' ft.

**NOTE: MULTIPLE SCREENS USE SECOND SHEET**

Sieve Analysis ☐ Yes (please enclose) ☒ No

**10. STATIC WATER LEVEL** 15' ft. below land surface after 24 hours

**11. PUMPING LEVEL Below Land Surface.** ______ ft. after ______ hrs. Pumping ______ G.P.M.

Pumping Test: ☐ Yes (please enclose) ☐ No

Yield:

**12. WATER QUALITY**

Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No

Please enclose lab results.

**13. ARTIFICIAL FILTER (gravel pack)** ☒ Yes ☐ No

Installed from 1" 23' TO 30' ft. to 2" 3' TO 15' ft.

Effective size 6/20 Uniformity Coefficient

**14. WELL GROUTED?** ☒ Yes ☐ No

☒ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other

Depth: From 0 ft. to 3' ft.

**15. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ______ ft. ______ direction

______ Type well disinfected ☐ Yes Type: ______ upon completion ☐ No Amount: ______

**16. PUMP:** Date installed: ______ Not installed ☐

Mfr. Name: ______ Model No.: ______

H.P. ______ Volts ______ Length of drop pipe ______ ft. Capacity ______ gpm

TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**3. REMARKS:** 1" AIR SPARGE well and 2" VAPOR well IN SAME BORE HOLE

**17. WATER WELL CONTRACTOR'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Registered Business Name: SAEDACCO Date: 5/26/00

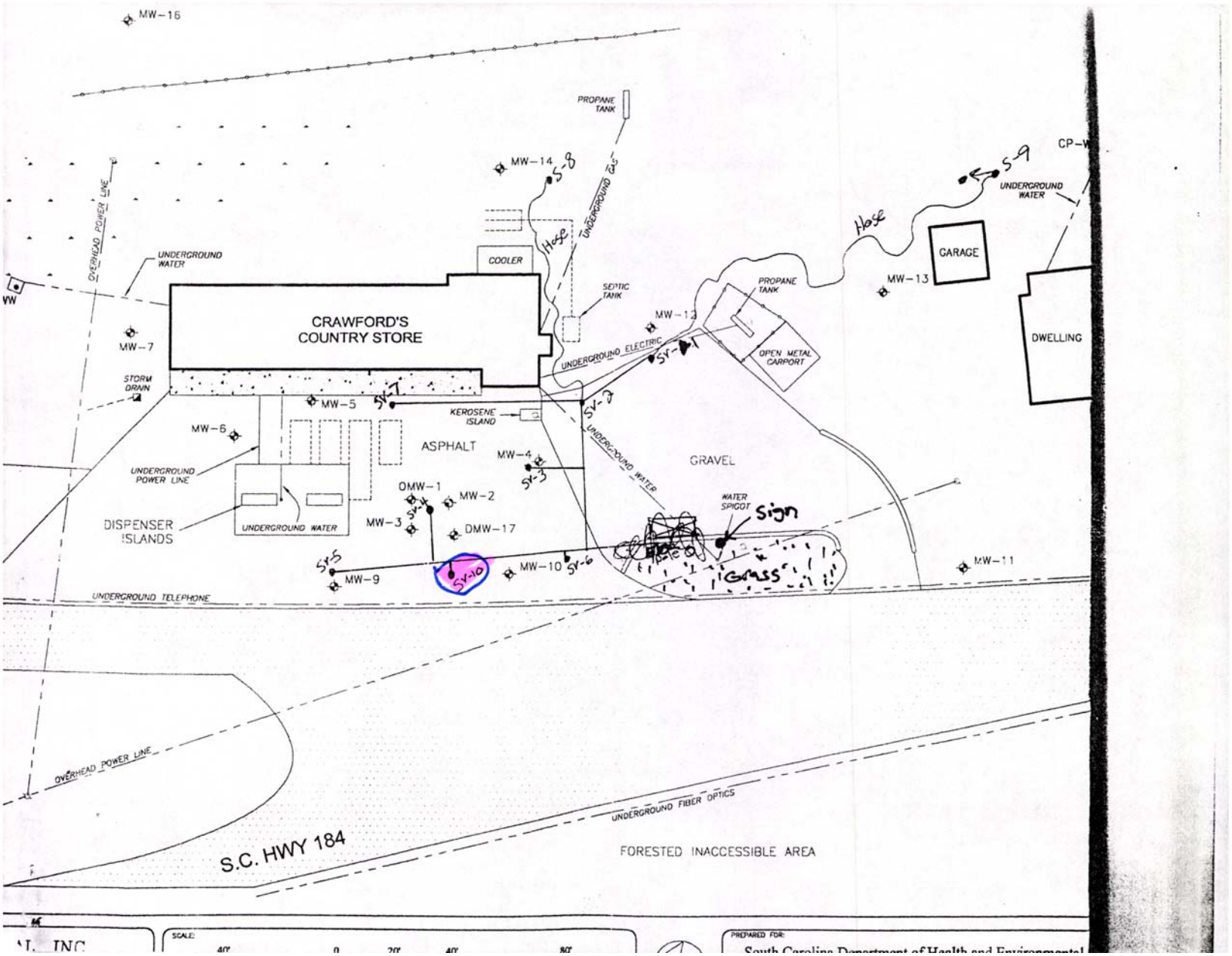
Address: 10401 JOHN PRICE RD. CHARLOTTE, N.C.

Signed: [signature] Cert. No.: 1472

Authorized Representative

RECEIVED JUN 5 2000 PRIVATE WELL SECTION

DHEC 1903 (10/96) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)


MW-16
PROPANE TANK
MW-14
S-8
S-9
CP-W
UNDERGROUND GAS
OVERHEAD POWER LINE
UNDERGROUND WATER
Hose
COOLER
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SV-1
OPEN METAL CARPORT
DWELLING
STORM DRAIN
MW-5
SV-2
SV-7
KEROSENE ISLAND
SV-3
MW-6
ASPHALT
GRAVEL
MW-4
SV-4
UNDERGROUND WATER
UNDERGROUND POWER LINE
OMW-1
MW-2
WATER SPIGOT
Sign
DISPENSER ISLANDS
MW-3
SV-6
DMW-17
SV-5
SV-10
MW-9
MW-10
MW-11
Grass
UNDERGROUND TELEPHONE
OVERHEAD POWER LINE
UNDERGROUND FIBER OPTICS
S.C. HWY 184
FORESTED INACCESSIBLE AREA
SCALE:
40'
0
20'
40'
80'
PREPARED FOR:
South Carolina Department of Health and Environmental

Left voice to LAIP in CSUS absence on 3/30/00.

# FIELD ACTIVITY WORKSHEET ORDER

**Date of Request:** _____

**Type of Request:**

(Please indicate your request with a check mark)

| | | |
|---|---|---|
| Emergency | (<2 Working Days) | ☐ |
| Specific | (1-5 Working Days) | X |
| Routine | (10 Working Days) | ☐ |

Please specify the type of work to be completed:

Sample the Rental Property well GAC for BTEX, MTBE, and Naphthalene (Pre & Post).

Facility Name: Crawford's Country Store

Permit Number: 12335

Project Manager: Corley

County: Abbeville

(Field Staff Only)

Date Field Activity Completed: 7/11/00

Completed by Field Staff: B. Fallin

Date Field Notes Entered into GTS: _____

Field Staff Comments: Please call Frank Crawford before changing Carbon.
STORE # 864-348-7442
Home " - 746-2000

**REMEMBER TO ESTABLISH COST PROPOSALS**

TEST AMERICA CP#: 11306:P GRI CP#: _____

V.E. AMICK & ASSOCIATES CP#: _____

Fill out back of this form. Photocopy, attach a completed CP cover for each CP. Thank you very much!

SCANNED

TestAmerica
INCORPORATED

2960 Foster Creighton Dr
Nashville, TN 37204
615-726-0177
Fax: 615-726-0954

# ANALYTICAL REPORT

SCDHEC 2200

2600 BULL STREET
COLUMBIA, SC 29201

Project: 12335
Project Name: SCDHEC
Sampler: B FALLER

Lab Number: 00-A97907
Sample ID: PRE-GAC
Sample Type: Ground water
Site ID:

Date Collected: 7/11/00
Time Collected: 14:00
Date Received: 7/13/00
Time Received: 9:00

| Analyte | Result | Units | Report Limit | Quan Limit | Dil Factor | Analysis Date | Analysis Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| *VOLATILE ORGANICS* | | | | | | | | | | |
| Benzene | 43.4 | ug/l | 2.0 | 2.0 | 1 | 7/15/00 | 15:01 | B. Elliott | 8260B | 5142 |
| Ethylbenzene | ND | ug/l | 2.0 | 2.0 | 1 | 7/15/00 | 15:01 | B. Elliott | 8260B | 5142 |
| Naphthalene | 7.6 | ug/l | 5.0 | 5.0 | 1 | 7/15/00 | 15:01 | B. Elliott | 8260B | 5142 |
| Toluene | ND | ug/l | 2.0 | 2.0 | 1 | 7/15/00 | 15:01 | B. Elliott | 8260B | 5142 |
| Xylenes, Total | 5.2 | ug/l | 2.0 | 2.0 | 1 | 7/15/00 | 15:01 | B. Elliott | 8260B | 5142 |
| Methyl-t-butyl ether | 310. | ug/l | 100. | 2.0 | 10 | 7/17/00 | 12:32 | B. Elliott | 8260B | 5142 |

ND = Not detected at the report limit.

| Surrogate | % Recovery | Target Range |
|---|---|---|
| VOA Surr, 1,2-DCA, d4 | 93. | 53. - 145. |
| VOA Surr, Toluene d8 | 120. | 80. - 123. |
| VOA Surr, 4-BFB | 118. | 73. - 122. |
| VOA Surr, DBFM | 94. | 58. - 148. |

Sample report continued . . .

TestAmerica
INCORPORATED

2960 Foster Creighton Dr
Nashville, TN 37204
615-726-0177
Fax: 615-726-0954

# ANALYTICAL REPORT

Laboratory Number: 00-A97907
Sample ID: PRE-GAC



These results relate only to the items tested.
This report shall not be reproduced except in full and with
permission of the laboratory.

Report Approved By: Michael B. Dunn Report Date: 7/17/00

Theodore J. Duello, Ph.D., Technical Serv.
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Serv.
Eric S. Smith, Assistant Technical Director
Gail A Lage, Technical Serv.
Paul E. Lane, Jr., Lab Director
Glenn L. Norton, Technical Serv.
Kelly S. Comstock, Technical Serv.
Pamela A. Langford, Technical Serv.

Laboratory Certification Number: 84009

End of Sample Report.

TestAmerica
INCORPORATED

2960 Foster Creighton Dr
Nashville, TN 37204
615-726-0177
Fax: 615-726-0954

# ANALYTICAL REPORT

SCDHEC 2200

2600 BULL STREET
COLUMBIA, SC 29201

Project: 12335
Project Name: SCDHEC
Sampler: B FALLER

Lab Number: 00-A97908
Sample ID: POST-GAC
Sample Type: Ground water
Site ID:

Date Collected: 7/11/00
Time Collected: 14:10
Date Received: 7/13/00
Time Received: 9:00

| Analyte | Result | Units | Report Limit | Quan Limit | Dil Factor | Analysis Date | Analysis Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| *VOLATILE ORGANICS* | | | | | | | | | | |
| Benzene | ND | ug/l | 2.0 | 2.0 | 1 | 7/15/00 | 15:37 | B. Elliott | 8260B | 5142 |
| Ethylbenzene | ND | ug/l | 2.0 | 2.0 | 1 | 7/15/00 | 15:37 | B. Elliott | 8260B | 5142 |
| Naphthalene | 6.0 | ug/l | 5.0 | 5.0 | 1 | 7/15/00 | 15:37 | B. Elliott | 8260B | 5142 |
| Toluene | ND | ug/l | 2.0 | 2.0 | 1 | 7/15/00 | 15:37 | B. Elliott | 8260B | 5142 |
| Xylenes, Total | ND | ug/l | 2.0 | 2.0 | 1 | 7/15/00 | 15:37 | B. Elliott | 8260B | 5142 |
| Methyl-t-butyl ether | 314. | ug/l | 100. | 2.0 | 10 | 7/17/00 | 13:08 | B. Elliott | 8260B | 5142 |

ND = Not detected at the report limit.

| Surrogate | % Recovery | Target Range |
|---|---|---|
| VOA Surr, 1,2-DCA, 04 | 93. | 53. - 145. |
| VOA Surr, Toluene 08 | 123. | 80. - 123. |
| VOA Surr, 4-BFB | 122. | 73. - 122. |
| VOA Surr, DBFM | 96. | 58. - 148. |

Sample report continued . . .

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2960 Foster Creighton Dr
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# ANALYTICAL REPORT

Laboratory Number: 00-A97908
Sample ID: POST-GAC



These results relate only to the items tested.
This report shall not be reproduced except in full and with
permission of the laboratory.

Report Approved By: Michael B. Dunn  Report Date: 7/17/00

Theodore J. Duello, Ph.D., Technical Serv.
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Serv.
Eric S. Smith, Assistant Technical Director
Gail A Lage, Technical Serv.
Paul E. Lane, Jr., Lab Director
Glenn L. Norton, Technical Serv.
Kelly S. Comstock, Technical Serv.
Pamela A. Langford, Technical Serv.

Laboratory Certification Number: 84009

End of Sample Report.

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JUL 19 2000
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Storage Tank Management

# PROJECT QUALITY CONTROL DATA

## Matrix Spike Recovery

| Analyte | units | Orig. Val. | MS Val | Spike Conc | Recovery | Target Range | Q.C. Batch | Spike Sample |
|---|---|---|---|---|---|---|---|---|
| Benzene | ng/l | < 0.00200 | 0.04360 | 0.05000 | 87 | 53. - 134. | 5142 | blank |
| Toluene | ng/l | < 0.00200 | 0.04460 | 0.05000 | 89 | 54. - 135. | 5142 | blank |

## Matrix Spike Duplicate

| Analyte | units | Orig. Val. | Duplicate | RPD | Limit | Q.C. Batch |
|---|---|---|---|---|---|---|
| Benzene | ng/l | 0.04360 | 0.04640 | 6.22 | 25. | 5142 |
| Toluene | ng/l | 0.04460 | 0.04630 | 3.74 | 29. | 5142 |

## Laboratory Control Data

| Analyte | units | Known Val. | Analyzed Val | % Recovery | Target Range | Q.C. Batch |
|---|---|---|---|---|---|---|
| Benzene | ng/l | 0.05000 | 0.04470 | 89 | 73 - 113 | 5142 |
| Ethylbenzene | ng/l | 0.05000 | 0.04550 | 91 | 78 - 119 | 5142 |
| Naphthalene | ng/l | 0.0500 | 0.0458 | 92 | 62 - 149 | 5142 |
| Toluene | ng/l | 0.05000 | 0.04480 | 90 | 70 - 119 | 5142 |
| Xylenes, Total | ng/l | 0.1500 | 0.1376 | 92 | 62 - 137 | 5142 |
| Methyl-t-butyl ether | ng/l | 0.0500 | 0.0483 | 97 | 70 - 130 | 5142 |

## Blank Data

| Analyte | Blank Value | Units | Q.C. Batch |
|---|---|---|---|
| Benzene | < 0.00200 | ng/l | 5142 |
| Ethylbenzene | < 0.00200 | ng/l | 5142 |
| Naphthalene | < 0.0050 | ng/l | 5142 |
| Toluene | < 0.00200 | ng/l | 5142 |
| Xylenes, Total | < 0.00200 | ng/l | 5142 |
| Methyl-t-butyl ether | < 0.0100 | ng/l | 5142 |

End of Report for Project 199716

# TESTAMERICA INC.

2200

*Chain of Custody Record*

Page 1 of 1

❒ Asheville, NC (A) (828) 254-5169 ❒ Bartlett, IL (C) (630) 289-3100 ❒ Cedar Falls, IA (E) (319) 277-2401 ❒ Charlotte, NC (G) (704) 392-1164 ❒ Dayton, OH (I) (937) 294-6856 ❒ Lumberton, NC (K) (910) 738-6190 ❒ Nashville, TN (M) (615) 726-0177 ❒ Pontiac, MI (O) (248) 332-1940 ❒ Rockford. Il (Q) (815) 874-2171
❒ Atlanta, GA (B) (770) 368-0636 ❒ Brighton, CO (D) (303) 659-0497 ❒ Charleston, SC (F) (843) 849-6550 ❒ Columbia, SC (H) (803) 796-8989 ❒ Davenport. IA (J) (319) 323-7944 ❒ Indianapolis, IN (L) (317) 842-4261 ❒ Macon, GA (N) (912) 757-0811 ❒ Orlando, FL (P) (407) 851-2560 ❒ Watertown, WI (R) (920) 261-1660

| | |
|---|---|
| Client: SCDHEC | Project No.: 12335 |
| Report Address: 2600 Bull St. Cola, S.C. 29201 | Invoice Address: Crawford's Co. Store Abbeville, S.C. |
| Attn: D. J. THOMA | Attn: R. Conley |
| Phone No.: 803-898-4350 | Sampled By: B. Fallen |
| Fax No.: " " -4330 | P.O. No: 179220 |
| TURNAROUND TIME | Quote No. |
| ☒ Standard | State Samples Collected S.C. |
| ❒ Rush (surcharges may apply) | Date Needed: 8-22-00 |

**REQUESTED PARAMETERS**

104014 7200 BTEX, Meth, & MTBE $260

Is this work being conducted for regulatory compliance monitoring? Yes___ No___

Is this work being conducted for regulatory enforcement action? Yes___ No___

Which regulations apply:
RCRA____ NPDES Wastewater____
UST____ Drinking Water____
Other___ None____

| Sample ID | Date | Time | Comp (C) Grab (G) | Matrix | Lab Use | # and type of containers: HCl | NaOH | $HNO_3$ | $H_2SO_4$ | Other | None | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TEST-GAC | 8/14/00 | 1410 | G | GW | 115017 | X | | | | | | |

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Bureau of Underground Storage Tank Management

QC Deliverables: ❒ None ❒ Level 2 - Batch QC ❒ Level 3 ❒ Level 4 ❒ Other

Init Lab Temp | Rec Lab Temp

COMMENTS: C/# 11729:P Fed# 8211629194721

FAX CHAIN TO COLUMBIA

| | | | | | |
|---|---|---|---|---|---|
| Relinquished By: | Date 8/17/00 | 0800 Time | Received By: | Date 8/15/00 | 1035 Time |
| Relinquished By: | Date 8-17-00 | Time | Received By: | Date | Time |
| Relinquished By: | Date | Time | Received By: | Date | Time |
| Relinquished By: | Date | Time | Received By: | Date 8-16-00 | 900 Time |

LAB USE ONLY:

Custody Seal: ❒ Yes ❒ No ❒ N/A
Bottles Supplied by TA: ❒ Yes ❒ No

# TESTAMERICA,INC.-NASHVILLE

## COOLER RECEIPT FORM

Client: SCDHEC BC# 204014

Cooler Received On: 8.16.00 And Opened On: 8.16.00 By: Craig Cothron

(Signature)

1. Temperature of Cooler when opened 4.0 Degrees Celsius
2. Were custody seals on outside of cooler?.....NO ~~Yes~~
   a. If yes, how many, what kind and where: 1 Front
   b. Were the seals intact, signed, and dated correctly?.....~~N/A~~ Yes
3. Were custody seals on containers and intact?.....NO
4. Were custody papers inside cooler?.....YES
5. Were custody papers properly filled out (ink,signed,etc)?.....YES
6. Did you sign the custody papers in the appropriate place?.....YES
7. What kind of packing material used? Bubblewrap Peanuts Vermiculite Other None
8. Was sufficient ice used (if appropriate)?.....YES
9. Did all bottles arrive in good condition( unbroken)?.....YES
10. Were all bottle labels complete (#,date,signed,pres,etc)?.....YES
11. Did all bottle labels and tags agree with custody papers?.....YES
12. Were correct bottles used for the analysis requested?.....YES
13. a. Were VOA vials received?.....YES
    b. Was there any observable head space present in any VOA vial?.....NO
14. Was sufficient amount of sample sent in each bottle?.....YES
15. Were correct preservatives used?.....YES
16. Was residual chlorine present?.....NO
17. Corrective action taken, if necessary:

    See attached for resolution

TestAmerica
INCORPORATED
2960 Foster Creighton Dr
Nashville, TN 37204
615-726-0177
Fax: 615-726-0954

# ANALYTICAL REPORT

SCDHEC 2200

2600 BULL STREET
COLUMBIA, SC 29201

Project: 12335
Project Name: SCDHEC
Sampler: B FALLER

Lab Number: 00-A115017
Sample ID: POST-GAC
Sample Type: Ground water
Site ID:

Date Collected: 8/14/00
Time Collected: 14:10
Date Received: 8/16/00
Time Received: 9:00

| Analyte | Result | Units | Report Limit | Quan Limit | Dil Factor | Analysis Date | Analysis Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| VOLATILE ORGANICS* | | | | | | | | | | |
| Benzene | 4.4 | ug/l | 2.0 | 2.0 | 1 | 8/19/00 | 1:57 | M. Hurt | 8260B | 9054 |
| Ethylbenzene | ND | ug/l | 2.0 | 2.0 | 1 | 8/19/00 | 1:57 | M. Hurt | 8260B | 9054 |
| Naphthalene | ND | ug/l | 5.0 | 5.0 | 1 | 8/19/00 | 1:57 | M. Hurt | 8260B | 9054 |
| Toluene | ND | ug/l | 2.0 | 2.0 | 1 | 8/19/00 | 1:57 | M. Hurt | 8260B | 9054 |
| Xylenes, Total | ND | ug/l | 2.0 | 2.0 | 1 | 8/19/00 | 1:57 | M. Hurt | 8260B | 9054 |
| Methyl-t-butyl ether | 240. | ug/l | 10.0 | 2.0 | 5 | 8/21/00 | 11:59 | M. Hurt | 8260B | 9054 |

ND = Not detected at the report limit.

| Surrogate | % Recovery | Target Range |
|---|---|---|
| VOA Surr, 1,2-DCA, d4 | 109. | 71. - 136. |
| VOA Surr, Toluene d8 | 121. | 69. - 129. |
| VOA Surr, 4-BFB | 114. | 65. - 122. |
| VOA Surr, DBFM | 115. | 61. - 139. |

Sample report continued . . .

TestAmerica
INCORPORATED
2960 Foster Creighton Dr
Nashville, TN 37204
615-726-0177
Fax: 615-726-0954

# ANALYTICAL REPORT

Laboratory Number: 00-A115017
Sample ID: POST-GAC



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permission of the laboratory.

Report Approved By: Report Date: 8/21/00

Paul E. Lane, Jr., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Serv.
Eric S. Smith, Assistant Technical Director
Gail A. Lage, Technical Serv.
Glenn L. Norton, Technical Serv.
Kelly S. Comstock, Technical Serv.
Pamela A. Langford, Technical Serv.

Laboratory Certification Number: 84009

End of Sample Report.

TestAmerica
INCORPORATED

2960 Foster Creighton Dr
Nashville, TN 37204
615-726-0177
Fax: 615-726-0954

# PROJECT QUALITY CONTROL DATA

Matrix Spike Recovery

| Analyte | units | Orig. Val. | MS Val | Spike Conc | Recovery | Target Range | Q.C. Batch | Spike Sample |
|---|---|---|---|---|---|---|---|---|
| Benzene | ug/l | < 0.00200 | 0.05030 | 0.05000 | 101 | 53. - 134. | 9054 | 08-A115873 |
| Toluene | ug/l | < 0.00200 | 0.05070 | 0.05000 | 101 | 54. - 135. | 9054 | 08-A115873 |

Matrix Spike Duplicate

| Analyte | units | Orig. Val. | Duplicate | RPD | Limit | Q.C. Batch |
|---|---|---|---|---|---|---|
| Benzene | ug/l | 0.05030 | 0.04940 | 1.81 | 25. | 9054 |
| Toluene | ug/l | 0.05070 | 0.05050 | 0.40 | 29. | 9054 |

Laboratory Control Data

| Analyte | units | Known Val. | Analyzed Val | % Recovery | Target Range | Q.C. Batch |
|---|---|---|---|---|---|---|
| Benzene | ug/l | 0.05000 | 0.04890 | 98 | 73 - 113 | 9054 |
| Ethylbenzene | ug/l | 0.05000 | 0.05180 | 104 | 78 - 119 | 9054 |
| Naphthalene | ug/l | 0.0500 | 0.0640 | 128 | 62 - 149 | 9054 |
| Toluene | ug/l | 0.05000 | 0.05150 | 103 | 78 - 119 | 9054 |
| Xylenes, Total | ug/l | 0.1500 | 0.1548 | 103 | 62 - 137 | 9054 |
| Methyl-t-butyl ether | ug/l | 0.0500 | 0.0512 | 102 | 78 - 130 | 9054 |

End of Report for Project 204014

August 28, 2000

RECEIVED
AUG 30 2000
Bureau of Underground
Storage Tank Management

Mr. Reed Corley, Hydrogeologist
Underground Storage Tank Program
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: 1st Quarterly Report
Crawford's Country Store
5870 Hwy 28 North
Antreville, South Carolina
SCDHEC Site ID # 12335

Dear Mr. Corley:

On February 4, 2000, the South Carolina Department of Health and Environmental Control (SCDHEC) provided notice to proceed to $H_2O$ Environmental, Inc. ($H_2O$) to perform Corrective Action at Crawford's Country Store located at 5870 Highway 28 North, Antreville, South Carolina (see Figure 1.0, Attachment 1). The objective of the project is to reduce the Chemicals of Concern (COC) in monitoring wells OMW-1, MW-2 through MW-5, MW-7 through MW-15, MW-17, CP-WW and CLS-WW to the site specific target levels (SSTLs). A chronological summary of site activities is provided below:

| | |
|---|---|
| 2/4/00 | SCDHEC awarded Bid Number SB-9570-12/02/99-TC |
| 3/02/00 | Corrective Action Plan/Engineering Report submitted to SCDHEC |
| 4/18/00 | CAP/ER approved |
| 4/26/00 | Initial groundwater sampling event |
| 5/17/00 | Initial groundwater results submitted |
| 5/22/00-5/31/00 | System installed |
| 5/31/00 | System was inspected and approved Todd Adams of SCDHEC |
| 5/31/00 | Invoice submitted for payment of 40% of the contract amount |
| 6/14/00 | System start-up |
| 8/01/00 | First quarter sampling event |
| 8/28/99 | First quarter report submitted |

An air injection/vapor extraction system was installed and put in operation in June 2000. The system consists of eight air injection/vapor extraction wells SV-1 through SV-8 and air injection wells S-9 and S-10. The vapor extraction wells are connected to a single line manifold. The following table summarizes the general operating characteristics of the system.

UST
4446
DOCKETING

$H_2O$ ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS
130 Centrum Drive, Suite 3B • Irmo, South Carolina 29063 • 803•749•4080 • Fax 803•749•9911

| Summary of System Operating Characteristics | | | | |
|---|---|---|---|---|
| Well ID | Activity | PSI | CFM | IWG |
| SV-1 - SV-8 | Vapor Extraction | – | – | 45 |
| SV-1 - SV-6 | Air Sparging | 10 | 5 | – |

(SV-7 through S-10 are not in use at this time)

An air sample was collected from the effluent of the vapor extraction system on August 1, 2000. Based on the review of the laboratory analysis, it is estimated that contaminant emissions will not exceed 1,000 pounds per month. A summary of laboratory analysis and projected mass removal rates are shown in the table. A copy of the laboratory report is provided in Attachment 3.

| Summary of Air Sample Analysis | | | |
|---|---|---|---|
| Compound | Concentration | Projected Mass Removal Rate | |
| | ($mg/m^3$) | Lb./day | lb./month |
| Benzene | 194 | 0.35 | 10.5 |
| Toluene | 859 | 1.54 | 46.2 |
| Eythlbenzene | 30.3 | 0.05 | 1.63 |
| Total Xylenes | 163.9 | 0.29 | 8.70 |
| MTBE | 123 | 0.23 | 6.90 |
| Naphthalene | 17.8 | 0.03 | 0.90 |

$$\frac{18\ mg}{m^3} \times \frac{0.02832\ m^3}{ft^3} \times \frac{1\ lb}{453.59 \times 10^3\ mg} \times \frac{20\ ft^3}{Min} \times \frac{1440\ min}{day} = \frac{0.017\ lbs}{Day} \times \frac{30\ days}{Month} = \frac{0.51\ lbs}{month}$$

On August 1, 2000, $H_2O$ Environmental Inc. personnel gauged and sampled all monitoring wells associated with the site. The monitoring wells were sampled for Benzene, Toluene, Ethylbenzene, total Xylenes (BTEX), Methyl-Tert-Butyl Ether (MTBE), and Naphthalene, with the exception of the wells containing free product: MW-1, MW-2 MW-3 and MW-10. A review of the groundwater elevation data indicated a groundwater flow direction to the south-southeast. Table 1, Attachment 2, summarizes field data collected during monitoring well purging. The groundwater elevations are summarized in Table 2, Attachment 2, and depicted graphically on Figure 1, Attachment 1. The groundwater quality for Chemicals of Concern are summarized on Table 3, Attachment 2, and depicted graphically on Figure 2, Attachment 1. A copy of the laboratory analytical report is provided in Attachment 3. Figure 3, Attachment 1 illustrates the Remediation System As-builts. Based on the concentrations, $H_20$ will continue to operate the system until all goals are achieved. If you have any questions or comments please do not hesitate to contact me at (803) 749-4080.

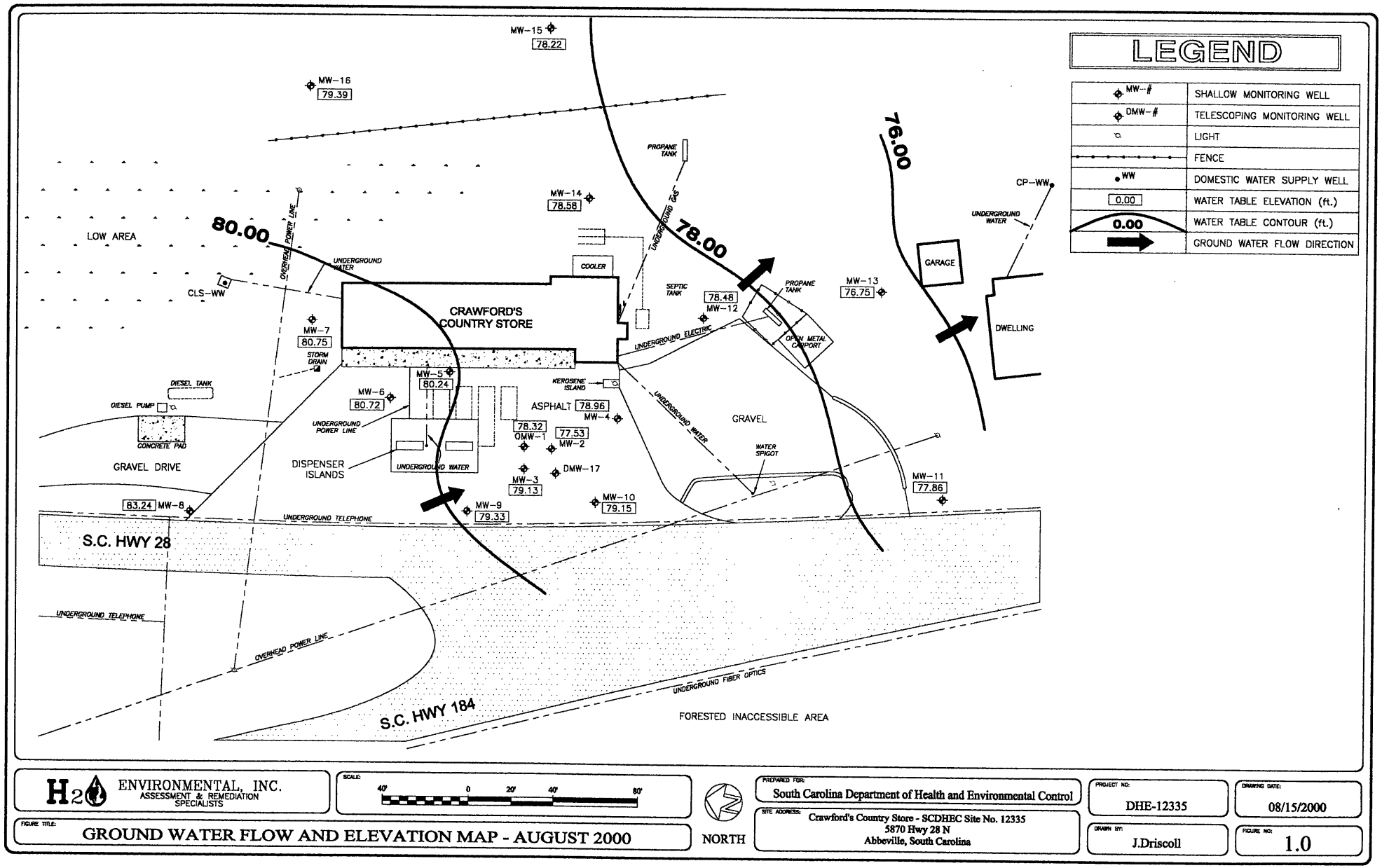
Sincerely,

**$H_2O$ Environmental, Inc.**
Class I Site Rehabilitation Contractor No. 32

Noal Hudson
Project Manager

Richard D. Gillespie, P.G.
License Number 2199 8-25-00

# ATTACHMENT 1
# FIGURES




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| 0.00 | WATER TABLE ELEVATION (ft.) |
| 0.00 | WATER TABLE CONTOUR (ft.) |
| | GROUND WATER FLOW DIRECTION |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

FIGURE TITLE: GROUND WATER FLOW AND ELEVATION MAP - AUGUST 2000

PREPARED FOR: South Carolina Department of Health and Environmental Control

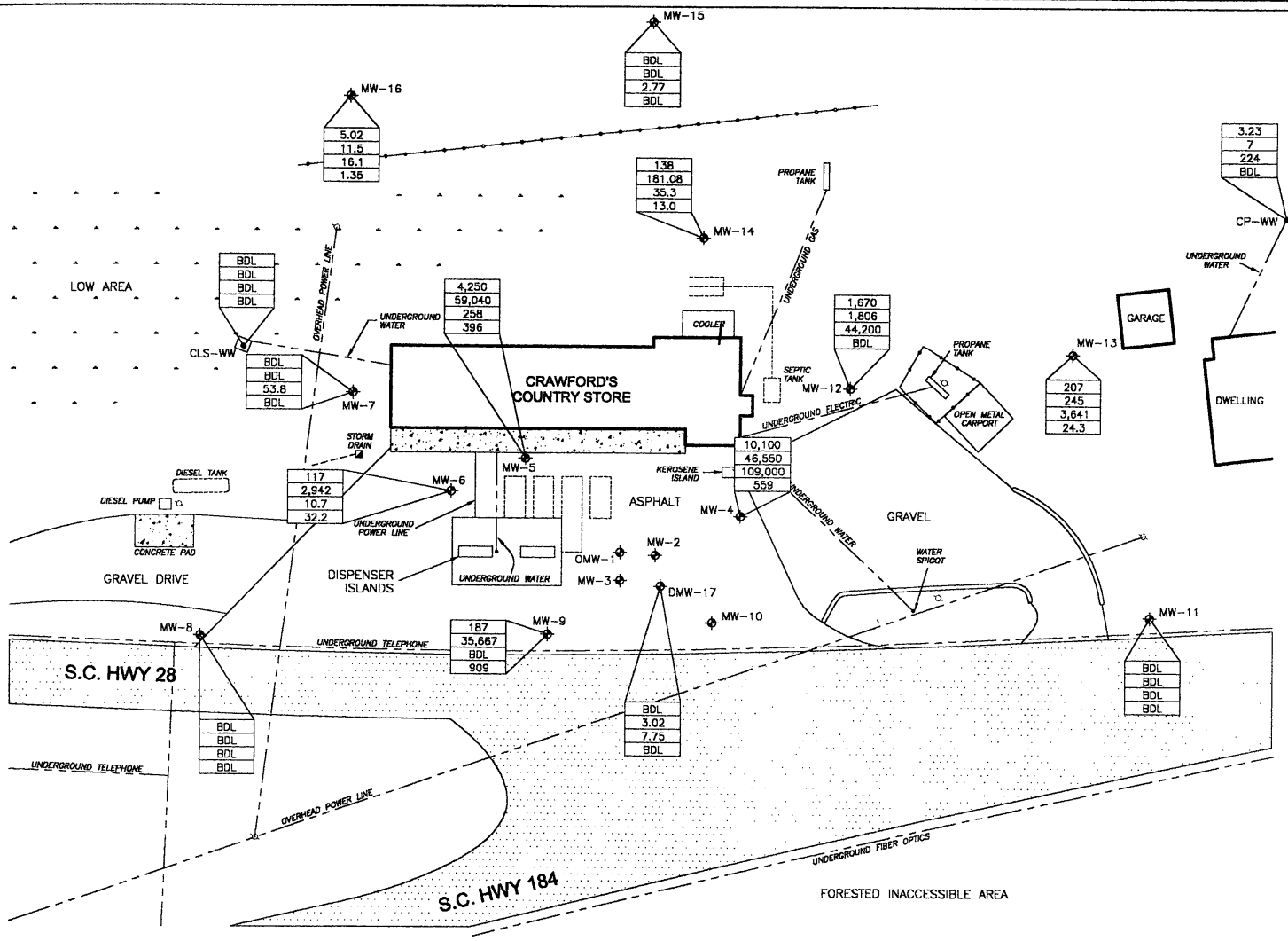
SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 08/15/2000

DRAWN BY: J.Driscoll

FIGURE NO: 1.0




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |

**SUMMARY OF GROUND WATER QUALITY**

| | |
|---|---|
| ug/l | BENZENE |
| ug/l | TOTAL BTEX |
| ug/l | MTBE |
| ug/l | NAPHTHALENE |

BDL – BELOW DETECTION LIMITS
FP – FREE PRODUCT
NS – NOT SAMPLED

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site no. 12335
5870 Hwy 28 N
Abbeville, South Carolina

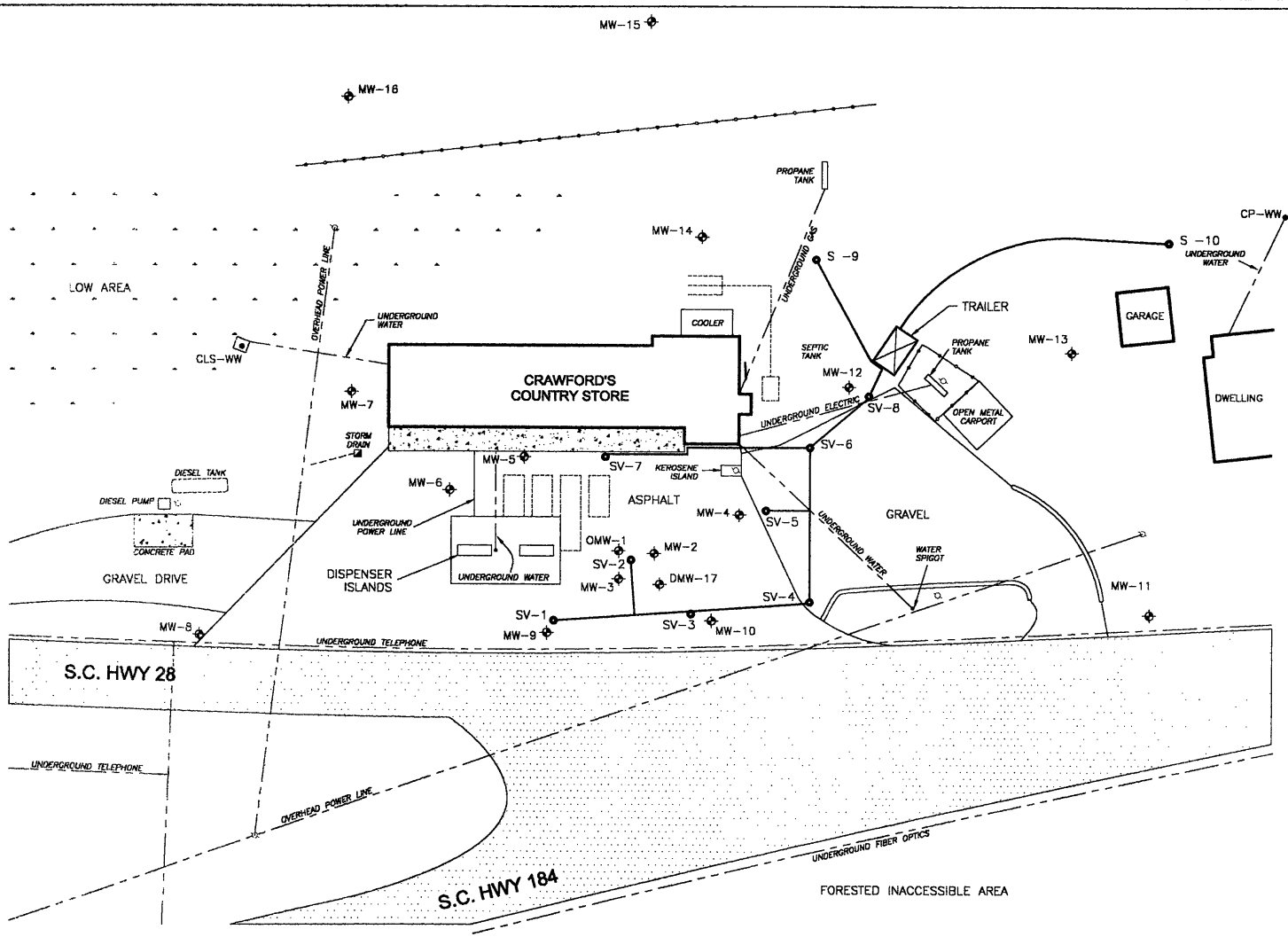
PROJECT NO: DHE-12335

DRAWING DATE: 8/15/2000

DRAWN BY: J.Driscoll

FIGURE NO: 2.0

FIGURE TITLE: GROUND WATER QUALITY MAP - AUGUST 1, 2000




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 08/24/2000

DRAWN BY: J.Driscoll

FIGURE NO: 3.0

FIGURE TITLE:

## REMEDIAL SYSTEM AS-BUILT

# ATTACHMENT 2
# TABLES

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 8/5/99 | 17.95 | 22' | 2" | 2.0 | | Free Product | | |
| | 4/26/00 | 15.68 | 22' | 2" | 3.1 | | Free Product | | |
| | 8/1/00 | 21.50 | 22' | 2" | 0.2 | | | | |
| MW-2 | 8/5/99 | 19.19 | 25' | 2" | 2.8 | | Free Product | | |
| | 4/26/00 | 15.80 | 25' | 2" | 4.5 | | Free Product | | |
| | 8/1/00 | 22.30 | 25' | 2" | 1.3 | | | | |
| MW-3 | 8/5/99 | 17.96 | 25' | 2" | 3.4 | | Free Product | | |
| | 4/26/00 | 15.73 | 25' | 2" | 4.5 | | Free Product | | |
| | 8/1/00 | 20.85 | 25' | 2" | 2.0 | | | | |
| MW-4 | 8/5/00 | 17.59 | 25' | 2" | 3.7 | 4.3 | 75.7 | 2.06 | 21.0 |
| | 4/26/00 | 16.51 | 25' | 2" | 4.2 | 6.0 | 0.78 | 1.82 | 20.2 |
| | 8/1/00 | 20.63 | 25' | 2" | 2.1 | 5.4 | 0.52 | 3.91 | 21.9 |
| MW-5 | 8/5/99 | 15.95 | 25' | 2" | 4.4 | 4.5 | 111.8 | 1.65 | 21.0 |
| | 4/26/00 | 14.35 | 25' | 2" | 5.2 | 6.2 | 0.92 | 2.73 | 19.4 |
| | 8/1/00 | 19.18 | 25' | 2" | 2.8 | 5.1 | 0.5 | 1.25 | 20.8 |
| MW-6 | 8/5/99 | 15.44 | 25' | 2" | 4.7 | 4.6 | 96 | 2.35 | 22.0 |
| | 4/26/00 | 13.65 | 25' | 2" | 5.6 | 6.1 | 0.92 | 1.72 | 18.6 |
| | 8/1/00 | 18.75 | 25' | 2" | 3.1 | 4.95 | 0.48 | 2.23 | 20.4 |
| MW-7 | 8/5/99 | 15.41 | 25' | 2" | 4.7 | 4.6 | 92.8 | 2.74 | 19.0 |
| | 4/26/00 | 13.54 | 25' | 2" | 5.6 | 6.2 | 0.91 | 2.46 | 17.4 |
| | 8/1/00 | 18.72 | 25' | 2" | 3.1 | 5.2 | 0.45 | 2.31 | 18.7 |
| MW-8 | 8/5/00 | 14.59 | 25' | 2" | 5.1 | 4.9 | 45.4 | 3.01 | 21.0 |
| | 4/26/00 | 11.56 | 25' | 2" | 6.6 | 6.3 | 0.72 | 2.06 | 18.4 |
| | 8/1/00 | 19.18 | 25' | 2" | 2.8 | 5.3 | 0.53 | 0.81 | 23.0 |
| MW-9 | 8/5/00 | 16.74 | 25' | 2" | 4.0 | 4.9 | 57.2 | 1.47 | 22.0 |
| | 4/26/00 | 15.09 | 25' | 2" | 4.8 | 5.9 | 0.72 | 1.45 | 20.4 |
| | 8/1/00 | 21.2 | 25' | 2" | 1.9 | 5.7 | 0.59 | 2.62 | 23.9 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-10 | 8/5/99 | 18.06 | 25' | 2" | 3.4 | | Free Product | | |
| | 4/26/00 | 15.75 | 25' | 2" | 4.5 | | Free Product | | |
| | 8/1/00 | 20.50 | 25' | 2" | 2.2 | | | | |
| MW-11 | 8/5/99 | 15.60 | 25' | 2" | 4.6 | 4.8 | 42.7 | 6.38 | 22.0 |
| | 4/26/00 | 13.65 | 25' | 2" | 5.6 | 6.2 | 0.6 | 4.48 | 20.8 |
| | 8/1/00 | 18.61 | 25' | 2" | 3.1 | 5.6 | 0.31 | 4.79 | 21.4 |
| MW-12 | 8/5/99 | 17.33 | 25' | 2" | 3.8 | 4.6 | 129.2 | 2.09 | 19.0 |
| | 4/26/00 | 16.06 | 25' | 2" | 4.4 | 6.3 | 1.03 | 2.9 | 18.5 |
| | 8/1/00 | 20.15 | 25' | 2" | 2.4 | 4.5 | 0.67 | 5.01 | 19.6 |
| MW-13 | 8/5/99 | 21.26 | 25' | 2" | 1.8 | 4.2 | 51.7 | 2.32 | 18.0 |
| | 4/26/00 | 20.02 | 25' | 2" | 2.4 | 6.3 | 0.62 | 3.00 | 18.5 |
| | 8/1/00 | 24.05 | 25' | 2" | 0.5 | 5.2 | 0.42 | 2.14 | 19.7 |
| MW-14 | 8/5/99 | 7.96 | 25' | 2" | 8.3 | 5.0 | 312 | 0.80 | 19.0 |
| | 4/26/00 | 6.46 | 25' | 2" | 9.1 | 6.1 | 1.56 | 1.72 | 15.5 |
| | 8/1/00 | 10.8 | 25' | 2" | 5.4 | 5.4 | 0.93 | 1.43 | 18.8 |
| MW-15 | 8/5/99 | 6.28 | 25' | 2" | 9.2 | 4.8 | 86.5 | 0.87 | 18.0 |
| | 4/26/00 | 4.75 | 25' | 2" | 9.9 | 6.5 | 0.6 | 3.32 | 16.2 |
| | 8/1/00 | 9.11 | 25' | 2" | 7.8 | 5.5 | 0.41 | 3.17 | 19.5 |
| MW-16 | 8/5/99 | 11.22 | 25' | 2" | 6.7 | 4.9 | 49 | 0.79 | 18.0 |
| | 4/26/00 | 9.50 | 25' | 2" | 7.6 | 6.5 | 0.61 | 1.66 | 15.5 |
| | 8/1/00 | 14.35 | 25' | 2" | 5.2 | 6.0 | 0.95 | 1.64 | 19.3 |
| MW-17 | 8/5/99 | 16.16 | 75' | 2" | 28.8 | 5.6 | 90.8 | 2.76 | 20.5 |
| | 4/26/00 | 16.8 | 75' | 2" | 28.5 | 6.4 | 0.86 | 6.1 | 20.8 |
| | 8/1/00 | 19.27 | 75' | 2" | 27.3 | 6.2 | 0.59 | 3.12 | 22.5 |

NOTES:

NS - Not sampled

Temperature in Degrees Celcius

Dissolved Oxygen in mg/L

Depth to Water and Depth to bottom in units of feet

Well volumes (Gallons)

Specific Conductivity (umhos/cm)

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| OMW-1 | Dec-97 | 99.82 | 17.13 | - | 82.69 |
| | Aug-99 | | 17.95 | 1.05 | 81.87 |
| | Apr-00 | | 15.68 | FP | 84.14 |
| | Aug-00 | | 21.50 | - | 78.32 |
| MW-2 | Dec-97 | 99.83 | 17.43 | - | 82.40 |
| | Aug-99 | | 19.19 | 2.29 | 80.64 |
| | Apr-00 | | 15.80 | FP | 84.03 |
| | Aug-00 | | 22.30 | - | 77.53 |
| MW-3 | Dec-97 | 99.98 | 17.00 | - | 82.98 |
| | Aug-99 | | 17.96 | 1.01 | 82.02 |
| | Apr-00 | | 15.73 | FP | 84.25 |
| | Aug-00 | | 20.85 | - | 79.13 |
| MW-4 | Dec-97 | 99.59 | 17.60 | - | 81.99 |
| | Aug-99 | | 17.59 | - | 82.00 |
| | Apr-00 | | 16.51 | - | 83.08 |
| | Aug-00 | | 20.63 | - | 78.96 |
| MW-5 | Dec-97 | 99.42 | 15.04 | - | 84.38 |
| | Aug-99 | | 15.95 | - | 83.47 |
| | Apr-00 | | 14.35 | - | 85.07 |
| | Aug-00 | | 19.18 | - | 80.24 |
| MW-6 | Dec-97 | 99.47 | 14.37 | - | 85.10 |
| | Aug-99 | | 15.44 | - | 84.03 |
| | Apr-00 | | 13.65 | - | 85.82 |
| | Aug-00 | | 18.75 | - | 80.72 |
| MW-7 | Dec-97 | 99.47 | 13.96 | - | 85.51 |
| | Aug-99 | | 15.41 | - | 84.06 |
| | Apr-00 | | 13.54 | - | 85.93 |
| | Aug-00 | | 18.72 | - | 80.75 |
| MW-8 | Dec-97 | 102.42 | 12.53 | - | 89.89 |
| | Aug-99 | | 14.59 | - | 87.83 |
| | Apr-00 | | 11.56 | - | 90.86 |
| | Aug-00 | | 19.18 | - | 83.24 |
| MW-9 | Dec-97 | 100.53 | 16.17 | - | 84.36 |
| | Aug-99 | | 16.74 | - | 83.79 |
| | Apr-00 | | 15.09 | - | 85.44 |
| | 36739.00 | | 21.20 | - | 79.33 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-10 | Dec-97 | 99.65 | 17.40 | - | 82.25 |
| | Aug-99 | | 18.06 | 1.01 | 81.59 |
| | Apr-00 | | 15.75 | FP | 83.90 |
| | Aug-00 | | 20.50 | - | 79.15 |
| MW-11 | Dec-97 | 96.47 | 15.74 | - | 80.73 |
| | Aug-99 | | 15.60 | - | 80.87 |
| | Apr-00 | | 13.65 | - | 82.82 |
| | Aug-00 | | 18.61 | - | 77.86 |
| MW-12 | Dec-97 | 98.63 | 17.03 | - | 81.60 |
| | Aug-99 | | 17.33 | - | 81.30 |
| | Apr-00 | | 16.06 | - | 82.57 |
| | Aug-00 | | 20.15 | - | 78.48 |
| MW-13 | Dec-97 | 100.80 | 21.05 | - | 79.75 |
| | Aug-99 | | 21.26 | - | 79.54 |
| | Apr-00 | | 20.02 | - | 80.78 |
| | Aug-00 | | 24.05 | - | 76.75 |
| MW-14 | Dec-97 | 89.38 | 7.27 | - | 82.11 |
| | Aug-99 | | 7.96 | - | 81.42 |
| | Apr-00 | | 6.46 | | 82.92 |
| | Aug-00 | | 10.80 | - | 78.58 |
| MW-15 | Dec-97 | 87.33 | 5.10 | - | 82.23 |
| | Aug-99 | | 6.28 | - | 81.05 |
| | Apr-00 | | 4.75 | - | 82.58 |
| | Aug-00 | | 9.11 | - | 78.22 |
| MW-16 | Dec-97 | 93.74 | 9.69 | - | 84.05 |
| | Aug-99 | | 11.22 | - | 82.52 |
| | Apr-00 | | 9.50 | - | 84.24 |
| | Aug-00 | | 14.35 | - | 79.39 |
| DMW-17 | Dec-97 | 100.08 | 15.53 | - | 84.55 |
| | Aug-99 | | 16.16 | - | 83.92 |
| | Apr-00 | | 16.80 | - | 83.28 |
| | Aug-00 | | 19.27 | - | 80.81 |

**Notes:**
TOC - Top-of-Casing elevation refrenced to common datum.
NM - Not measured.
All measurments in units of feet.
- = No Data

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| OMW-1 | 1-Dec-97 | 14.9 | 85.5 | 5.2 | 24.8 | 130 | 96 | BDL |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-2 | 1-Dec-97 | 9,900 | 42,300 | 2,040 | 12,100 | 66,340 | 242,000 | 71.2 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-3 | 1-Dec-97 | 9,820 | 54,500 | 2,160 | 11,900 | 78,380 | 81,200 | 445 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-4 | 1-Dec-97 | 8,140 | 21,000 | 1,510 | 11,500 | 42,150 | 215,000 | 813 |
| | 5-Aug-99 | 14,200 | 34,600 | 2,750 | 15,900 | 67,450 | 109,000 | <5 |
| | 26-Apr-00 | 13,400 | 33,200 | 3,420 | 13,270 | 63,290 | 102,000 | 1,060 |
| | 1-Aug-00 | 10,100 | 23,300 | 1,740 | 11,410 | 46,550 | 109,000 | 559 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | <5 |
| MW-5 | 1-Dec-97 | 5,930 | 47,600 | 2,100 | 12,600 | 68,230 | BDL | 125 |
| | 5-Aug-99 | 6,400 | 61,600 | 2,460 | 12,100 | 82,560 | 410 | 335 |
| | 26-Apr-00 | 6,680 | 48,300 | 2,390 | 9,610 | 66,980 | 681 | 609 |
| | 1-Aug-00 | 4,250 | 40,300 | 1,960 | 12,530 | 59,040 | 258 | 396 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-6 | 1-Dec-97 | 5.5 | 137 | 6.0 | 149 | 297.5 | BDL | BDL |
| | 5-Aug-99 | 4.1 | 1.1 | 3.7 | 16.7 | 25.6 | 5 | BDL |
| | 26-Apr-00 | 13.0 | 19.2 | 15 | 48 | 95.2 | 27.2 | 6.44 |
| | 1-Aug-00 | 117 | 1820 | 128 | 877 | 2942 | 10.7 | 32.2 |
| MW-7 | 1-Dec-97 | 1.1 | 1.7 | BDL | 1.1 | 3.9 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 41 | <1 |
| | 26-Apr-00 | 2.13 | 13.5 | BDL | 1.59 | 17.2 | 68.9 | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 53.8 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-8 | 1-Dec-97 | BDL | 2.4 | 1.2 | 5.4 | 9.0 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 1.58 | 8.53 | BDL | BDL | 10.1 | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-9 | 1-Dec-97 | 77 | 14,000 | 2,390 | 20,700 | 37,167 | 114 | 384 |
| | 5-Aug-99 | 110 | 4,280 | 2,450 | 17,000 | 23,840 | 150 | <500 |
| | 26-Apr-00 | 163 | 2,640 | 3,520 | 14,760 | 21,083 | BDL | 2,090 |
| | 1-Aug-00 | 187 | 18,400 | 1,010 | 16,070 | 35,667 | BDL | 909 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-10 | 1-Dec-97 | 6,220 | 46,300 | 2,320 | 14,800 | 69,640 | 938 | 542 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-11 | 1-Dec-97 | 1.4 | 3.4 | BDL | 4.7 | 9.5 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 7 | <5 |
| | 26-Apr-00 | 1.18 | 3.96 | BDL | BDL | 5.1 | 4.69 | 9.98 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | <1 | <1 | <1 | <1 | - | 7 | <5 |
| MW-12 | 1-Dec-97 | 7,970 | 382 | 266 | 1,540 | 10,158 | 99,900 | 119 |
| | 5-Aug-99 | 5,000 | 260 | <200 | <200 | 5,260 | 41,200 | <1000 |
| | 26-Apr-00 | 135 | 4.51 | BDL | 11.0 | 151 | 6,800 | 18.2 |
| | 1-Aug-00 | 1670 | 17.1 | 4.33 | 114.9 | 1806 | 44,200 | BDL |
| SSTL | | 5 | 260 | <200 | <200 | - | 40 | 25 |
| MW-13 | 1-Dec-97 | BDL | 1.4 | BDL | 1.6 | 3 | 82.3 | BDL |
| | 5-Aug-99 | 3 | <1 | <1 | <1 | 3 | 604 | <5 |
| | 26-Apr-00 | 188 | 149 | BDL | BDL | 337 | 3,150 | BDL |
| | 1-Aug-00 | 207 | 5.74 | BDL | 32.8 | 245 | 3,641 | 24.3 |
| SSTL | | 3.0 | <1 | <1 | <1 | 3 | 40 | <5 |
| MW-14 | 1-Dec-97 | 1.1 | 1.4 | BDL | 2.7 | 5 | 76.5 | BDL |
| | 5-Aug-99 | 57 | 7 | 1 | 23 | 88 | 606 | 5 |
| | 26-Apr-00 | BDL | 1.38 | BDL | BDL | 1.38 | 1.11 | BDL |
| | 1-Aug-00 | 138 | 4.04 | BDL | 39.04 | 181.08 | 35.3 | 13.0 |
| SSTL | | 5 | 7 | 1 | 23 | - | 40 | 5 |

# TABLE 3
# SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-15 | 1-Dec-97 | 1.0 | 1.6 | BDL | 2.5 | 5 | BDL | BDL |
| | 5-Aug-99 | 3 | 6 | 1 | 6 | 16 | 27 | <5 |
| | 26-Apr-00 | 1.01 | 1.32 | BDL | BDL | 2.33 | 2.82 | 5.66 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 2.77 | BDL |
| SSTL | | 3 | 6 | 1 | 6 | - | 27 | <5 |
| MW-16 | 1-Dec-97 | BDL | 1.2 | BDL | 1.3 | 2.5 | BDL | BDL |
| | 5-Aug-99 | 2.2 | 8.8 | 1.6 | 7.1 | 19.7 | 4 | BDL |
| | 26-Apr-00 | 2.17 | 1.27 | BDL | BDL | 3.4 | 10.1 | BDL |
| | 1-Aug-00 | 5.02 | 3.01 | BDL | 3.5 | 11.5 | 16.1 | 1.35 |
| DMW-17 | 1-Dec-97 | 1.6 | 3.8 | 2.3 | 12.7 | 20.3 | BDL | BDL |
| | 5-Aug-99 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 26-Apr-00 | 1.06 | 1.24 | BDL | BDL | 2.3 | 8.97 | BDL |
| | 1-Aug-00 | BDL | 3.02 | BDL | BDL | 3.02 | 7.75 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | - | <1 | <1 |
| CP-WW | 1-Dec-97 | BDL | 1.2 | BDL | BDL | 1.2 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 2.96 | 1.09 | BDL | BDL | 4.1 | 315 | BDL |
| | 1-Aug-00 | 3.23 | 2.56 | BDL | 1.09 | 7 | 224 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | - | <1 | <1 |
| CLS-WW | 1-Dec-97 | 81.3 | 1.1 | BDL | 9.6 | 92 | 34.5 | BDL |
| | 5-Aug-99 | 81 | 1 | <1 | 10 | 92 | 35 | <5 |
| | 26-Apr-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | <1 | <1 | 10 | - | 35 | <5 |

Notes:

All results reported in parts per billion (ug/L) unless otherwise noted.

SSTL = Site specific target levels referenced in bid

FP = Free Product; NS = Not Sampled

BDL = Below detecatable Levels

Total BTEX = Summation of benzene, toluene, ethylbenzene and xylenes

MTBE = Methyl-tert-buytl-ether

# ATTACHMENT 3
# LABORATORY ANALYTICAL REPORTS

# ACCESS ANALYTICAL, INC.

**Noal Hudson**
**H2O Environmental, Inc.**
**130 Centrum Drive**
**Suite 3B**
**Irmo, SC 29063**

**Page 1**
**August 8, 2000**
**Report # 8000151**
**Order # 70378**
**South Carolina Cert ID# 96023**

**Site Location/Project**
**SC.**
**Crawfords**

**Sample I.D.: MW-4**
**Collected: 08/01/00 00:00**
**Received: 08/03/00 09:30**
**Collected by: Client**

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 100 | | | |
| Methyl-Tert-Butyl-Ether | 109000 | ug/L | 5030/8260B | 100.000 | 08/05/2000 | 08/05/2000 08:11 | SS |
| Benzene | 10100 | ug/L | 5030/8260B | 100.000 | 08/05/2000 | 08/05/2000 08:10 | SS |
| Toluene | 23300 | ug/L | 5030/8260B | 100.000 | 08/05/2000 | 08/05/2000 08:11 | SS |
| Ethylbenzene | 1740 | ug/L | 5030/8260B | 100.000 | 08/05/2000 | 08/05/2000 08:10 | SS |
| m & p-Xylene | 7360 | ug/L | 5030/8260B | 100.000 | 08/05/2000 | 08/05/2000 08:10 | SS |
| o-Xylene | 4050 | ug/L | 5030/8260B | 100.000 | 08/05/2000 | 08/05/2000 08:10 | SS |
| Naphthalene | 559 | ug/L | 5030/8260B | 100.000 | 08/05/2000 | 08/05/2000 08:11 | SS |
| SURROGATE: Toluene-D8 | 102.25% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 126.50% | | | | | | |
| SURROGATE: Dibromofluoromethane | 105.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


August 8, 2000
Report # 8000151
Order # 70379
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfords

Sample I.D.: MW-5
Collected: 08/01/00 00:00
Received: 08/03/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 100 | | | |
| Methyl-Tert-Butyl-Ether | 258 | ug/L | 5030/8260B | 100.000 | 08/05/2000 | 08/05/2000 09:54 | SS |
| Benzene | 4250 | ug/L | 5030/8260B | 100.000 | 08/05/2000 | 08/05/2000 09:55 | SS |
| Toluene | 40300 | ug/L | 5030/8260B | 100.000 | 08/05/2000 | 08/05/2000 09:59 | SS |
| Ethylbenzene | 1960 | ug/L | 5030/8260B | 100.000 | 08/05/2000 | 08/05/2000 09:59 | SS |
| m & p-Xylene | 8100 | ug/L | 5030/8260B | 100.000 | 08/05/2000 | 08/05/2000 09:59 | SS |
| o-Xylene | 4430 | ug/L | 5030/8260B | 100.000 | 08/05/2000 | 08/05/2000 09:59 | SS |
| Naphthalene | 396 | ug/L | 5030/8260B | 100.000 | 08/05/2000 | 08/05/2000 09:59 | SS |
| SURROGATE: Toluene-D8 | 100.00% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 130.75% | | | | | | |
| SURROGATE: Dibromofluoromethane | 84.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


August 8, 2000
Report # 8000151
Order # 70380
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfords

Sample I.D.: MW-6
Collected: 08/01/00 00:00
Received: 08/03/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 10.7 | ug/L | 5030/8260B | 1.000 | 08/03/2000 | 08/03/2000 07:59 | SS |
| Benzene | 117 | ug/L | 5030/8260B | 1.000 | 08/03/2000 | 08/03/2000 07:59 | SS |
| Toluene | 1820 | ug/L | 5030/8260B | 1.000 | 08/03/2000 | 08/03/2000 08:00 | SS |
| Ethylbenzene | 128 | ug/L | 5030/8260B | 1.000 | 08/03/2000 | 08/03/2000 07:59 | SS |
| m & p-Xylene | 664 | ug/L | 5030/8260B | 1.000 | 08/03/2000 | 08/03/2000 08:02 | SS |
| o-Xylene | 213 | ug/L | 5030/8260B | 1.000 | 08/03/2000 | 08/03/2000 08:01 | SS |
| Naphthalene | 32.2 | ug/L | 5030/8260B | 1.000 | 08/03/2000 | 08/03/2000 07:59 | SS |
| SURROGATE: Toluene-D8 | 102.25% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 133.75% | | | | | | |
| SURROGATE: Dibromofluoromethane | 96.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


August 8, 2000
Report # 8000151
Order # 70381
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfords

Sample I.D.: MW-7
Collected: 08/01/00 00:00
Received: 08/03/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 53.8 | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 09:40 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 09:40 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 09:40 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 09:40 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 09:40 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 09:40 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 09:40 | SKL |
| SURROGATE: Toluene-D8 | 102.75% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 100.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 102.50% | | | | | | |

REPORT COMMENTS:
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August 8, 2000
Report # 8000151
Order # 70382
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfords

Sample I.D.: MW-8
Collected: 08/01/00 00:00
Received: 08/03/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:21 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:21 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:21 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:21 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:21 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:21 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:21 | SKL |
| SURROGATE: Toluene-D8 | 106.25% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 100.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 99.75% | | | | | | |

REPORT COMMENTS:
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Company Representative

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August 8, 2000
Report # 8000151
Order # 70383
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfords

Sample I.D.: MW-9
Collected: 08/01/00 00:00
Received: 08/03/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 100 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 100.000 | 08/03/2000 | 08/03/2000 15:21 | PMD |
| Benzene | 187 | ug/L | 5030/8260B | 100.000 | 08/03/2000 | 08/03/2000 15:21 | PMD |
| Toluene | 18400 | ug/L | 5030/8260B | 100.000 | 08/03/2000 | 08/03/2000 15:21 | PMD |
| Ethylbenzene | 1010 | ug/L | 5030/8260B | 100.000 | 08/03/2000 | 08/03/2000 15:21 | PMD |
| m & p-Xylene | 12100 | ug/L | 5030/8260B | 100.000 | 08/03/2000 | 08/03/2000 15:21 | PMD |
| o-Xylene | 3970 | ug/L | 5030/8260B | 100.000 | 08/03/2000 | 08/03/2000 15:21 | PMD |
| Naphthalene | 909 | ug/L | 5030/8260B | 100.000 | 08/03/2000 | 08/03/2000 15:21 | PMD |
| SURROGATE: Toluene-D8 | 112.25% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 63.25% | | | | | | |
| SURROGATE: Dibromofluoromethane | 91.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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August 8, 2000
Report # 8000151
Order # 70384
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfords

Sample I.D.: MW-11
Collected: 08/01/00 00:00
Received: 08/03/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 09:44 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 09:44 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 09:44 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 09:44 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 09:44 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 09:44 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 09:44 | SKL |
| SURROGATE: Toluene-D8 | 100.00% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 100.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 101.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

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August 8, 2000
Report # 8000151
Order # 70385
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfords

Sample I.D.: MW-12
Collected: 08/01/00 00:00
Received: 08/03/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 44200 | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 07:56 | SS |
| Benzene | 1670 | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 07:56 | SS |
| Toluene | 17.1 | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 07:55 | SS |
| Ethylbenzene | 4.33 | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 07:55 | SS |
| m & p-Xylene | 49.9 | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 07:55 | SS |
| o-Xylene | 65.0 | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 07:55 | SS |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 07:57 | SS |
| SURROGATE: Toluene-D8 | 100.25% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 131.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 95.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
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August 8, 2000
Report # 8000151
Order # 70386
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfords

Sample I.D.: MW-13
Collected: 08/01/00 00:00
Received: 08/03/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 3641 | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:46 | SKL |
| Benzene | 207 | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:46 | SKL |
| Toluene | 5.74 | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:46 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:46 | SKL |
| m & p-Xylene | 4.25 | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:46 | SKL |
| o-Xylene | 28.5 | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:46 | SKL |
| Naphthalene | 24.3 | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:46 | SKL |
| SURROGATE: Toluene-D8 | 106.50% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 100.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 94.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
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Company Representative

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August 8, 2000
Report # 8000151
Order # 70387
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfords

Sample I.D.: MW-14
Collected: 08/01/00 00:00
Received: 08/03/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 35.3 | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:44 | SKL |
| Benzene | 138 | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:44 | SKL |
| Toluene | 4.04 | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:44 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:44 | SKL |
| m & p-Xylene | 3.04 | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:44 | SKL |
| o-Xylene | 36.0 | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:44 | SKL |
| Naphthalene | 13.0 | ug/L | 5030/8260B | 1.000 | 08/05/2000 | 08/05/2000 07:44 | SKL |
| SURROGATE: Toluene-D8 | 104.00% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 100.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 88.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

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August 8, 2000
Report # 8000151
Order # 70390
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfords

Sample I.D.: MW-15
Collected: 08/01/00 00:00
Received: 08/03/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 2.77 | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:22 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:22 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:22 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:22 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:22 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:22 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:22 | PMD |
| SURROGATE: Toluene-D8 | 111.00% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 63.50% | | | | | | |
| SURROGATE: Dibromofluoromethane | 91.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

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August 8, 2000
Report # 8000151
Order # 70391
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfords

Sample I.D.: MW-16
Collected: 08/01/00 00:00
Received: 08/03/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 16.1 | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:27 | PMD |
| Benzene | 5.02 | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:27 | PMD |
| Toluene | 3.01 | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:27 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:27 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:27 | PMD |
| o-Xylene | 3.50 | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:27 | PMD |
| Naphthalene | 1.35 | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:27 | PMD |
| SURROGATE: Toluene-D8 | 112.75% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 64.25% | | | | | | |
| SURROGATE: Dibromofluoromethane | 93.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

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August 8, 2000
Report # 8000151
Order # 70392
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfords

Sample I.D.: MW-17
Collected: 08/01/00 00:00
Received: 08/03/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 7.75 | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:28 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:28 | PMD |
| Toluene | 3.02 | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:28 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:28 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:28 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:28 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:28 | PMD |
| SURROGATE: Toluene-D8 | 108.50% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 63.50% | | | | | | |
| SURROGATE: Dibromofluoromethane | 96.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


August 8, 2000
Report # 8000151
Order # 70393
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfords

Sample I.D.: CP-WW
Collected: 08/01/00 00:00
Received: 08/03/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 224 | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:29 | PMD |
| Benzene | 3.23 | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:29 | PMD |
| Toluene | 2.56 | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:29 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:29 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:29 | PMD |
| o-Xylene | 1.09 | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:29 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:29 | PMD |
| SURROGATE: Toluene-D8 | 108.75% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 63.75% | | | | | | |
| SURROGATE: Dibromofluoromethane | 91.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


August 8, 2000
Report # 8000151
Order # 70394
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfords

Sample I.D.: CLS-WW
Collected: 08/01/00 00:00
Received: 08/03/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:29 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:29 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:29 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:29 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:29 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:29 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 08/04/2000 | 08/04/2000 15:29 | PMD |
| SURROGATE: Toluene-D8 | 102.50% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 62.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 92.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


August 8, 2000
Report # 8000151
Order # 70397
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfords

Sample I.D.: VES Discharge
Collected: 08/01/00 00:00
Received: 08/03/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SC-GRO BTEX/MTBE/Napth. in Air (w/GRO-TPH) | | | MEDF | 10 | | | |
| Methyl-Tert-Butyl Ether | 123 | mg/M^3 | TO14 | 10.000 | 08/04/2000 | 08/04/2000 13:37 | SS |
| Benzene | 194 | mg/M^3 | TO14 | 10.000 | 08/04/2000 | 08/04/2000 13:37 | SS |
| Toluene | 859 | mg/M^3 | TO14 | 10.000 | 08/04/2000 | 08/04/2000 13:37 | SS |
| Ethylbenzene | 30.3 | mg/M^3 | TO14 | 10.000 | 08/04/2000 | 08/04/2000 13:38 | SS |
| m & p-Xylene | 141 | mg/M^3 | TO14 | 10.000 | 08/04/2000 | 08/04/2000 13:38 | SS |
| o-Xylene | 22.9 | mg/M^3 | TO14 | 10.000 | 08/04/2000 | 08/04/2000 13:38 | SS |
| Naphthalene | 17.8 | mg/M^3 | TO14 | 10.000 | 08/04/2000 | 08/04/2000 13:38 | SS |
| TPH, Total (GRO in Air) | 3080 | mg/M^3 | TO14 | 10.000 | 08/04/2000 | 08/04/2000 13:38 | SS |
| SURROGATE: Toluene-D8 | 103.00% | | | | | | |
| SURROGATE: 1,4-DCB-D4 | 0.00% N/A | | | | | | |

Noal Hudson
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


August 8, 2000
Report # 8000151
Order # 70397
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfords

Sample I.D.: VES Discharge
Collected: 08/01/00 00:00
Received: 08/03/00 09:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 0.00% | N/A | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.
* MATRIX INTERFERENCE WITH SURROGATES(HYDROCARBONS).

Company Representative

# Access Analytical - Chain of Custody Record

Project Submission #: 00108-151 — 0-70378 | 70397 — PO #:

Company Name: H2O Env

Address:

City: State: Zip:

Project Name: Crawfords

Report To: N. Hudson

REQUESTED LAB ANALYSIS:

PARAMETER: BTEX/MTBE/Naph

| Sample Label | Date Collected | Time Collected | Matr | # of Cont | | NOTES / COMMENTS |
|---|---|---|---|---|---|---|
| mw-4 | 8/1/00 | | GW | 2 | 70378 | |
| mw-5 | | | | | 70379 | |
| mw-6 | | | | | 70380 | |
| mw-7 | | | | | 70381 | |
| mw-8 | | | | | 70382 | |
| mw-9 | | | | | 70383 | HOT !!! |
| mw-11 | | | | | 70384 | |
| mw-12 | | | | | 70385 | |
| mw-13 | | | | | 70386 | |
| mw-14 | | | | | 70387 | |

**Turnaround Time Requested:**

X Std. *(5-7 Bus. days)*

___RUSH*

*Date Required:_____

Samples Recd. on Ice?

X Yes

___No

Project Location:

X SC

___NC

___Other _____(specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| Mark Hite | 8/1/00 | 9:20 | Cheryl Barr |
| Cheryl Barr | 8/2/00 | 14:25 | Fedex |
| Fedex | 08/03/00 | 0930 | @ SC |

ACCESS ANALYTICAL, INC.

1248 Lake Murray Blvd.
Irmo, SC 29063

Phone: (803) 781-4243
Fax: 781-4303
Toll Free (888) 315-4243

Original Copy - Returned w/Report
Yellow Copy - Access Analytical Copy
Pink Copy - Client Copy



*Access Analytical, Inc.*

# Access Analytical - Chain of Custody Record

Project Submission #: _____ PO #: _____

Company Name: H2O Env.

Address:

City: State: Zip:

Project Name: Crawford's

Report To: N. Hudson

REQUESTED LAB ANALYSIS:

PARAMETER: BTEX/MTBE/Naph

| Sample Label | Date Collected | Time Collected | Matr | # of Cont | | NOTES / COMMENTS |
|---|---|---|---|---|---|---|
| mw-15 | 8/1/00 | | GW | 2 | X | 70390 |
| mw-16 | | | | | X | 70391 |
| mw-17 | | | | | X | 70392 |
| CP-WW | | | | | X | 70393 |
| CLS-WW | | | | | X | 70394 |
| | | | | | | |
| * VES Discharge | 8/1/00 | | Air | 2 | X | 70397 Air Sample * |
| | | | | | | |
| | | | | | | |
| | | | | | | |

ACCESS ANALYTICAL, INC.

1248 Lake Murray Blvd.
Irmo, SC 29063

Phone: (803) 781-4243
Fax: 781-4303
Toll Free (888) 315-4243

**Turnaround Time Requested:**

X Std. *(5-7 Bus. days)*

___RUSH*

*Date Required: _____

Samples Recd on Ice?

X Yes

___No

Project Location:

X SC

___NC

___Other _____(specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| [signature] | 8/1/00 | 9:20 | Cheryl Barr |
| Cheryl Barr | 8/2/00 | 14:25 | Fedex |
| Fedex | | | |

Original Copy - Returned w/Report
Yellow Copy - Access Analytical Copy
Pink Copy - Client Copy

RECEIVED
OCT 0 6 2000
reau of Underground
Storage Tank Management

Force & Associates, Inc.
138 Middlebrook Drive
Lexington, SC 29072
Phone: (803) 359-3200
Fax: (803) 359-6682

# Fax

#12335

| | | | |
|---|---|---|---|
| **To:** | Read Miner | **From:** | Greg Force |
| **Fax:** | 898-4330 | **Date:** | October 6, 2000 |
| **Phone:** | 898-4349 | **Pages:** | 12 |
| **Re:** | Crawford's Country Store | **CC:** | |

☐ **Urgent** ☐ **For Review** ☐ **Please Comment** ☐ **Please Reply** ☐ **Please Recycle**

**•Comments:**

Attached is the Health & Safety Plan for Crawford's County Store.

UST
45-tec
DOCKETING

**SITE DESCRIPTION**

**Task to be performed**

1) Install a 300-ft. water supply well using 100-ft of 4-inch diameter outer casing and completing the remainder of the well open hole.
2) _____

**Approximate size of site:** 1-acre

**Indicate site topography, road and air accessibility, and pathways for hazardous substance dispersion on the Site Map.**

**Features**

Tanks _____ Drums _____ No. of drums _____ Containers (type) _____
Buildings ____ Dikes _____ Power lines ___X___ Sumps _____ Bodies of liquid _____
Dips in land _____ Buried lines _____ Phone lines ___X___ Well installation ___X___
Neighboring homes _____ Businesses _____ Unusual hazards _____
Other _____

**Activities**

1. Spill cleanup _____ Remedial cleanup _____ First Recon _____ Other Well Replacement
2. Soil: Excavation _____ Sampling _____ Disposal _____ Other _____
3. Drum: Excavation _____ Sampling _____ Staging _____ Bulking _____
   No. of Drums Other _____
4. Well: Replacement _____ Installation Approximately 300-ft. Sampling _____
5. Water Treatment _____
6. Liquid Treatment _____
7. Building Decontamination _____ Demolition _____ TBD _____
8. Tank: air monitoring _____ sampling _____ cleaning _____ repair _____
9. Other: _____

**Physical Hazards**

Check hazards which apply to the site:

Heat _____ Cold _____ Radiation _____ Small entry/exit Confined Space _____
Electrical equipment/sparks _____ Scaffolds _____ Trenching _____
Oxygen deficiency _____ High winds _____ Slippery ground Ice _____
Snake bites _____ Turbulent weather _____ Heavy equipment noise ___X___
Please see attachment for confined space information.

Will heat stress monitoring be necessary? Yes _____ No ___X___
If yes, you will need thermometers, stop watches and log for each employee.

**CONTAMINANTS**

**Give contractors and subcontractors a copy of the site safety plan because by law, they must be told about contaminants and hazards.**

**Please fill in blanks. Most lines will require circling the appropriate characteristic. Reference sources, Sittig's Handbook of Toxic & Hazardous Chemicals & Carcinogens, NIOSH's Pocket Guide to Chemical Hazards, and ACGIH's TLV's Threshold Limit Values, should be consulted. Other sources such as Condensed Chemical Dictionary, Hazardous Chemicals Data Book and others may be used. If MSDS is available, attach.**

**NA = Not Applicable _ DNA = Data Not Available**

**Substance:** Gasoline

**Physical state:** solid/sludge/liq/in container/free liq./vapor/other Trace quantities dissolved in water

**Soluble:** Water/other: Negligible

**Vapor Density:** 3-4 at _____ °F\°C

**Flammability:** combustible/flammable/pyrophoric/NA/DNA/LEL 1.3 UEL 6

**Explosivity:** explosive/shock sensitive/NA/DNA/LEL _____ EVL _____

**Incompatibles:** strong oxidizers (Al,Br,Nitrates,etc.)/strong acids/strong bases active metals (K,Na,etc.) water/other Oxidizers /NA/DNA _____

**Corrosivity:** ph _____ neutralizer _____ N/A

**Radioactivity:** background/alpha/beta/gamma/NA Known amount _____

**Exposure limits:** TLV Not Established ppm or _____ $mg/m^3$

Skin (Notation in TVL Book): yes/no

PEL _____ ppm or _____ $mg/m^3$

IDLH _____ ppm or _____ $mg/m^3$

**Warning properties:** respiratory irritant: yes

skin irritant: yes

corrosive: no

odor threshold _____ ppm or _____ $mg/m^3$/DNA

odor characteristics _____ /DNA

**Signs and Symptoms/Health Effects:**

Eye/nose/throat irritation

Eye burns/skin burns/pupil problems/vision disturbances

Dermatitis

Headache/nausea/vomiting/motor incoordination/numbness

Coughing/breathing problems/pulmonary edema

Abdominal pain/chest palpitations

**AIR MONITORING**
**Air Monitoring Equipment Needed:**

FID-OVA ____X____ $0_2$ Meter_____Explosimeter_____
Sample pump ensemble: Dupont or Gillian pumps_____ Sample media_____Tubing_____
Detector tube (especially useful for inorgainics): types _____
Confined space: CO_____$H_2S$ _____
Geiger Counter_____Other _____
***Be sure to calibrate and to attach log with air monitoring data.
*Remember CONTINUOUS monitoring is necessary for confined spaces.

Initial Monitoring Results: Generated by Force & Associates, Inc.
Generated by other company_____who?_____

| SUBSTANCE | QUALITY | EQUIPMENT USED | TOTAL ORGANIC VAPORS (FROM OVA) |
|---|---|---|---|
| Benzene | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
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| | | | |

Emergency Equipment:

Eyewash ___X___ shower _____ lifeline _____ SCBA _____
stretchers _____ emergency oxygen _____ first aid kit ___X___
PPE for the next level of protection: _____
Other: _____

Fire Extinguishers:
A,B,C,(Multiple purpose) ___X___
A (for ordinary materials) _____
B (for flammable and grease) _____
C (for electrical equipment) _____
D (for combustible metals such as Mg,Na) _____

Injury/Medical Emergencies
(General Priorities)

1. Use hand signals, horn signals, voice contact. Call paramedics.
2. Avoid exposure. SCBA is preferred for rescue.
3. Remove person from the site unless spinal injury is possible.
4. Observe for signs of breathing, eye contact, skin contact, bleeding, broken bones and signs of shock.
5. If the victim stops breathing, perform artificial respiration. If the heart stops, perform CPR, if qualified.
6. Eye contact – 15 minutes of plain water, contact doctor immediately.
7. Cursory decon is possible if injury does not involve loss of consciousness or heat stress.
8. Remove or cut off clothing. Avoid contamination of unprotected persons, if possible.
9. Skin contact – Shower 15 minutes, contact doctor as chemical might have been absorbed into the body.
10. For shock, keep warm, still, until medical help is available.
11. If necessary, transport to hospital.

Decontamination

Remember to bag sensitive instruments before use as they cannot be decontaminated. Wooden tools used on skin absorbing contaminants should be discarded. See attachment for recommended minimum decon layout and list of skin absorbers.

Solution(s) to be used: detergent & water __X__ Degreaser _____ Other _____
Methanol _____ Isopropanel ____ Hexane _____
Ivory (for oil) _____ Penatone (for PCB's) _____

Heavy equipment decon plan: water laser ____X____ diesel _____ Other _____
Other: _____

| RISK ANALYSIS | | | | | |
|---|---|---|---|---|---|
| Location | Level of Protection | Task | Probability of Fire | Probability of Heat Stress | Probability of Injury/Illness |
| Well Site | D | Well Installation | Low | Low | Low |
| | ABCD Other | | | | |
| | ABCD Other | | | | |
| | ABCD Other | | | | |
| | ABCD Other | | | | |
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| | ABCD Other | | | | |



OCT-06-2000 14:52 FROM: TO:18039984330 P.007/011

PERSONAL PROTECTIVE EQUIPMENT WORKSHET

*Switch to SCBA's when levels are IDLH, $O_2$ is 19.5% or less.
*Please remember the Protection Factors:

| | |
|---|---|
| Full face cartridge respirator | 50 |
| SAR | 2,000 |
| SCBA | 10,000 |

*TVL X protection Factor = Maximum amount of contaminant in ppm allowed for that respirator. (Exception: If the level of contaminant is at the IDLH, SCBA should be worn)_
Example:

Full face cartridge respirator X TLB Benzene
50 X 10 ppm ≤ 500 ppm Benzene
OK with that respirator

*Hard hats must be worn for all drilling activities.
*When hazards are unknown, Level B protection is required.
*Confined Spaces requries SAR and SCBA.

Please fill in the blanks and note if a change in operations will require a change in level.
EPA Criteria for PPE: Level C 0-5 ppm above background
Level B 5-500 ppm above background
Level A 500-1000 ppm above background

Personal Protective Equipment: Concentration of Contaminant = Level of Protection

____ppm to ____ppm Level C
Full face respirator cartridge _____
Protective clothing material: Tyvek_____Other _____
Hood: 2 Tyvek_____ 2 Other
Inside glove: Sample_____ Other_____
Outside glove: PVC_____ Other _____
Protective footwear: tingley(neoprene)_____Steel toe_____Other _____
Face Shield: _____
Other _____

____ppm to ____ppm Level B
SCBA_____SAR _____
Protective clothing material: Tyvek_____Acid Suit_____Other_____
Hood: Tyvek_____Acid Suit_____Other _____
Inside glove: Sample _____Other_____
Outside glove: PVC_____Other _____
Face Shield: _____
Other _____

____ppm to ____ppm Level A
SCBA _____
Encapsulating Suit _____
Plus what items _____
Other_____

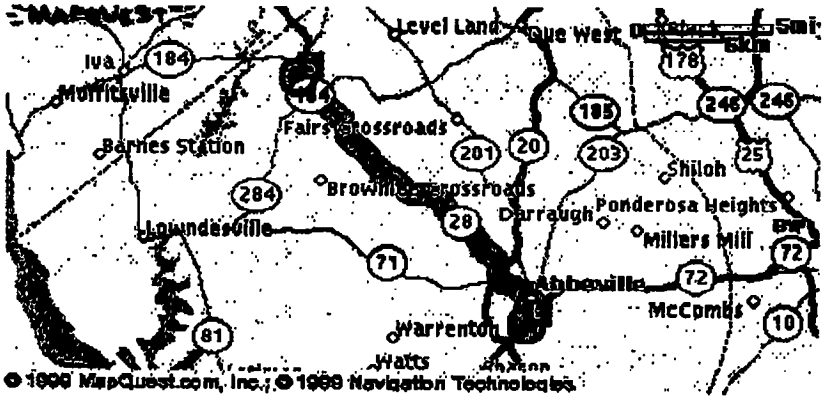
**EMERGENCY CONTACTS:**

Post this page at the Site, in many locations. Post in vehicles that may be used in the event of an emergency.

Local Assistance:

- Paramedics: Phone #: 864-459-5011
- Hospital Phone #: 864-459-5011
  Name: Abbeville County Memorial Hospital
  Address: 901 W. Greenwood Street, Abbeville, SC
  Distance and approximate time of route: 14.6 miles/27 minutes
- Fire Dept Phone #: 864-459-2718
- Police Dept Phone #: 864-459-5832
- Poison Center Phone #: 800-922-1117

Map:




Written Directions:

1. Start out going Southeast on SC-184 towards SC-28. 1.2 miles
2. Stay straight to go onto SC-28. 10.5 miles
3. Stay straight to go onto SC-28 CONN. 0.4 miles
4. SC-28 CONN becomes SC-71. 1.2 miles
5. SC-71 becomes SC-20. 0.2 miles
6. Stay straight to go onto TRINITY ST. 0.1 miles
7. Turn LEFT onto CHURCH ST. 0.1 miles
8. CHURCH ST becomes VIENNA ST. 0.7 miles
9. VIENNA ST becomes SC-72. 0.3 miles

TOTAL ESTIMATED TIME: TOTAL DISTANCE: 27 minutes 14.6 miles (23.5 km)

OTHER ASSISTANCE:

FORCE & ASSOCIATES, INC.

| | |
|---|---|
| • Warehouse/shop | 803-359-3200 |
| • Corporate Office | 803-359-7847 |
| • EPA | 404-347-3047 |
| • Medical Toxicology Consultants | 404-253-4444 |
| • Chemtrec (24 hrs.) | 800-424-9300 |
| • National Response Center | 800-424-8802 |
| • Bureau of Explosives | 800-424-3802 |
| • Center of Disease Control | 404-633-5313 |
| • DOT, Office of Hazardous Operations | 202-426-0656 |
| • DOT regulation | 202-426-9270 |
| • US Coast Guard (major incidents) | 202-426-8802 |
| • National Agricultural Chemical Association | 513-961-4300 |
| • Agency for Toxic Substances and Disease Registry | 404-639-0615 |

## ACKNOWLEDGEMENT SHEET

I HAVE REVIEWED AND BEEN INFORMED OF THE HEALTH AND SAFETY CONCERNS ON THE PROJECT SITE.

| Date | Name (Print) | Company | Signature | Social Security # |
|---|---|---|---|---|
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***Force & Associates, Inc.***
*138 Middlebrook Drive, Lexington, South Carolina 29072 (803) 359-3200 (803) 359-6682 fax*

RECEIVED
DEC 0 5 2000
Bureau of Underground
Storage Tank Management

*November 1, 2000*

*South Carolina Department of Health and Environmental Control*
*Assessment & Corrective Action Division*
*Bureau of Underground Storage Tank Management*
*2600 Bull Street*
*Columbia, South Carolina 29201*

*ATTN: Mr. Read Miner, Hydrogeologist*

*Re: Crawford's Country Store Water Supply Well*
*SCDHEC Site ID #12335*

*Dear Mr. Miner:*

Attached are the analytical results from the chemical and biological water quality samples collected from the referenced public supply well. The well record form and yield/performance test results with pump curve for the pump installed is also enclosed for your review.

Thank you for your assistance with this project. If you have any questions or require additional information prior to issuing a permit to operate, please contact my office at 803-359-3200.

*Sincerely,*
***FORCE & ASSOCIATES, INC.***

*Greg Force, P.G.*
*President*

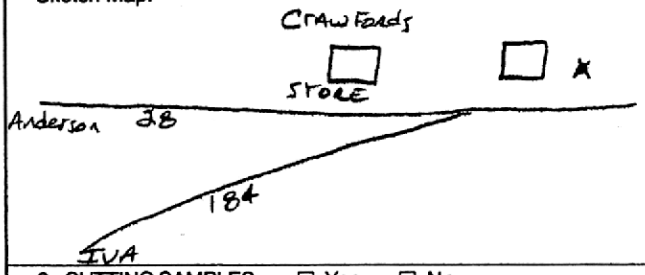
USA
DOCKETING

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 734-5300

DHEC — PROMOTE PROTECT PROSPER

**1. LOCATION OF WELL:**
County: Abbeville System Name:
Latitude: Longitude:
Distance and Direction from Road Intersections:
Street Address & City of Well Location:

Sketch Map:




**2. CUTTING SAMPLES:** ☐ Yes ☐ No

Geophysical Logs: ☐ Yes (please enclose) ☐ No

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Red clay | 10 | 10 |
| Brown silty | 33 | 43 |
| Brown Rock + Quartz | 70 | 113 |
| Grey Granite | 147 | 260 |
| light Grey Granite | 20 | 280 |
| Grey Granite | 20 | 300 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**3. REMARKS:**

**4. OWNER OF WELL:** Frank Crawford
Address: 5870 Hwy 28 N Abbeville S.C.
Telephone No.:

Engineer: Fore + Assoc.
Address: 138 middlebrook Dr Lexington S.C.
Telephone No.:

**5. WELL DEPTH (completed)** 300 ft. Date Started: 10/9/00 Date Completed: 10/11/00

**6.** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug
☒ Air Rotary ☐ Driven ☐ Cable tool ☐ Other

**7. USE:**
☒ Domestic ☐ Public Supply–Permit No. _____ ☐ Industry
☐ Irrigation ☐ Air Conditioning ☐ Commercial
☐ Test Well ☐ Monitor Well ☐ _____

**8. CASING:** ☐ Threaded ☐ Welded
Diam.: 6 1/4
Type: ☒ PVC ☐ Galvanized ☐ Steel ☐ Other
6 1/4 in. to 100 ft. depth
_____ in. to _____ ft. depth
Height: (Above)/Below Surface 1 ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**9. SCREEN**
Type: _____ Diam.: _____
Slot/Gauge: _____ Length: _____
Set Between: _____ ft. and _____ ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☐ No

**10. STATIC WATER LEVEL**
80 ft. below land surface after 24 hours

**11. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: 15 GPM

**12. WATER QUALITY**
Chemical Analysis ☒ Yes ☐ No Bacterial Analysis ☒ Yes ☐ No
Please enclose lab results.

**13. ARTIFICIAL FILTER** (gravel pack) ☐ Yes ☐ No
Installed from _____ ft. to _____ ft.
Effective size _____ Uniformity Coefficient _____

**14. WELL GROUTED?** ☒ Yes ☐ No
☒ Neat Cement ☐ Sand Cement ☐ Concrete ☐ Other _____
Depth: From 0 ft. to 100 ft.

**15. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
_____ Type well disinfected ☒ Yes Type: CLOROX
upon completion ☐ No Amount: 1 1/2 Gal

**16. PUMP:** Date installed: 10/18/00 Not installed ☐
Mfr. Name: STA RITE Model No.: 20SP4F03J
H.P. 1 1/2 Volts 230 Length of drop pipe 280 ft. Capacity 20 gpm
TYPE: ☒ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**17. WATER WELL CONTRACTOR'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Registered Business Name: Miller Drilling Co Date: 10/12/00
Address: 4206 Hwy 24 Anderson S.C. 29626
Signed: Ronald W Harrick Cert. No.: 1397
Authorized Representative

DHEC 1903 (10/96) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

TestAmerica INCORPORATED

Orlando Division
~~Nashville Division~~
~~2960 Foster Creighton~~
~~Nashville, TN 37204~~ jm
Phone: 615-726-0177
Fax: 615-726-3404

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring _____

Client Name: Force + Associates  Client #: 6883
Address: 138 Middleblack Drive
City/State/Zip Code: Lexington SC 29072
Project Manager: Greg Force
Telephone Number: 803-359-3200  Fax: 803-359-7847
Sampler Name: (Print Name) Jason Miller
Sampler Signature: Jason S. Miller

Project Name: Crawfords Grocery
Project #: 12335
Site/Location ID: _____  State: SC
Report To: _____
Invoice To: _____
Quote #: 09259881199  PO#: _____

TAT: ☑ Standard 5 Day Turnaround
☐ Rush (surcharges may apply)
Date Needed: _____
Fax Results: ☑ Y ☐ N

QC Deliverables: ☐ None ☐ Level 2 (Batch QC) ☐ Level 3 ☐ Level 4 Other: _____

| SAMPLE ID | Date Sampled | Time Sampled | G = Grab, C = Composite | Field Filtered | Matrix: SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other | Preservation & # of Containers: $HNO_3$ | HCl | NaOH | $H_2SO_4$ | Methanol | None | Other (Specify) | Analyze For: Sodium ✓ | Potassium ✓ | Carbonates Cont $HCO_3$ ✓ | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Crawford well | 11/7/00 | | 6 | N/A | DW | 1 | | | | | 1 | | ✓ | ✓ | ✓ | |

Special Instructions:

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp:
Custody Seals: Y N N/A
Bottles Supplied by TestAmerica: Y N
Method of Shipment:

| | Date | Time | | Date | Time |
|---|---|---|---|---|---|
| Relinquished By: Jason S. Miller | Date: 11/7/00 | Time: | Received By: | Date: | Time: |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: |
| Relinquished By: | Date: | Time: | Received By: | Date: | Time: |

TestAmerica
INCORPORATED

November 13, 2000 Page 1

CLIENT: FORCE AND ASSOCIATES
138 MIDDLEBROOK DRIVE
LEXINGTON, SC 29072

Order Number: 7745
Project: CRAWFORD'S GROCERY
Date Received: 11/08/00

ATTN: GREG FORCE

| Sample Identification | Lab Number | Collection Date and Time |
|---|---|---|
| CRAWFORD WELL | 00-F23804 | 11/ 7/00 |

Approved By:

Mark Rusler, Director of Technical Services
K.R. Vault, Client Services Manager
Elizabeth A. Rich, Q.A. Officer

South Carolina Certification Number: DHEC 96012

CLIENT: FORCE AND ASSOCIATES
138 MIDDLEBROOK DRIVE
LEXINGTON, SC 29072

ATTN: GREG FORCE

Order Number: 7745
Project: CRAWFORD'S GROCERY
Sample ID: CRAWFORD WELL
Lab Number: 00-F23804
Date Collected: 11/07/00
Date Received: 11/08/00

**LABORATORY REPORT**

| Analyte | Result | Q | Units | Report Limit | Dil Factor | Date | Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| *METALS* | | | | | | | | | | |
| Potassium | 4.240 | | mg/l | 0.5000 | 1 | 11/ 9/00 | 16:21 | KS | 200.7 | 5235 |
| Sodium, total | 11.20 | | mg/l | 0.5000 | 1 | 11/ 9/00 | 16:21 | KS | 200.7 | 5235 |
| *GENERAL PARAMETERS* | | | | | | | | | | |
| Bicarbonate Alkalinity | 69.3 | | mg/L CaCO1 | 1.00 | 1 | 11/ 9/00 | 14:05 | IK | EPA 310.1 | 5309 |
| Carbonate | < 2.0 | U | mg/l | 2.0 | 2 | 11/ 9/00 | 14:05 | IK | 310.1 | 5309 |

CLIENT: FORCE AND ASSOCIATES
Order No.: 7745
Lab No.: 00-F23804
Sample ID: CRAWFORD WELL

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**Qualifier Definitions:**

B = results based upon colony counts outside the acceptable range
I = the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J1 = surrogate recovery limits have been exceeded
J3 = the reported value failed to meet the established quality control criteria for either precision and/or accuracy
J4 = the sample matrix interfered with the ability to make an accurate determination
J5 = the data is questionable because of improper lab or field protocols
K = off-scale low, actual value is less than the value given
L = off-scale high, actual value is known to be greater than the value given
Q = sample held beyond acceptable holding time
U = the compound was analyzed for but not detected
V = the analyte was detected in both the sample and the associated method blank
Z = too many colonies present (TNTC)

7251

**TestAmerica** INCORPORATED

Division/Laboratory Name: FAX CHAIN ~~TO COLUMBIA~~

To assist us in using the proper analytical methods, is this work being conducted for regulatory purposes?
Compliance Monitoring: Yes

Client Name: Force & Ass
Client #:
Address: 138 Middlebrook Dr
City/State/Zip Code: Lexington SC 29072
Project Manager: Greg Force
Telephone Number: 803-359-3302
Fax:
Sampler Name: (Print Name) JR Gray
Sampler Signature: [signature]

Project Name: Crawford
Project #:
Site/Location ID: Abbeville Co
State: SC
Report To: Greg Force
Invoice To: Force & Assoc
Quote #:
PO#:

TAT: ✓ Standard / Rush (surcharges may apply)
Date Needed:
Fax Results: (Y) N

| SAMPLE ID | Date Sampled | Time Sampled | G = Grab, C = Composite | Field Filtered | Matrix (SL - Sludge, DW - Drinking Water, GW - Groundwater, S - Soil/Solid, WW - Wastewater, Specify Other) | $HNO_3$ (metals) | HCl | NaOH | $H_2SO_4$ | Methanol | None | Other (Specify) | BTEX | $NO_3$, $SO_4$, $PO_4$, TDS, (Coliform), Pb, Fe, Mn | pH, Alk, Hardness | | | | | | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Crawford #1 | 10/19 | — | G | — | DW | ✓ | | | | | | | | | | | | F218161 | | | water well sample from Antreville Crawford Location |

QC Deliverables: None / Level 2 (Batch QC) / Level 3 / Level 4 / Other:

Special Instructions:
3 x VOA
2 x 250 mL P
1 x Qt A

| Relinquished By | Date | Time | Received By | Date | Time |
|---|---|---|---|---|---|
| [signature] | 10/19 | 4:15 | [signature] | 10.20.00 | 9:30 |
| | | | | | |
| | | | | | |

LABORATORY COMMENTS:
Init Lab Temp:
Rec Lab Temp:
Custody Seals: Y N N/A
Bottles Supplied by TestAmerica: Y N
Method of Shipment:

TestAmerica
INCORPORATED

December 5, 2000 Page 1

CLIENT: FORCE AND ASSOCIATES
138 MIDDLEBROOK DRIVE
LEXINGTON, SC 29072

Order Number: 7251
Project: CRAWFORD
Date Received: 10/20/00

ATTN: GREG FORCE

| Sample Identification | Lab Number | Collection Date and Time |
|---|---|---|
| CRAWFORD #1 | 00-F21861 | 10/19/00 |

Approved By: _____

Mark Rusler, Director of Technical Services
K.R. Vault, Client Services Manager
Elizabeth A. Rich, Q.A. Officer

South Carolina Certification Number: DHEC 96012

Attachments: chain-of-custody/field sheet

December 5, 2000



CLIENT: FORCE AND ASSOCIATES
138 MIDDLEBROOK DRIVE
LEXINGTON, SC 29072

ATTN: GREG FORCE

Order Number: 7251
Project: CRAWFORD
Sample ID: CRAWFORD #1
Lab Number: 00-F21861
Date Collected: 10/19/00
Date Received: 10/20/00

## LABORATORY REPORT

| Analyte | Result | Q | Units | Report Limit | Dil Factor | Date | Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| *VOLATILE ORGANICS* | | | | | | | | | | |
| 1,1-Dichloropropene | < 0.06000 | U | ug/L | 0.06000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Benzene | < 0.05000 | U | ug/L | 0.05000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Bromobenzene | < 0.05000 | U | ug/L | 0.05000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Bromoform | < 0.31000 | U | ug/L | 0.31000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Bromomethane | < 0.29000 | U | ug/L | 0.29000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Carbon Tetrachloride | < 0.29000 | U | ug/L | 0.29000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Chlorobenzene | < 0.23000 | U | ug/L | 0.23000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Chloroethane | < 0.29000 | U | ug/L | 0.29000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Chloroform | 0.38000 | | ug/L | 0.16000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Chloromethane | < 0.35000 | U | ug/L | 0.35000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| 2-Chlorotoluene | < 0.33000 | U | ug/L | 0.33000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| 4-Chlorotoluene | < 0.29000 | U | ug/L | 0.29000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Dibromochloromethane | < 0.27000 | U | ug/L | 0.27000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Dibromomethane | < 0.03000 | U | ug/L | 0.03000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| 1,2-Dichlorobenzene | < 0.05000 | U | ug/L | 0.05000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| 1,3-Dichlorobenzene | < 0.20000 | U | ug/L | 0.20000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| 1,4-Dichlorobenzene | < 0.02000 | U | ug/L | 0.02000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| 1,1-Dichloroethane | < 0.10000 | U | ug/L | 0.10000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| 1,2-Dichloroethane | < 0.02000 | U | ug/L | 0.02000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| 1,1-Dichloroethene | < 0.02000 | U | ug/L | 0.02000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| cis-1,2-Dichloroethene | < 0.03000 | U | ug/L | 0.03000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| trans-1,2-Dichloroethene | < 0.12000 | U | ug/L | 0.12000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| 1,2-Dichloropropane | < 0.33000 | U | ug/L | 0.33000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| 1,3-Dichloropropane | < 0.05000 | U | ug/L | 0.05000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| 1,3-Dichloropropene | < 0.21000 | U | ug/L | 0.21000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| 2,2-Dichloropropane | < 0.38000 | U | ug/L | 0.38000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| trans-1,3-Dichloropropene | < 0.50000 | U | ug/L | 0.50000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Ethylbenzene | < 0.47000 | U | ug/L | 0.47000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Methylene Chloride | < 0.31000 | U | ug/L | 0.31000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Styrene | < 0.47000 | U | ug/L | 0.47000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| 1,1,1,2-Tetrachloroethane | < 0.13000 | U | ug/L | 0.13000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| 1,1,2,2-Tetrachloroethane | < 0.33000 | U | ug/L | 0.33000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Tetrachloroethene | < 0.21000 | U | ug/L | 0.21000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Toluene | < 0.41000 | U | ug/L | 0.41000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| 1,2,4-Trichlorobenzene | < 0.22000 | U | ug/L | 0.22000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| 1,1,1-Trichloroethane | < 0.21000 | U | ug/L | 0.21000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| 1,1,2-Trichloroethane | < 0.23000 | U | ug/L | 0.23000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Trichloroethene | < 0.02000 | U | ug/L | 0.02000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| 1,2,3-Trichloropropane | < 0.39000 | U | ug/L | 0.39000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |

CLIENT: FORCE AND ASSOCIATES
Order No.: 7251
Lab No.: 00-F21861
Sample ID: CRAWFORD #1

**LABORATORY REPORT CONTINUED**

| Analyte | Result | Q | Units | Report Limit | Dil Factor | Date | Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| Vinyl Chloride | < 0.29000 | U | ug/L | 0.29000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Xylenes | < 0.24000 | U | ug/L | 0.24000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Bromodichloromethane | < 0.36000 | U | ug/L | 0.36000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Trichlorofluoromethane | < 0.28000 | U | ug/L | 0.28000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Dichlorodifluoromethane | < 0.50000 | U | ug/l | 0.50000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| Methyl-tert-butyl ether | < 0.27000 | U | ug/L | 0.27000 | 1 | 10/24/00 | 14:25 | CTH | 524.2 | 3967 |
| *METALS* | | | | | | | | | | |
| Calcium | 15.20 | | mg/l | 0.5000 | 1 | 10/23/00 | 17:05 | KS | 200.7 | 3934 |
| Iron, total | 2.503 | | mg/l | 0.0300 | 1 | 10/23/00 | 17:05 | KS | 200.7 | 3934 |
| Lead | 0.0013 | I | mg/l | 0.0030 | 1 | 10/20/00 | 15:01 | CML | 200.9 | 3670 |
| Magnesium | 4.180 | | mg/l | 0.5000 | 1 | 10/23/00 | 17:05 | KS | 200.7 | 3934 |
| Manganese | 0.0924 | | mg/l | 0.0300 | 1 | 10/23/00 | 17:05 | KS | 200.7 | 3934 |
| *GENERAL PARAMETERS* | | | | | | | | | | |
| pH | 6.83 | | pH Units | | 1 | 10/20/00 | 15:00 | IK | 150.1 | 3751 |
| Nitrate-N as N | < 0.0200 | U | mg/l | 0.0200 | 1 | 10/21/00 | 5:42 | GP | 300.0A | 3957 |
| Fluoride, water | 0.238 | | mg/l | 0.100 | 1 | 10/21/00 | 5:42 | GP | 300.0A | 3957 |
| Sulfate | 5.47 | | mg/l | 5.00 | 1 | 10/21/00 | 5:42 | GP | 300.0A | 3957 |
| Alkalinity | 69.3 | | mg/l | 1.0 | 1 | 10/20/00 | 15:00 | IK | 310.1 | 3754 |
| Hardness as CaCO3 | 55.2 | | mg/l | 2.50 | | 10/23/00 | 17:05 | Calculated | SM2340B | |
| Solids, Total Dissolved | 156. | | mg/l | 5.0 | 1 | 10/23/00 | 15:38 | RV | 160.1 | 3811 |

| Surrogate | % Recovery | Target Range |
|---|---|---|
| 524.2: 4-Bromofluorobenzene | 95 | 75.0 - 125 |

CLIENT: FORCE AND ASSOCIATES
Order No.: 7251
Project: CRAWFORD

---

**Qualifier Definitions:**

B = results based upon colony counts outside the acceptable range
I = the reported value is between the laboratory method detection limit and the laboratory practical quantitation limit
J1 = surrogate recovery limits have been exceeded
J3 = the reported value failed to meet the established quality control criteria for either precision and/or accuracy
J4 = the sample matrix interfered with the ability to make an accurate determination
J5 = the data is questionable because of improper lab or field protocols
K = off-scale low, actual value is less than the value given
L = off-scale high, actual value is known to be greater than the value given
Q = sample held beyond acceptable holding time
U = the compound was analyzed for but not detected
V = the analyte was detected in both the sample and the associated method blank
Z = too many colonies present (TNTC)

# Report of Analysis

**Force and Associates, Inc.**
138 Middlebrook Drive
Lexington, SC 29072
Attention : Greg Force

Project Name : **Drinking Water Sample**

Lot Number : **BJ19034**
Date Completed : **10/24/2000**

Jennifer L. Orr
Project Manager

Total number of pages in report : **2**

This report has been prepared and reviewed in accordance with Shealy's Quality Assurance Management Plan. Any data qualifiers associated with sample analysis are footnoted on the analytical results page(s). This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain Of Custody Record and Sample Receipt Checklist.

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Report of Analysis

SC DHEC No. 32010 NC DEHNR No. 329

Client : **Force and Associates, Inc.**
**138 Middlebrook Drive**
**Lexington, SC 29072**

Attention : **Greg Force**
Project Name : **Drinking Water Sample**

**Description** : **Crawford Well #1**
Lot Number : BJ19034-001

Date Sampled : 10/19/2000 1542
Matrix : Aqueous

Date Received : 10/19/2000

| Parameter | Prep Method | Analytical Method | Result | Q | PQL | Units | Prep Date | Analysis Date | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| **Inorganic non-metals** | | | | | | | | | |
| TRC | | 330.5 | ND | @ | 0.10 | mg/L | | 10/23/2000 0800 | NWD |
| **Microbiology** | | | | | | | | | |
| Total Coliform (Colilert) | | 9223 | Absent | | | P/A | 10/20/2000 0925 | 10/21/2000 0930 | AH |

Footnote(s) @Analyzed outside the 15 minute holding time.

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
B = Detected in the method blank
J = Estimated result less than the PQL
E = Quantitation of compound exceeded the calibration range
Soils reported on a dry weight basis unless flagged with a "W"

USE BALL POINT PEN ONLY, PRESS HARD

CHAIN OF CUSTODY #

**SHEALY ENVIRONMENTAL SERVICES, INC.**
106 Vantage Pointe Drive
Cayce, South Carolina 29033
Telephone No. (803) 791-9700 Fax No. (803) 791-9111

# CHAIN OF CUSTODY RECORD

**SAMPLE ANALYSIS REQUIRED**

Page ___ of ___

NPDES # Crawford Site
County Asheville
Receiving Stream —
Outfall No. —

Client Name Force & Associates
Reporting Address 155 Middlebrook Dr.
Attention Greg Force
Telephone No. 359-3200 P.O. No. ___

←PRESERVATION (CODE)
CODE: A = None, B = HNO3, C = H2SO4, D = NaOH, E = ICE, F = ___

LAB USE ONLY
Program Area (Circle): DW, CWA/NPDES, RCRA, SP/SOL, SP/LIQ, Other:___

| Sample ID (Location) | Yr. DATE | TIME | WELL | SOLID | COMP | GRAB | # of containers | pH, Conductivity | BOD | Nutrients - Specify | METALS - Specify | TOC/TOX - Specify | BTEX | VOC - Specify Method Required | Pesticides/PCBs - Specify | Herbicides | Total Phenol | Oil & Grease | BNAs | Solids - Specify | Cyanide | Coliform - Specify type | Toxicity - Specify | REMARKS | SESI LAB I.D. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Crawford Well #1) | Start 10/19 | 1045 | ✓ | | | ✓ | 2 | | | ✓ | | | | | | | | | | | | ✓ | | Well Sample for T-Col, Resident Chlorine | 5 BJ19034 |
| | Finish 10/19 | 1142 | | | | | | | | | | | | | | | | | | | | | | | |
| | Start | | | | | | | | | | | | | | | | | | | | | | | | |
| | Finish | | | | | | | | | | | | | | | | | | | | | | | | |
| | Start | | | | | | | | | | | | | | | | | | | | | | | | |
| | Finish | | | | | | | | | | | | | | | | | | | | | | | | |
| | Start | | | | | | | | | | | | | | | | | | | | | | | | |
| | Finish | | | | | | | | | | | | | | | | | | | | | | | | |
| | Start | | | | | | | | | | | | | | | | | | | | | | | | |
| | Finish | | | | | | | | | | | | | | | | | | | | | | | | |
| | Start | | | | | | | | | | | | | | | | | | | | | | | | |
| | Finish | | | | | | | | | | | | | | | | | | | | | | | | |
| | Start | | | | | | | | | | | | | | | | | | | | | | | | |
| | Finish | | | | | | | | | | | | | | | | | | | | | | | | |
| | Start | | | | | | | | | | | | | | | | | | | | | | | | |
| | Finish | | | | | | | | | | | | | | | | | | | | | | | | |

| SAMPLER | Date/Time | Received by (Sig.) | Date/Time | Hazards Associated with Sample | Custody Seal Intact (Circle) YES NO NONE |
|---|---|---|---|---|---|
| Print Name: Joseph Bryant | 10/19 1544 | | | | Receipt TRC ___ mg/l |
| Signature: | | | | | Receipt pH ___ su |
| Relinquished by (Sig.) | Date/Time | Received by (Sig.) | Date/Time | | Receipt Temp. 5.3 °C |
| Relinquished by (Sig.) | Date/Time | Lab Receipt by (Sig.) | Date/Time 10/19/00 1544 | | Received on Ice (Circle) YES NO ICE PACK |

White Copy: Sampler — Yellow Copy: Shealy — Pink Copy: Report

AMERICAN SYSTEMS, COLUMBIA, S.C.

# Sample Receipt Checklist

Client: Force & Assoc. Cooler received by/date: LAM 10/19/00 Lot number: BJ19039

| Means of receipt: ☐ SESI ☑ Client ☐ UPS ☐ FedEx ☐ DirectX ☐ Other_____ |
|---|

| | | |
|---|---|---|
| Cooler temperature upon receipt 5.3 °C<br>Method: ☐ Temperature Blank ☑ Against Bottles<br>Method of coolant: ☑ Wet Ice ☐ Blue Ice ☐ Dry Ice ☐ None | | |
| Yes ☐ | No ☐ | If cooler was shipped, was temperature 0-6°C. |
| Yes ☑ | No ☐ | If cooler was hand delivered, was sample received on ice. |

| | | | |
|---|---|---|---|
| Yes ☐ | No ☐ | NA ☑ | 1. Is the shipper's packing slip attached to this form? (if applicable) |
| Yes ☑ | No ☐ | NA ☐ | 2. Was a chain of custody provided with the samples? |
| Yes ☑ | No ☐ | NA ☐ | 3. Were proper custody procedures followed? |
| Yes ☑ | No ☐ | NA ☐ | 4. Was the client name listed? |
| Yes ☑ | No ☐ | NA ☐ | 5. Were sample IDs listed? |
| Yes ☑ | No ☐ | NA ☐ | 6. Was collection date & time listed? |
| Yes ☑ | No ☐ | NA ☐ | 7. Were the tests to be performed listed on either the C of C or quote? |
| Yes ☑ | No ☐ | NA ☐ | 8. Did all samples arrive in the proper containers for each test? |
| Yes ☑ | No ☐ | NA ☐ | 9. Did all bottle labels agree with custody papers? |
| Yes ☑ | No ☐ | NA ☐ | 10. Did all containers arrive in good condition (unbroken)? |
| Yes ☑ | No ☐ | NA ☐ | 11. Was adequate sample volume available? |
| Yes ☑ | No ☐ | NA ☐ | 12. Were all samples received within ½ the holding time or 48 hours, whichever comes first? |
| Yes ☐ | No ☑ | NA ☐ | 13. Were any samples containers missing? |
| Yes ☐ | No ☑ | NA ☐ | 14. Were there any excess samples not listed on C of C? |
| Yes ☐ | No ☐ | NA ☑ | 15. Were air bubbles >6 mm in any VOA vials (if applicable)? |
| Yes ☐ | No ☐ | NA ☑ | 16. Were all Metals; Oil & Grease; Nutrient samples received at a pH of <2? |
| Yes ☐ | No ☐ | NA ☑ | 17. Were all Cyanide; Sulfide samples received at a pH >12? |
| Yes ☐ | No ☐ | NA ☑ | 18. Were all NH3; TKN; Cyanide; BNA; PEST; PCB; HERB samples free of residual chlorine? (< 0.2 mg/L) |
| Yes ☐ | No ☐ | NA ☑ | 19. For North Carolina samples, were collection temperatures documented on the chain of custody? |

| Sample Preservation (Must be completed for any sample(s) incorrectly preserved.) |
|---|
| Sample(s)_____ were received incorrectly preserved and were adjusted accordingly in sample receiving. |
| Sample(s)_____ were received incorrectly preserved and were unable to be analyzed |
| Sample(s)_____ were received with bubble >6 mm in diameter |

**Corrective Action taken, if necessary:**

Was client notified: Yes ☐ No ☐

Did client respond: Yes ☐ No ☐

Date of response: _____

Shealy employee: _____

Client instructions / Comments: _____

# Report of Analysis

**Force and Associates, Inc.**
138 Middlebrook Drive
Lexington, SC 29072
Attention : Greg Force

Project Name : **Drinking Water Sample**

Lot Number : **BJ26027**
Date Completed : **10/30/2000**

Jennifer L. Orr
Project Manager

Total number of pages in report : **2**

This report has been prepared and reviewed in accordance with Shealy's Quality Assurance Management Plan. Any data qualifiers associated with sample analysis are footnoted on the analytical results page(s). This report shall not be reproduced, except in its entirety, without the written approval of Shealy Environmental Services, Inc.

The following non-paginated documents are considered part of this report: Chain Of Custody Record and Sample Receipt Checklist.

# SHEALY ENVIRONMENTAL SERVICES, INC.

## Report of Analysis

SC DHEC No. 32010 NC DEHNR No. 329

Client : **Force and Associates, Inc.**
**138 Middlebrook Drive**
**Lexington, SC 29072**

Attention : **Greg Force**
Project Name : **Drinking Water Sample**

**Description** : **Crawford Well**
Lot Number : BJ26027-001

Date Sampled : 10/26/2000
Matrix : Aqueous

Date Received : 10/26/2000

| Parameter | Prep Method | Analytical Method | Result | Q | PQL | Units | Prep Date | Analysis Date | Analyst |
|---|---|---|---|---|---|---|---|---|---|
| **Inorganic non-metals** | | | | | | | | | |
| TRC | | 330.5 | ND | @ | 0.10 | mg/L | | 10/26/2000 1650 | TES |
| **Microbiology** | | | | | | | | | |
| Total Coliform (Colilert) | | 9223 | Absent | | | P/A | 10/27/2000 1400 | 10/28/2000 1630 | MDC |

Footnote(s) @Analyzed outside the 15 minute holding time.

PQL = Practical quantitation limit
ND = Not detected at or above the PQL
B = Detected in the method blank
J = Estimated result less than the PQL
E = Quantitation of compound exceeded the calibration range
Soils reported on a dry weight basis unless flagged with a "W"

USE BALL POINT PEN ONLY, PRESS HARD


**SHEALY ENVIRONMENTAL SERVICES, INC.**
106 Vantage Pointe Drive
Cayce, South Carolina 29033
Telephone No. (803) 791-9700 Fax No. (803) 791-9111


Page ____ of ____

CHAIN OF CUSTODY #

# CHAIN OF CUSTODY RECORD

## SAMPLE ANALYSIS REQUIRED

Client Name: Force + Associates
Reporting Address: 138 Middlebrook Ln
Lexington SC 29016
Attention: Greg Force
Telephone No. ____ P.O. No. ____

NPDES #: Crawford Well
County: Abbeville
Receiving Stream: ____
Outfall No. ____

←PRESERVATION (CODE)
CODE: A = None, B = HNO3, C = H2SO4, D = NaOH, E = ICE, F = ____

LAB USE ONLY
Program Area (Circle): DW, CWA/NPDES, RCRA, SP/SOL, SP/LIQ, Other: ____

| Sample ID (Location) | Yr. 20__ DATE | TIME | WELL | SOLID | COMP | GRAB | # of containers | pH, Conductivity | BOD | Nutrients - Specify (Cl) | METALS - Specify | TOC/TOX - Specify | BTEX | VOC - Specify Method required | Pesticides/PCBs - Specify | Herbicides | Total Phenol | Oil & Grease | BNAs | Solids - Specify | Cyanide | Coliform - Specify type | Toxicity - Specify | | | | REMARKS | SESI LAB I.D. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Crawford Well | Start 10/26 Finish 10/26 | | ✓ | | | | 2 | | | 4 | | | | | | | | | | | | ✓ | | | | | Coliform & free Chlorine Analysis (Residual) | BJ26027 |
| | Start Finish | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Start Finish | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Start Finish | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Start Finish | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Start Finish | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Start Finish | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Start Finish | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| SAMPLER<br>Print Name: Josiah Grant<br>Signature: [signature] | Date/Time<br>10/26 14:38 | Received by (Sig.) | Date/Time | Hazards Associated with Sample | Custody Seal Intact (Circle) YES NO NONE<br>Receipt TRC ____ mg/l<br>Receipt pH ____ su<br>Receipt Temp. 8.0 °C<br>Received on Ice (Circle) YES NO ICE PACK |
| Relinquished by (Sig.) | Date/Time | Received by (Sig.) | Date/Time | | |
| Relinquished by (Sig.) | Date/Time | Lab Receipt by (Sig.) [signature] | Date/Time<br>10/26/01 1638 | | |

White Copy: Sampler Yellow Copy: Shealy Pink Copy: Report

AMERICAN SYSTEMS, COLUMBIA, S.C.

## Sample Receipt Checklist

BJ26027

Client: Force & Assoc Cooler received by/date: [illegible] 05/26/20 Lot number: ~~BJ26027~~ BBM

| Means of receipt: ☐ SESI ☑ Client ☐ UPS ☐ FedEx ☐ DirectX ☐ Other_____ |
|---|

| Cooler temperature upon receipt 8.0 °C<br>Method: ☐ Temperature Blank ☑ Against Bottles<br>Method of coolant: ☑ Wet Ice ☐ Blue Ice ☐ Dry Ice ☐ None | | |
|---|---|---|
| Yes ☐ | No ☐ | If cooler was shipped, was temperature 0-6°C. |
| Yes ☑ | No ☐ | If cooler was hand delivered, was sample received on ice. |

| | | | |
|---|---|---|---|
| Yes ☐ | No ☐ | NA ☑ | 1. Is the shipper's packing slip attached to this form? (if applicable) |
| Yes ☑ | No ☐ | NA ☐ | 2. Was a chain of custody provided with the samples? |
| Yes ☑ | No ☐ | NA ☐ | 3. Were proper custody procedures followed? |
| Yes ☑ | No ☐ | NA ☐ | 4. Was the client name listed? |
| Yes ☑ | No ☐ | NA ☐ | 5. Were sample IDs listed? |
| Yes ☐ | No ☑ | NA ☐ | 6. Was collection date & time listed? |
| Yes ☑ | No ☐ | NA ☐ | 7. Were the tests to be performed listed on either the C of C or quote? |
| Yes ☑ | No ☐ | NA ☐ | 8. Did all samples arrive in the proper containers for each test? |
| Yes ☑ | No ☐ | NA ☐ | 9. Did all bottle labels agree with custody papers? |
| Yes ☑ | No ☐ | NA ☐ | 10. Did all containers arrive in good condition (unbroken)? |
| Yes ☑ | No ☐ | NA ☐ | 11. Was adequate sample volume available? |
| Yes ☑ | No ☐ | NA ☐ | 12. Were all samples received within ½ the holding time or 48 hours, whichever comes first? |
| Yes ☐ | No ☑ | NA ☐ | 13. Were any samples containers missing? |
| Yes ☐ | No ☑ | NA ☐ | 14. Were there any excess samples not listed on C of C? |
| Yes ☐ | No ☐ | NA ☑ | 15. Were air bubbles >6 mm in any VOA vials (if applicable)? |
| Yes ☐ | No ☐ | NA ☑ | 16. Were all Metals; Oil & Grease; Nutrient samples received at a pH of <2? |
| Yes ☐ | No ☐ | NA ☑ | 17. Were all Cyanide; Sulfide samples received at a pH >12? |
| Yes ☐ | No ☐ | NA ☑ | 18. Were all NH3; TKN; Cyanide; BNA; PEST; PCB; HERB samples free of residual chlorine? (< 0.2 mg/L) |
| Yes ☐ | No ☐ | NA ☑ | 19. For North Carolina samples, were collection temperatures documented on the chain of custody? |

| Sample Preservation (Must be completed for any sample(s) incorrectly preserved.) |
|---|
| Sample(s)_____ were received incorrectly preserved and were adjusted accordingly in sample receiving. |
| Sample(s)_____ were received incorrectly preserved and were unable to be analyzed |
| Sample(s)_____ were received with bubble >6 mm in diameter |

**Corrective Action taken, if necessary:**

Was client notified: Yes ☐ No ☐

Did client respond: Yes ☐ No ☐

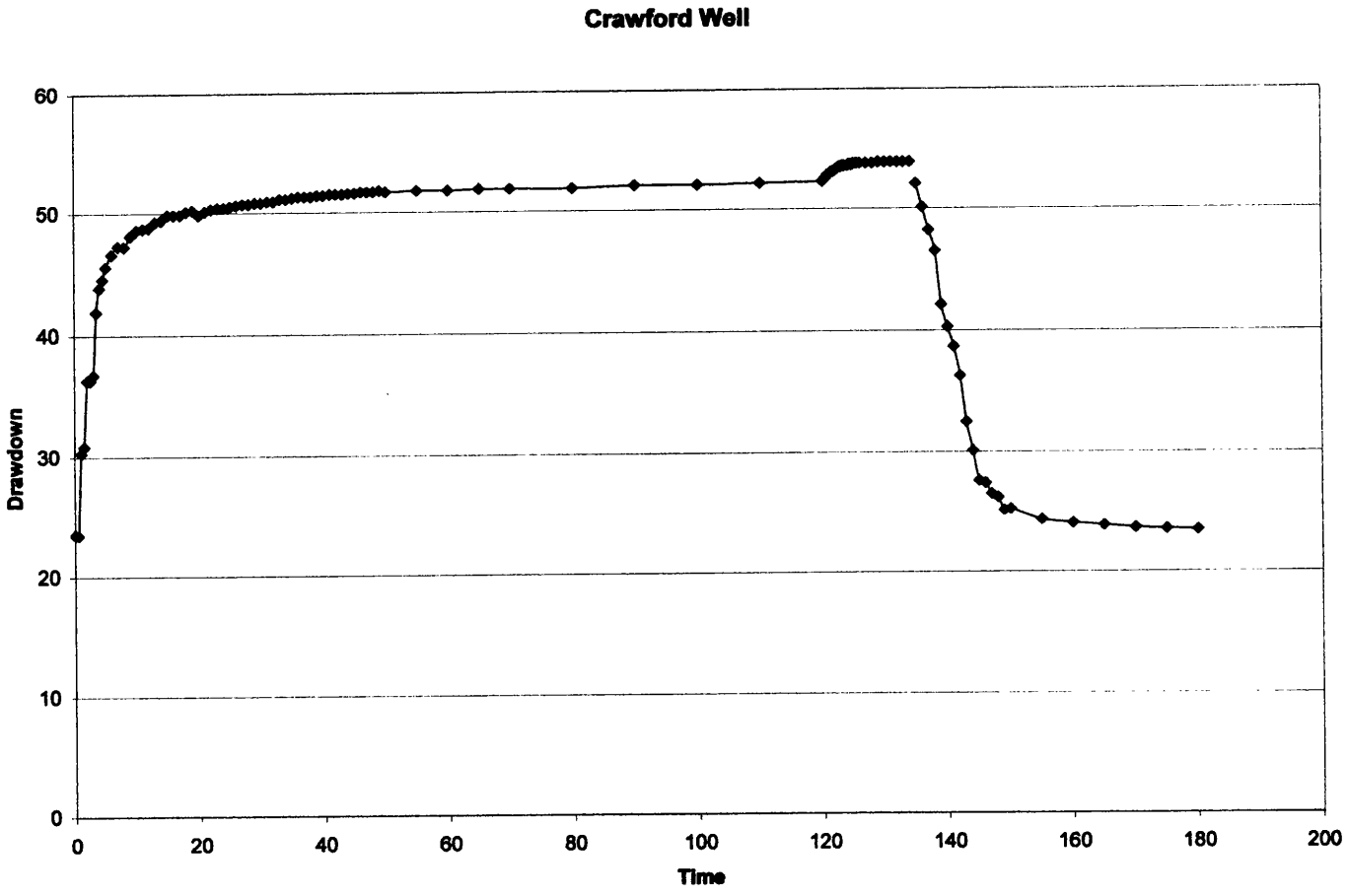
Date of response: _____

Shealy employee: _____

Client instructions / Comments: _____

_____

_____


Crawford Well
Drawdown
Time
0
10
20
30
40
50
60
0
20
40
60
80
100
120
140
160
180
200

Crawford

Drawdown Test

| Elapsed Time | Drawdown | Pump Rate |
|---|---|---|
| 0 | 23.45 | 18gpm |
| 0.5 | 23.4 | |
| 1 | 30.3 | |
| 1.5 | 30.85 | |
| 2 | 36.3 | |
| 2.5 | 36.3 | |
| 3 | 36.77 | |
| 3.5 | 41.9 | |
| 4 | 43.85 | |
| 4.5 | 44.56 | |
| 5 | 45.58 | |
| 6 | 46.62 | |
| 7 | 47.29 | |
| 8 | 47.25 | |
| 9 | 48.12 | |
| 10 | 48.57 | |
| 11 | 48.7 | |
| 12 | 48.79 | |
| 13 | 49.25 | |
| 14 | 49.37 | |
| 15 | 49.81 | |
| 16 | 49.81 | |
| 17 | 49.81 | |
| 18 | 50.1 | |
| 19 | 50.2 | |
| 20 | 49.8 | |
| 21 | 50.1 | |
| 22 | 50.3 | |
| 23 | 50.4 | |
| 24 | 50.4 | |
| 25 | 50.5 | |
| 26 | 50.6 | |
| 27 | 50.7 | |
| 28 | 50.7 | |
| 29 | 50.8 | |
| 30 | 50.8 | |
| 31 | 50.9 | |
| 32 | 50.9 | |
| 33 | 51.1 | |
| 34 | 51.1 | |
| 35 | 51.2 | |
| 36 | 51.3 | |
| 37 | 51.3 | |
| 38 | 51.3 | |
| 39 | 51.4 | |
| 40 | 51.4 | |

| | | |
|---|---|---|
| 41 | 51.5 | |
| 42 | 51.5 | |
| 43 | 51.5 | |
| 44 | 51.6 | |
| 45 | 51.6 | |
| 46 | 51.7 | |
| 47 | 51.7 | |
| 48 | 51.7 | |
| 49 | 51.8 | |
| 50 | 51.7 | |
| 55 | 51.8 | |
| 60 | 51.8 | |
| 65 | 51.9 | |
| 70 | 51.9 | |
| 80 | 51.9 | |
| 90 | 52.1 | |
| 100 | 52.1 | |
| 110 | 52.2 | |
| 120 | 52.3 | |
| 120.2 | 52.4 | |
| 120.4 | 52.5 | |
| 120.5 | 52.6 | |
| 120.75 | 52.8 | |
| 121 | 52.9 | |
| 121.5 | 53.1 | |
| 121.75 | 53.1 | |
| 122 | 53.2 | |
| 122.25 | 53.3 | |
| 122.5 | 53.4 | |
| 122.75 | 53.5 | |
| 123 | 53.5 | |
| 123.25 | 53.6 | |
| 123.5 | 53.6 | |
| 124 | 53.6 | |
| 124.25 | 53.7 | |
| 124.5 | 53.7 | |
| 124.75 | 53.7 | |
| 125 | 53.8 | |
| 125.5 | 53.8 | |
| 126 | 53.8 | |
| 127 | 53.8 | |
| 128 | 53.8 | |
| 129 | 53.9 | |
| 130 | 53.9 | |
| 131 | 53.9 | |
| 132 | 53.9 | |
| 133 | 53.9 | |
| 134 | 53.9 | |
| 135 | 52.1 | Start Recharge |
| 136 | 50.1 | |
| 137 | 48.2 | |

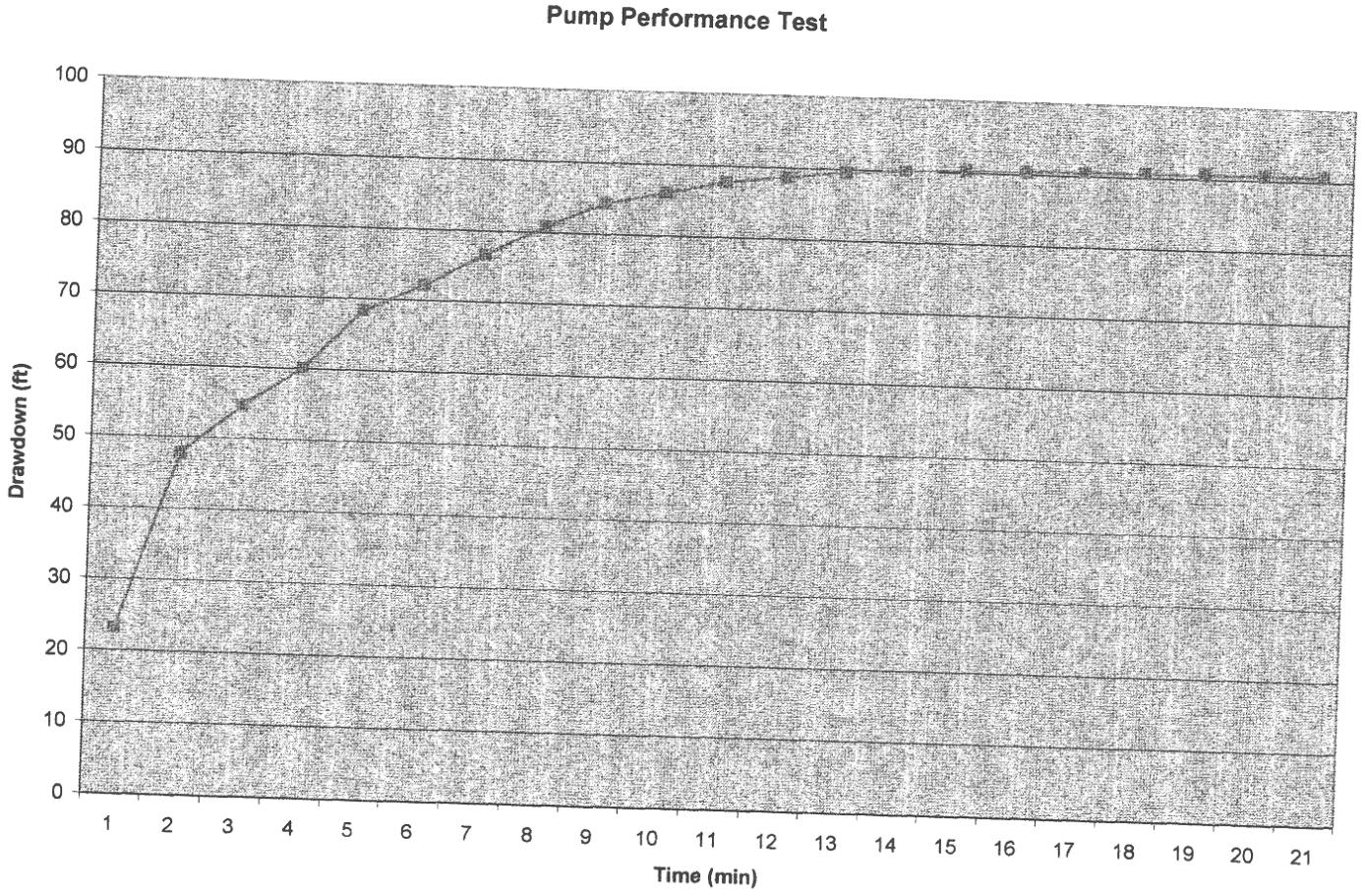
CRAWFORD'S GROCERY
Antreville, SC
Site ID #12335

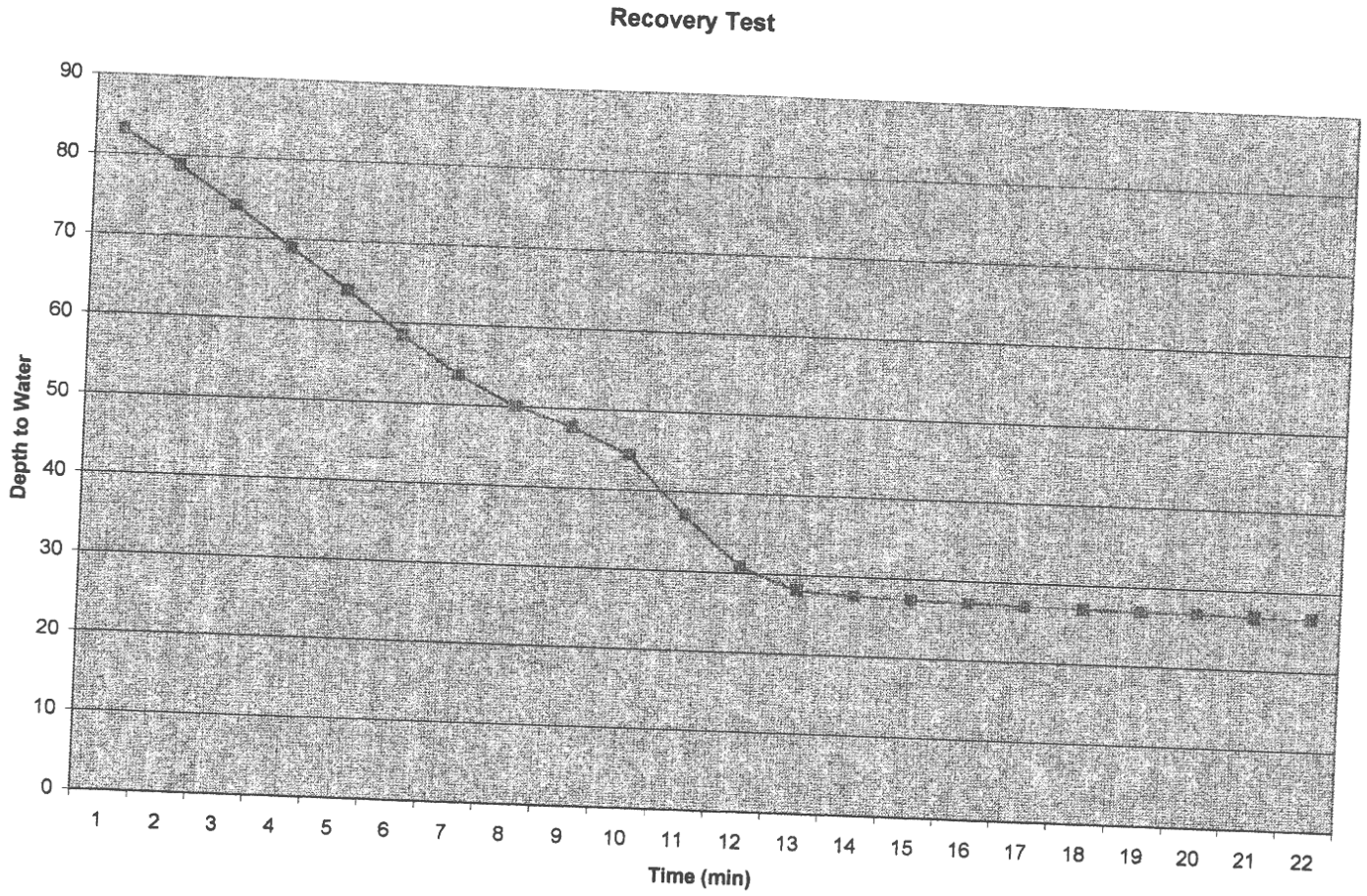
**PUMPING TEST DATA**

| DATE | TIME | DRAWDOWN (FT.) | PUMPING RATE | COMMENTS |
|---|---|---|---|---|
| 11/7/00 | 14:15 | 23.21 | | Static Water Level |
| 11/7/00 | 14:20 | 47.78 | 10 gpm | Start of the test |
| 11/7/00 | 14:25 | 54.62 | 10 gpm | |
| 11/7/00 | 14:30 | 60.11 | 10 gpm | |
| 11/7/00 | 14:35 | 68.35 | 10 gpm | |
| 11/7/00 | 14:40 | 72.06 | 10 gpm | |
| 11/7/00 | 14:45 | 76.69 | 10 gpm | |
| 11/7/00 | 14:50 | 80.85 | 10 gpm | |
| 11/7/00 | 14:55 | 84.33 | 10 gpm | |
| 11/7/00 | 15:00 | 86.02 | 10 gpm | |
| 11/7/00 | 15:05 | 87.73 | 10 gpm | |
| 11/7/00 | 15:10 | 88.64 | 10 gpm | |
| 11/7/00 | 15:15 | 89.52 | 10 gpm | |
| 11/7/00 | 15:30 | 90.03 | 10 gpm | |
| 11/7/00 | 15:45 | 90.22 | 10 gpm | |
| 11/7/00 | 16:00 | 90.38 | 10 gpm | |
| 11/7/00 | 16:15 | 90.48 | 10 gpm | |
| 11/7/00 | 16:30 | 90.55 | 10 gpm | |
| 11/7/00 | 16:45 | 90.59 | 10 gpm | |
| 11/7/00 | 17:00 | 90.62 | 10 gpm | |
| 11/7/00 | 17:15 | 90.64 | 10 gpm | Stopped pumping |

## RECOVERY TEST DATA

| Date | Time | Depth of Water (ft.) | Comments |
|---|---|---|---|
| 11/7/00 | 17:16 | 83.20 | |
| 11/7/00 | 17:17 | 78.83 | |
| 11/7/00 | 17:18 | 74.11 | |
| 11/7/00 | 17:19 | 68.97 | |
| 11/7/00 | 17:20 | 63.85 | |
| 11/7/00 | 17:21 | 58.43 | |
| 11/7/00 | 17:22 | 53.71 | |
| 11/7/00 | 17:23 | 50.09 | |
| 11/7/00 | 17:24 | 47.68 | |
| 11/7/00 | 17:25 | 44.38 | |
| 11/7/00 | 17:30 | 37.05 | |
| 11/7/00 | 17:35 | 30.78 | |
| 11/7/00 | 17:40 | 28.09 | |
| 11/7/00 | 17:45 | 27.63 | |
| 11/7/00 | 17:50 | 27.40 | |
| 11/7/00 | 17:55 | 27.23 | |
| 11/7/00 | 18:00 | 27.09 | |
| 11/7/00 | 18:05 | 26.96 | |
| 11/7/00 | 18:10 | 26.87 | |
| 11/7/00 | 18:15 | 26.80 | |
| 11/7/00 | 18:20 | 26.71 | |
| 11/7/00 | 18:25 | 26.63 | End of Test |


Pump Performance Test
Drawdown (ft)
100
90
80
70
60
50
40
30
20
10
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
Time (min)


Recovery Test
Depth to Water
90
80
70
60
50
40
30
20
10
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
Time (min)

RECEIVED
APR 1 8 2001
Underground Storage
Tank Program

RECEIVED
FEB 2 2 2001
Bureau of Underground
Storage Tank Management

February 16, 2001

Mr. John Abernathy
Underground Storage Tank Program
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: 2nd Quarterly Report
Crawford's Country Store
5870 Hwy 28 North
Antreville, South Carolina
SCDHEC Site ID # 12335

Dear Mr. Abernathy:

On February 4, 2000, the South Carolina Department of Health and Environmental Control (SCDHEC) provided notice to proceed to $H_2O$ Environmental, Inc. ($H_2O$) to perform Corrective Action at Crawford's Country Store located at 5870 Highway 28 North, Antreville, South Carolina. The objective of the project is to reduce the Chemicals of Concern (COC) in monitoring wells OMW-1, MW-2 through MW-5, MW-7 through MW-15, MW-17, CP-WW and CLS-WW to the site specific target levels (SSTLs). A chronological summary of site activities is provided below:

| | |
|---|---|
| 2/4/00 | SCDHEC awarded Bid Number SB-9570-12/02/99-TC |
| 3/02/00 | Corrective Action Plan/Engineering Report submitted to SCDHEC |
| 4/18/00 | CAP/ER approved |
| 4/26/00 | Initial groundwater sampling event |
| 5/17/00 | Initial groundwater results submitted |
| 5/22/00-5/31/00 | System installed |
| 5/31/00 | System was inspected and approved Todd Adams of SCDHEC |
| 5/31/00 | Invoice submitted for payment of 40% of the contract amount |
| 6/14/00 | System start-up |
| 8/01/00 | 1st quarter sampling event |
| 8/28/99 | 1st quarter report submitted |
| 9/13/00 | Free product recovery from OMW-1, MW-2 and MW-3 |
| 12/13/00 | 2nd quarter sampling event |

UST
47
DOCKETING

An air injection/vapor extraction system was installed and put in operation in June 2000. The system consists of ten air injection/vapor extraction wells SV-1 through SV-10. In order to effectively target the source area, $H_2O$ is currently air sparging in injection/vapor extraction wells SV-1 through SV-6 and extracting vapor from injection/vapor extraction wells SV-1 through SV-8. Refer to Figure 1, Attachment 1 for a Site Plan depicting the system layout. The following table summarizes the general operating characteristics of the system.

| Summary of System Operating Characteristics | | | | |
|---|---|---|---|---|
| Well ID | Activity | PSI | CFM | IWG |
| SV-1 - SV-8 | Vapor Extraction | -- | -- | 55 |
| SV-1 - SV-6 | Air Sparging | 10 | 5 | -- |

An air sample was collected from the effluent of the vapor extraction system on August 1, 2000. Based on the review of the laboratory analysis, it is estimated that contaminant emissions will not exceed 1,000 pounds per month. No air sample was collected this quarter as OVA field screening indicated below detectable concentrations.

On December 13, 2000, $H_2O$ Environmental Inc. personnel gauged and collected groundwater samples from monitoring wells MW-4 through MW-9, MW-11 through MW-17, and water well CLS-WW at the site. Water well CP-WW located at the Green residence was not operational at the time of the sampling event and a groundwater sample could not be collected. A new water well has apparently been installed and is currently being used by the Green residence. Monitoring wells OMW-1, MW-2, MW-3 and MW-10 contain free product. These monitoring wells were gauged but groundwater samples were not collected. The groundwater samples were analyzed for Benzene, Toluene, Ethylbenzene, total Xylenes (BTEX), Methyl-Tert-Butyl Ether (MTBE), and Naphthalene. A review of the groundwater elevation data indicated a groundwater flow direction to the south-southeast. Groundwater elevation data collected from MW-3 and MW-12 was considered anomalous and was not used in determining groundwater flow direction. Table 1, Attachment 2, summarizes field data collected during monitoring well purging. The groundwater elevations are summarized on Table 2, Attachment 2, and depicted graphically on Figure 2, Attachment 1. The groundwater quality for Chemicals of Concern is summarized on Table 3, Attachment 2, and depicted graphically on Figure 3, Attachment 1. A copy of the laboratory analytical report is provided in Attachment 3.

On May 5, 2000 $H_2O$ conducted an Aggressive Fluid and Vapor Extraction Event (AVFR) with Ecological Services, Inc. Prior to evacuation, depth to product and depth to water measurements were collected from monitoring wells OMW-1, MW-2, MW-3 and MW-10. The event was conducted over a six-hour period and a total of approximately 625 gallons of water and petroleum product were removed from the referenced monitoring wells. A Material Manifests has been included as Attachment 4. Refer to the table below for depth to product and depth to water measurements collected during the AVFR event.

| Monitoring Well | Depth to product | Depth to Water | Product Thickness |
|---|---|---|---|
| OMW-1 | 15.91 | 17.01 | 1.1 |
| MW-2 | 16.02 | 18.07 | 2.05 |
| MW-3 | 15.96 | 16.72 | 0.76 |
| MW-10 | 15.90 | 17.65 | 1.75 |

Note: All measurements in units of feet.

Free product recovery efforts were also conducted on September 13, 2000 and December 13, 2000 from monitoring wells OMW-1, MW-2 and MW-3. Approximately 25 gallons of product were generated from the two product recovery events. Liquid level measurements collected from monitoring well MW-10 indicated a sheen on the date measured. Refer to Figure 1, Attachment 1 for a Site Plan depicting the location of

the referenced monitoring wells. Table 2, Attachment 2 summarizes free product thicknesses encountered during this quarter. Product generated is placed on-site into a 55-gallon drum. Any disposal manifests will be forwarded to DHEC upon receipt.

Based on the concentrations, $H_20$ will continue to operate the remediation system. If you have any questions or comments please do not hesitate to contact me at (803) 749-4080.

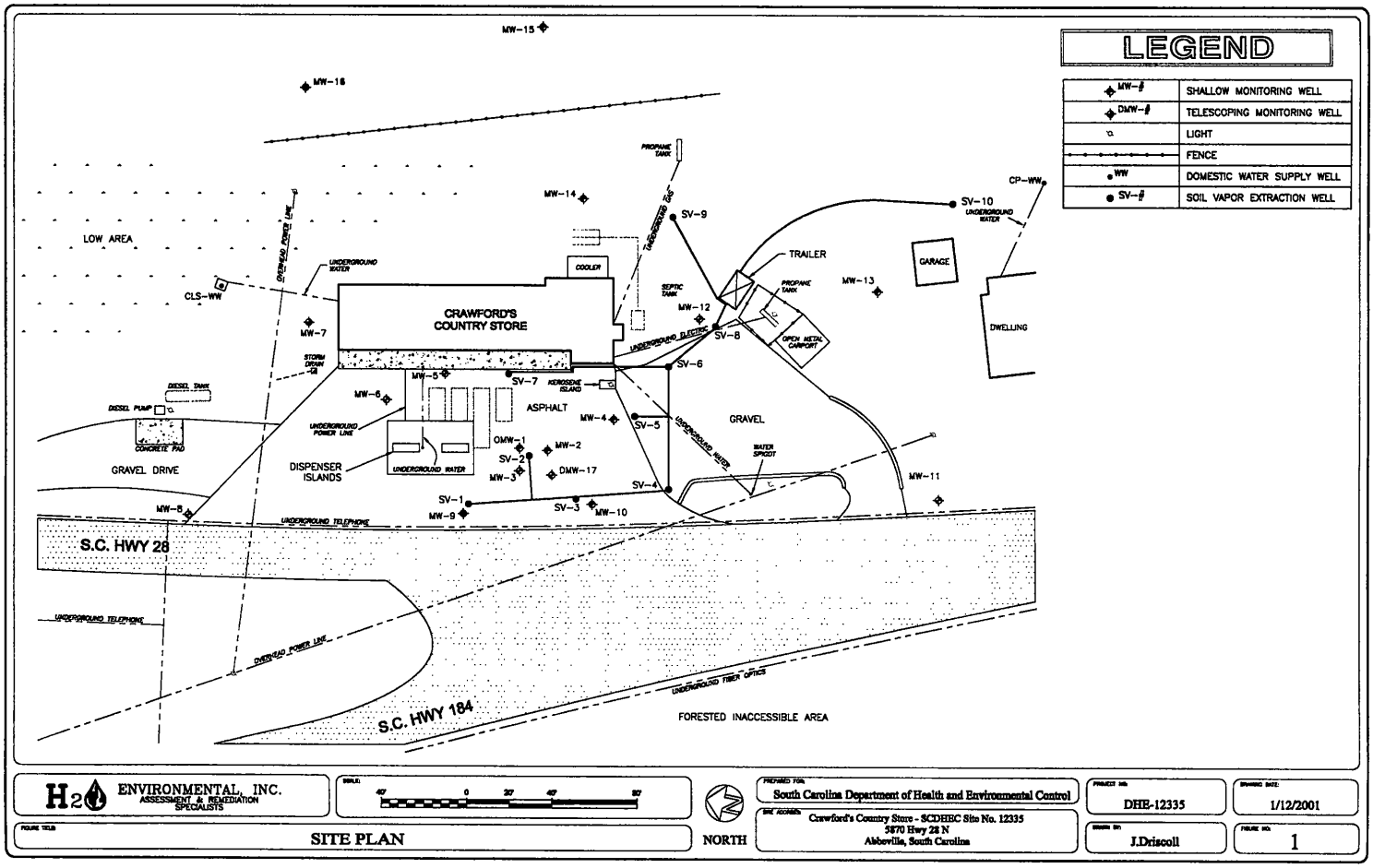
Sincerely,

**$H_2O$ Environmental, Inc.**
Class I Site Rehabilitation Contractor No. 32

Scott Johnston
Division Director

Richard D. Gillespie, P.G. 2-16-01
License Number 2199

# ATTACHMENT 1
# FIGURES




H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

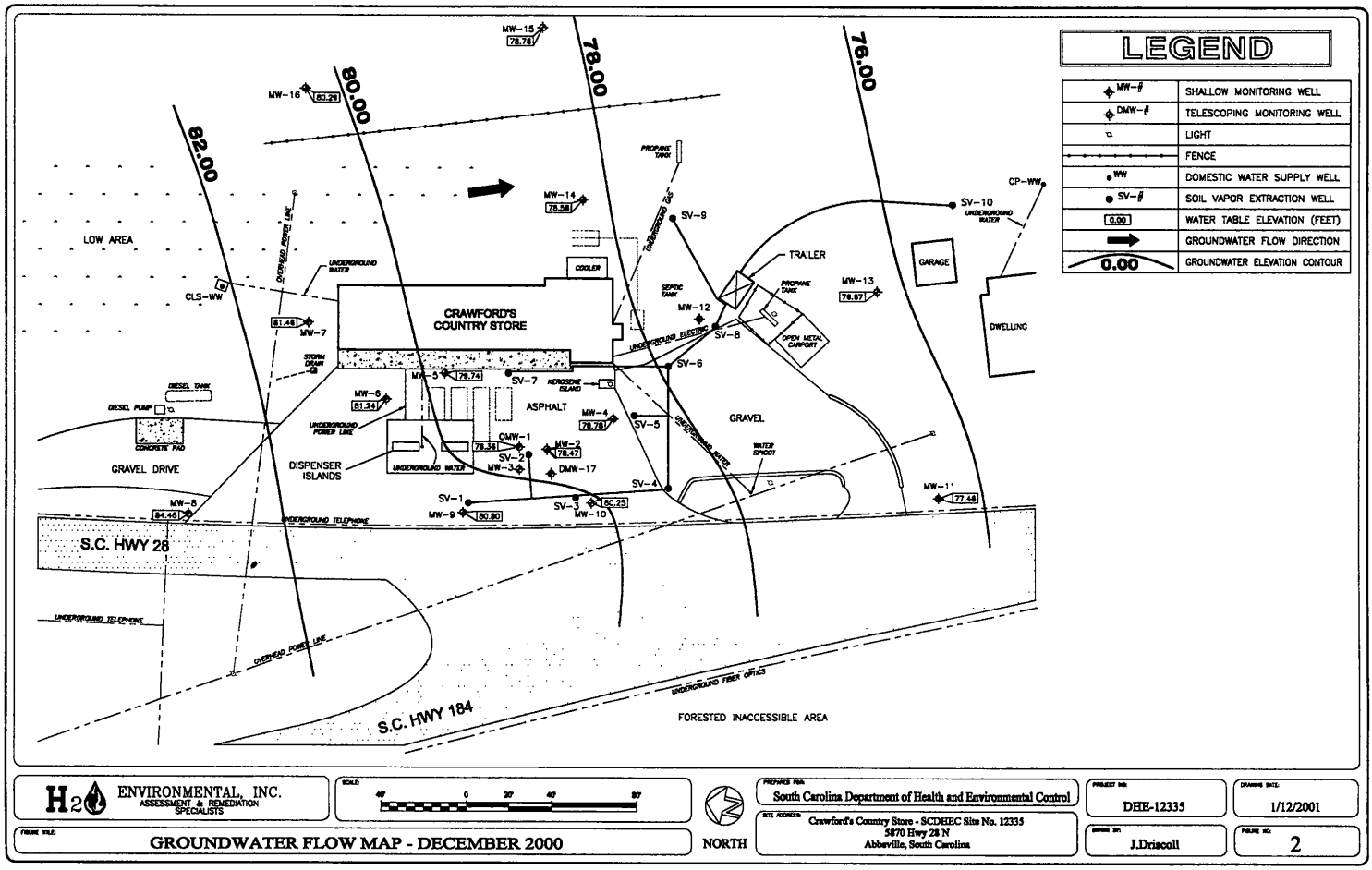
PROJECT NO: DHE-12335

DRAWING DATE: 1/12/2001

DRAWN BY: J.Driscoll

FIGURE NO: 1

FIGURE TITLE: SITE PLAN




H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

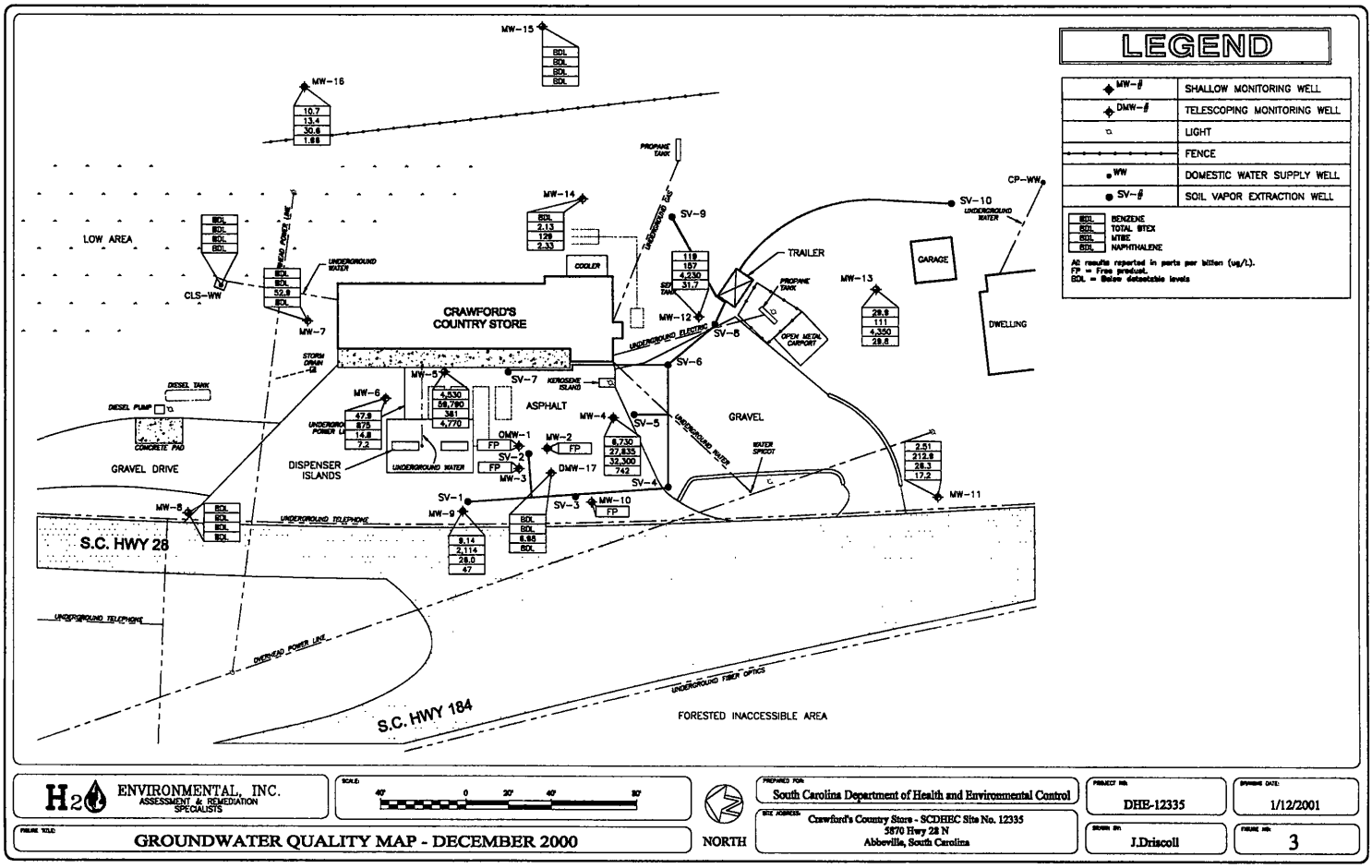
PROJECT NO.: DHE-12335

DRAWING DATE: 1/12/2001

DRAWN BY: J.Driscoll

FIGURE NO.: 2

FIGURE TITLE: GROUNDWATER FLOW MAP - DECEMBER 2000




H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO.: DHE-12335

DRAWING DATE: 1/12/2001

DRAWN BY: J.Driscoll

FIGURE NO.: 3

FIGURE TITLE: GROUNDWATER QUALITY MAP - DECEMBER 2000

# ATTACHMENT 2
# TABLES

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 8/5/99 | 17.95 | 22' | 2" | 2.0 | | Free Product | | |
| | 4/26/00 | 15.68 | 22' | 2" | 3.1 | | Free Product | | |
| | 8/1/00 | 21.50 | 22' | 2" | 0.2 | | | | |
| | 12/13/00 | 21.46 | 22' | 2" | 0.3 | | | | |
| MW-2 | 8/5/99 | 19.19 | 25' | 2" | 2.8 | | Free Product | | |
| | 4/26/00 | 15.80 | 25' | 2" | 4.5 | | Free Product | | |
| | 8/1/00 | 22.30 | 25' | 2" | 1.3 | | | | |
| | 12/13/00 | 21.36 | 25' | 2" | 1.8 | | | | |
| MW-3 | 8/5/99 | 17.96 | 25' | 2" | 3.4 | | Free Product | | |
| | 4/26/00 | 15.73 | 25' | 2" | 4.5 | | Free Product | | |
| | 8/1/00 | 20.85 | 25' | 2" | 2.0 | | | | |
| | 12/13/00 | 22.18 | 25' | 2" | 1.4 | | | | |
| MW-4 | 8/5/00 | 17.59 | 25' | 2" | 3.7 | 4.3 | 75.7 | 2.06 | 21.0 |
| | 4/26/00 | 16.51 | 25' | 2" | 4.2 | 6.0 | 0.78 | 1.82 | 20.2 |
| | 8/1/00 | 20.63 | 25' | 2" | 2.1 | 5.4 | 0.52 | 3.91 | 21.9 |
| | 12/13/00 | 20.81 | 25' | 2" | 2.0 | 5.5 | NM | 1.90 | 18.5 |
| MW-5 | 8/5/99 | 15.95 | 25' | 2" | 4.4 | 4.5 | 111.8 | 1.65 | 21.0 |
| | 4/26/00 | 14.35 | 25' | 2" | 5.2 | 6.2 | 0.92 | 2.73 | 19.4 |
| | 8/1/00 | 19.18 | 25' | 2" | 2.8 | 5.1 | 0.5 | 1.25 | 20.8 |
| | 12/13/00 | 19.68 | 25' | 2" | 2.6 | 5.3 | NM | 2.51 | 18.4 |
| MW-6 | 8/5/99 | 15.44 | 25' | 2" | 4.7 | 4.6 | 96 | 2.35 | 22.0 |
| | 4/26/00 | 13.65 | 25' | 2" | 5.6 | 6.1 | 0.92 | 1.72 | 18.6 |
| | 8/1/00 | 18.75 | 25' | 2" | 3.1 | 4.95 | 0.48 | 2.23 | 20.4 |
| | 12/13/00 | 18.23 | 25' | 2" | 3.3 | 5.14 | NM | 1.42 | 18.4 |
| MW-7 | 8/5/99 | 15.41 | 25' | 2" | 4.7 | 4.6 | 92.8 | 2.74 | 19.0 |
| | 4/26/00 | 13.54 | 25' | 2" | 5.6 | 6.2 | 0.91 | 2.46 | 17.4 |
| | 8/1/00 | 18.72 | 25' | 2" | 3.1 | 5.2 | 0.45 | 2.31 | 18.7 |
| | 12/13/00 | 18.01 | 25' | 2" | 3.4 | 5.6 | NM | 1.96 | 16.5 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-8 | 8/5/00 | 14.59 | 25' | 2" | 5.1 | 4.9 | 45.4 | 3.01 | 21.0 |
| | 4/26/00 | 11.56 | 25' | 2" | 6.6 | 6.3 | 0.72 | 2.06 | 18.4 |
| | 8/1/00 | 19.18 | 25' | 2" | 2.8 | 5.3 | 0.53 | 0.81 | 23.0 |
| | 12/13/00 | 17.96 | 25' | 2" | 3.4 | 5.4 | NM | 1.93 | 18.7 |
| MW-9 | 8/5/00 | 16.74 | 25' | 2" | 4.0 | 4.9 | 57.2 | 1.47 | 22.0 |
| | 4/26/00 | 15.09 | 25' | 2" | 4.8 | 5.9 | 0.72 | 1.45 | 20.4 |
| | 8/1/00 | 21.2 | 25' | 2" | 1.9 | 5.7 | 0.59 | 2.62 | 23.9 |
| | 12/13/00 | 19.73 | 25' | 2" | 2.6 | 5.4 | NM | 1.12 | 18.6 |
| MW-10 | 8/5/99 | 18.06 | 25' | 2" | 3.4 | | Free Product | | |
| | 4/26/00 | 15.75 | 25' | 2" | 4.5 | | Free Product | | |
| | 8/1/00 | 20.50 | 25' | 2" | 2.2 | | | | |
| | 12/13/00 | 19.40 | 25' | 2" | 2.7 | | Product/sheen | | |
| MW-11 | 8/5/99 | 15.60 | 25' | 2" | 4.6 | 4.8 | 42.7 | 6.38 | 22.0 |
| | 4/26/00 | 13.65 | 25' | 2" | 5.6 | 6.2 | 0.6 | 4.48 | 20.8 |
| | 8/1/00 | 18.61 | 25' | 2" | 3.1 | 5.6 | 0.31 | 4.79 | 21.4 |
| | 12/13/00 | 19.01 | 25' | 2" | 2.9 | 5.7 | NM | 5.15 | 19.8 |
| MW-12 | 8/5/99 | 17.33 | 25' | 2" | 3.8 | 4.6 | 129.2 | 2.09 | 19.0 |
| | 4/26/00 | 16.06 | 25' | 2" | 4.4 | 6.3 | 1.03 | 2.9 | 18.5 |
| | 8/1/00 | 20.15 | 25' | 2" | 2.4 | 4.5 | 0.67 | 5.01 | 19.6 |
| | 12/13/00 | 23.7 | 25' | 2" | 0.6 | 5.4 | NM | 2.9 | 17.1 |
| MW-13 | 8/5/99 | 21.26 | 25' | 2" | 1.8 | 4.2 | 51.7 | 2.32 | 18.0 |
| | 4/26/00 | 20.02 | 25' | 2" | 2.4 | 6.3 | 0.62 | 3.00 | 18.5 |
| | 8/1/00 | 24.05 | 25' | 2" | 0.5 | 5.2 | 0.42 | 2.14 | 19.7 |
| | 12/13/00 | 24.13 | 25' | 2" | 0.4 | 5.5 | NM | 1.04 | 15.9 |
| MW-14 | 8/5/99 | 7.96 | 25' | 2" | 8.3 | 5.0 | 312 | 0.80 | 19.0 |
| | 4/26/00 | 6.46 | 25' | 2" | 9.1 | 6.1 | 1.56 | 1.72 | 15.5 |
| | 8/1/00 | 10.8 | 25' | 2" | 5.4 | 5.4 | 0.93 | 1.43 | 18.8 |
| | 12/13/00 | 10.8 | 25' | 2" | 5.4 | 5.5 | NM | 1.72 | 14.7 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-15 | 8/5/99 | 6.28 | 25' | 2" | 9.2 | 4.8 | 86.5 | 0.87 | 18.0 |
| | 4/26/00 | 4.75 | 25' | 2" | 9.9 | 6.5 | 0.6 | 3.32 | 16.2 |
| | 8/1/00 | 9.11 | 25' | 2" | 7.8 | 5.5 | 0.41 | 3.17 | 19.5 |
| | 12/13/00 | 8.57 | 25' | 2" | 8.0 | 5.6 | NM | 1.93 | 15.1 |
| MW-16 | 8/5/99 | 11.22 | 25' | 2" | 6.7 | 4.9 | 49 | 0.79 | 18.0 |
| | 4/26/00 | 9.50 | 25' | 2" | 7.6 | 6.5 | 0.61 | 1.66 | 15.5 |
| | 8/1/00 | 14.35 | 25' | 2" | 5.2 | 6.0 | 0.95 | 1.64 | 19.3 |
| | 12/13/00 | 13.45 | 25' | 2" | 5.6 | 5.8 | NM | 2.27 | 15.6 |
| MW-17 | 8/5/99 | 16.16 | 75' | 2" | 28.8 | 5.6 | 90.8 | 2.76 | 20.5 |
| | 4/26/00 | 16.8 | 75' | 2" | 28.5 | 6.4 | 0.86 | 6.1 | 20.8 |
| | 8/1/00 | 19.27 | 75' | 2" | 27.3 | 6.2 | 0.59 | 3.12 | 22.5 |
| | 12/13/00 | 19.20 | 75' | 2" | 27.3 | NM | NM | NM | NM |

NOTES:

NS - Not sampled

Temperature in Degrees Celcius

Dissolved Oxygen in mg/L

Depth to Water and Depth to bottom in units of feet

Well volumes (Gallons)

Specific Conductivity (umhos/cm)

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| OMW-1 | 01-Dec-97 | 99.82 | 17.13 | - | 82.69 |
| | 05-Aug-99 | | 17.95 | 1.05 | 81.87 |
| | 26-Apr-00 | | 15.68 | 0.99 | 84.14 |
| | 01-Aug-00 | | 21.50 | 1.40 | 78.32 |
| | 13-Dec-00 | | 21.46 | 1.70 | 78.36 |
| | 06-Feb-01 | | 18.11 | 1.78 | 81.71 |
| MW-2 | 01-Dec-97 | 99.83 | 17.43 | - | 82.40 |
| | 05-Aug-99 | | 19.19 | 2.29 | 80.64 |
| | 26-Apr-00 | | 15.80 | 2.18 | 84.03 |
| | 01-Aug-00 | | 22.30 | 2.10 | 77.53 |
| | 13-Dec-00 | | 21.36 | 0.84 | 78.47 |
| | 06-Feb-01 | | 18.89 | sheen | 80.94 |
| MW-3 | 01-Dec-97 | 99.98 | 17.00 | - | 82.98 |
| | 05-Aug-99 | | 17.96 | 1.01 | 82.02 |
| | 26-Apr-00 | | 15.73 | 0.68 | 84.25 |
| | 01-Aug-00 | | 20.85 | 0.78 | 79.13 |
| | 13-Dec-00 | | 22.18 | 2.22 | 77.80 |
| | 06-Feb-01 | | 19.26 | 0.96 | 80.72 |
| MW-4 | 01-Dec-97 | 99.59 | 17.60 | - | 81.99 |
| | 05-Aug-99 | | 17.59 | - | 82.00 |
| | 26-Apr-00 | | 16.51 | - | 83.08 |
| | 01-Aug-00 | | 20.63 | - | 78.96 |
| | 13-Dec-00 | | 20.81 | - | 78.78 |
| | 06-Feb-01 | | 19.09 | - | 80.50 |
| MW-5 | 01-Dec-97 | 99.42 | 15.04 | - | 84.38 |
| | 05-Aug-99 | | 15.95 | - | 83.47 |
| | 26-Apr-00 | | 14.35 | - | 85.07 |
| | 01-Aug-00 | | 19.18 | - | 80.24 |
| | 13-Dec-00 | | 19.68 | - | 79.74 |
| | 06-Feb-01 | | 16.50 | - | 82.92 |
| MW-6 | 01-Dec-97 | 99.47 | 14.37 | - | 85.10 |
| | 05-Aug-99 | | 15.44 | - | 84.03 |
| | 26-Apr-00 | | 13.65 | - | 85.82 |
| | 01-Aug-00 | | 18.75 | - | 80.72 |
| | 13-Dec-00 | | 18.23 | - | 81.24 |
| | 06-Feb-01 | | 15.34 | - | 84.13 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-7 | 01-Dec-97 | 99.47 | 13.96 | - | 85.51 |
| | 05-Aug-99 | | 15.41 | - | 84.06 |
| | 26-Apr-00 | | 13.54 | - | 85.93 |
| | 01-Aug-00 | | 18.72 | - | 80.75 |
| | 13-Dec-00 | | 18.01 | - | 81.46 |
| | 06-Feb-01 | | 15.41 | - | 84.06 |
| MW-8 | 01-Dec-97 | 102.42 | 12.53 | - | 89.89 |
| | 05-Aug-99 | | 14.59 | - | 87.83 |
| | 26-Apr-00 | | 11.56 | - | 90.86 |
| | 01-Aug-00 | | 19.18 | - | 83.24 |
| | 13-Dec-00 | | 17.96 | - | 84.46 |
| | 06-Feb-01 | | 13.34 | - | 89.08 |
| MW-9 | 01-Dec-97 | 100.53 | 16.17 | - | 84.36 |
| | 05-Aug-99 | | 16.74 | - | 83.79 |
| | 26-Apr-00 | | 15.09 | - | 85.44 |
| | 01-Aug-00 | | 21.20 | - | 79.33 |
| | 13-Dec-00 | | 19.73 | - | 80.80 |
| | 06-Feb-01 | | 17.54 | - | 82.99 |
| MW-10 | 01-Dec-97 | 99.65 | 17.40 | - | 82.25 |
| | 05-Aug-99 | | 18.06 | 1.01 | 81.59 |
| | 26-Apr-00 | | 15.75 | 1.65 | 83.90 |
| | 01-Aug-00 | | 20.50 | 0.03 | 79.15 |
| | 13-Dec-00 | | 19.40 | 0.01 | 80.25 |
| | 06-Feb-01 | | 18.84 | sheen | 80.81 |
| MW-11 | 01-Dec-97 | 96.47 | 15.74 | - | 80.73 |
| | 05-Aug-99 | | 15.60 | - | 80.87 |
| | 26-Apr-00 | | 13.65 | - | 82.82 |
| | 01-Aug-00 | | 18.61 | - | 77.86 |
| | 13-Dec-00 | | 19.01 | - | 77.46 |
| | 06-Feb-01 | | 17.43 | - | 79.04 |
| MW-12 | 01-Dec-97 | 98.63 | 17.03 | - | 81.60 |
| | 05-Aug-99 | | 17.33 | - | 81.30 |
| | 26-Apr-00 | | 16.06 | - | 82.57 |
| | 01-Aug-00 | | 20.15 | - | 78.48 |
| | 13-Dec-00 | | 23.70 | - | 74.93 |
| | 06-Feb-01 | | 18.45 | - | 80.18 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-13 | 01-Dec-97 | 100.80 | 21.05 | - | 79.75 |
| | 05-Aug-99 | | 21.26 | - | 79.54 |
| | 26-Apr-00 | | 20.02 | - | 80.78 |
| | 01-Aug-00 | | 24.05 | - | 76.75 |
| | 13-Dec-00 | | 24.13 | - | 76.67 |
| | 06-Feb-01 | | 22.43 | - | 78.37 |
| MW-14 | 01-Dec-97 | 89.38 | 7.27 | - | 82.11 |
| | 05-Aug-99 | | 7.96 | - | 81.42 |
| | 26-Apr-00 | | 6.46 | - | 82.92 |
| | 11-Aug-00 | | 10.80 | - | 78.58 |
| | 13-Dec-00 | | 10.80 | - | 78.58 |
| | 06-Feb-01 | | 8.72 | - | 80.66 |
| MW-15 | 01-Dec-97 | 87.33 | 5.10 | - | 82.23 |
| | 05-Aug-99 | | 6.28 | - | 81.05 |
| | 26-Apr-00 | | 4.75 | - | 82.58 |
| | 01-Aug-00 | | 9.11 | - | 78.22 |
| | 13-Dec-00 | | 8.57 | - | 78.76 |
| | 06-Feb-01 | | 6.36 | - | 80.97 |
| MW-16 | 01-Dec-97 | 93.74 | 9.69 | - | 84.05 |
| | 05-Aug-99 | | 11.22 | - | 82.52 |
| | 26-Apr-00 | | 9.50 | - | 84.24 |
| | 01-Aug-00 | | 14.35 | - | 79.39 |
| | 13-Dec-00 | | 13.45 | - | 80.29 |
| | 06-Feb-01 | | 10.89 | - | 82.85 |
| DMW-17 | 01-Dec-97 | 100.08 | 15.53 | - | 84.55 |
| | 05-Aug-99 | | 16.16 | - | 83.92 |
| | 26-Apr-00 | | 16.80 | - | 83.28 |
| | 01-Aug-00 | | 19.27 | - | 80.81 |
| | 13-Dec-00 | | 19.20 | - | 80.88 |
| | 06-Feb-01 | | 16.82 | - | 83.26 |

**Notes:**
TOC - Top-of-Casing elevation refrenced to common datum.
NM - Not measured.
All measurments in units of feet.
- = No Data

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| OMW-1 | 1-Dec-97 | 14.9 | 85.5 | 5.2 | 24.8 | 130 | 96 | BDL |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-2 | 1-Dec-97 | 9,900 | 42,300 | 2,040 | 12,100 | 66,340 | 242,000 | 71.2 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-3 | 1-Dec-97 | 9,820 | 54,500 | 2,160 | 11,900 | 78,380 | 81,200 | 445 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-4 | 1-Dec-97 | 8,140 | 21,000 | 1,510 | 11,500 | 42,150 | 215,000 | 813 |
| | 5-Aug-99 | 14,200 | 34,600 | 2,750 | 15,900 | 67,450 | 109,000 | <5 |
| | 26-Apr-00 | 13,400 | 33,200 | 3,420 | 13,270 | 63,290 | 102,000 | 1,060 |
| | 1-Aug-00 | 10,100 | 23,300 | 1,740 | 11,410 | 46,550 | 109,000 | 559 |
| | 13-Dec-00 | 6,730 | 16,300 | 635 | 4,170 | 27,835 | 32,300 | 742 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | <5 |
| MW-5 | 1-Dec-97 | 5,930 | 47,600 | 2,100 | 12,600 | 68,230 | BDL | 125 |
| | 5-Aug-99 | 6,400 | 61,600 | 2,460 | 12,100 | 82,560 | 410 | 335 |
| | 26-Apr-00 | 6,680 | 48,300 | 2,390 | 9,610 | 66,980 | 681 | 609 |
| | 1-Aug-00 | 4,250 | 40,300 | 1,960 | 12,530 | 59,040 | 258 | 396 |
| | 13-Dec-00 | 4,530 | 38,100 | 2,520 | 14,640 | 59,790 | 381 | 4770 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-6 | 1-Dec-97 | 5.5 | 137 | 6.0 | 149 | 297.5 | BDL | BDL |
| | 5-Aug-99 | 4.1 | 1.1 | 3.7 | 16.7 | 25.6 | 5 | BDL |
| | 26-Apr-00 | 13.0 | 19.2 | 15 | 48 | 95.2 | 27.2 | 6.44 |
| | 1-Aug-00 | 117 | 1820 | 128 | 877 | 2942 | 10.7 | 32.2 |
| | 13-Dec-00 | 47.9 | 460 | 35.4 | 332 | 875 | 14.8 | 7.2 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-7 | 1-Dec-97 | 1.1 | 1.7 | BDL | 1.1 | 3.9 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 41 | <1 |
| | 26-Apr-00 | 2.13 | 13.5 | BDL | 1.59 | 17.2 | 68.9 | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 53.8 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 52.9 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-8 | 1-Dec-97 | BDL | 2.4 | 1.2 | 5.4 | 9.0 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 1.58 | 8.53 | BDL | BDL | 10.1 | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-9 | 1-Dec-97 | 77 | 14,000 | 2,390 | 20,700 | 37,167 | 114 | 384 |
| | 5-Aug-99 | 110 | 4,280 | 2,450 | 17,000 | 23,840 | 150 | <500 |
| | 26-Apr-00 | 163 | 2,640 | 3,520 | 14,760 | 21,083 | BDL | 2,090 |
| | 1-Aug-00 | 187 | 18,400 | 1,010 | 16,070 | 35,667 | BDL | 909 |
| | 13-Dec-00 | 9.14 | 657 | 108 | 1,340 | 2,114 | 26.0 | 47 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-10 | 1-Dec-97 | 6,220 | 46,300 | 2,320 | 14,800 | 69,640 | 938 | 542 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-11 | 1-Dec-97 | 1.4 | 3.4 | BDL | 4.7 | 9.5 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 7 | <5 |
| | 26-Apr-00 | 1.18 | 3.96 | BDL | BDL | 5.1 | 4.69 | 9.98 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | 2.51 | 91.0 | 15.0 | 104.4 | 212.9 | 26.3 | 17.2 |
| SSTL | | <1 | <1 | <1 | <1 | - | 7 | <5 |
| MW-12 | 1-Dec-97 | 7,970 | 382 | 266 | 1,540 | 10,158 | 99,900 | 119 |
| | 5-Aug-99 | 5,000 | 260 | <200 | <200 | 5,260 | 41,200 | <1000 |
| | 26-Apr-00 | 135 | 4.51 | BDL | 11.0 | 151 | 6,800 | 18.2 |
| | 1-Aug-00 | 1670 | 17.1 | 4.33 | 114.9 | 1806 | 44,200 | BDL |
| | 13-Dec-00 | 119 | 9.1 | 2.11 | 26.7 | 157 | 4,230 | 31.7 |
| SSTL | | 5 | 260 | <200 | <200 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-13 | 1-Dec-97 | BDL | 1.4 | BDL | 1.6 | 3 | 82.3 | BDL |
| | 5-Aug-99 | 3 | <1 | <1 | <1 | 3 | 604 | <5 |
| | 26-Apr-00 | 188 | 149 | BDL | BDL | 337 | 3,150 | BDL |
| | 1-Aug-00 | 207 | 5.74 | BDL | 32.8 | 245 | 3,641 | 24.3 |
| | 13-Dec-00 | 29.9 | 3.81 | 1.0 | 76.6 | 111 | 4,350 | 29.8 |
| SSTL | | 3.0 | <1 | <1 | <1 | 3 | 40 | <5 |
| MW-14 | 1-Dec-97 | 1.1 | 1.4 | BDL | 2.7 | 5 | 76.5 | BDL |
| | 5-Aug-99 | 57 | 7 | 1 | 23 | 88 | 606 | 5 |
| | 26-Apr-00 | BDL | 1.38 | BDL | BDL | 1.38 | 1.11 | BDL |
| | 1-Aug-00 | 138 | 4.04 | BDL | 39.04 | 181.08 | 35.3 | 13.0 |
| | 13-Dec-00 | BDL | BDL | BDL | 2.13 | 2.13 | 129 | 2.33 |
| SSTL | | 5 | 7 | 1 | 23 | - | 40 | 5 |
| MW-15 | 1-Dec-97 | 1.0 | 1.6 | BDL | 2.5 | 5 | BDL | BDL |
| | 5-Aug-99 | 3 | 6 | 1 | 6 | 16 | 27 | <5 |
| | 26-Apr-00 | 1.01 | 1.32 | BDL | BDL | 2.33 | 2.82 | 5.66 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 2.77 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 3 | 6 | 1 | 6 | - | 27 | <5 |
| MW-16 | 1-Dec-97 | BDL | 1.2 | BDL | 1.3 | 2.5 | BDL | BDL |
| | 5-Aug-99 | 2.2 | 8.8 | 1.6 | 7.1 | 19.7 | 4 | BDL |
| | 26-Apr-00 | 2.17 | 1.27 | BDL | BDL | 3.4 | 10.1 | BDL |
| | 1-Aug-00 | 5.02 | 3.01 | BDL | 3.5 | 11.5 | 16.1 | 1.35 |
| | 13-Dec-00 | 10.7 | BDL | BDL | 2.66 | 13.4 | 30.6 | 1.96 |
| DMW-17 | 1-Dec-97 | 1.6 | 3.8 | 2.3 | 12.7 | 20.3 | BDL | BDL |
| | 5-Aug-99 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 26-Apr-00 | 1.06 | 1.24 | BDL | BDL | 2.3 | 8.97 | BDL |
| | 1-Aug-00 | BDL | 3.02 | BDL | BDL | 3.02 | 7.75 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 6.98 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | - | <1 | <1 |
| CP-WW | 1-Dec-97 | BDL | 1.2 | BDL | BDL | 1.2 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 2.96 | 1.09 | BDL | BDL | 4.1 | 315 | BDL |
| | 1-Aug-00 | 3.23 | 2.56 | BDL | 1.09 | 7 | 224 | BDL |
| | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | <1 | <1 | <1 | <1 | - | <1 | <1 |

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| CLS-WW | 1-Dec-97 | 81.3 | 1.1 | BDL | 9.6 | 92 | 34.5 | BDL |
| | 5-Aug-99 | 81 | 1 | <1 | 10 | 92 | 35 | <5 |
| | 26-Apr-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | <1 | <1 | 10 | - | 35 | <5 |

Notes:

All results reported in parts per billion (ug/L) unless otherwise noted.

SSTL = Site specific target levels referenced in bid

FP = Free Product; NS = Not Sampled

BDL = Below detecatable Levels

Total BTEX = Summation of benzene, toluene, ethylbenzene and xylenes

MTBE = Methyl-tert-buytl-ether

# ATTACHMENT 3
# LABORATORY ANALYTICAL REPORT

# ACCESS ANALYTICAL, INC.

Richard Gillespie
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


December 22, 2000
Report # 12000871
Order # 118915
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfonds DHE 12335

Sample I.D.: MW-4
Collected: 12/13/00 00:00
Received: 12/16/00 10:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 100 | | | |
| Methyl-Tert-Butyl-Ether | 32300 | ug/L | 5030/8260B | 100.000 | 12/18/2000 | 12/18/2000 13:13 | ME |
| Benzene | 6730 | ug/L | 5030/8260B | 100.000 | 12/18/2000 | 12/18/2000 13:13 | ME |
| Toluene | 16300 | ug/L | 5030/8260B | 100.000 | 12/18/2000 | 12/18/2000 13:13 | ME |
| Ethylbenzene | 635 | ug/L | 5030/8260B | 100.000 | 12/18/2000 | 12/18/2000 13:13 | ME |
| m & p-Xylene | 2580 | ug/L | 5030/8260B | 100.000 | 12/18/2000 | 12/18/2000 13:13 | ME |
| o-Xylene | 1590 | ug/L | 5030/8260B | 100.000 | 12/18/2000 | 12/18/2000 13:13 | ME |
| Naphthalene | 742 | ug/L | 5030/8260B | 100.000 | 12/18/2000 | 12/18/2000 13:13 | ME |
| SURROGATE: Toluene-D8 | 110.75% | | | | | | |
| SURROGATE: Bromofluorobenzene | 111.75% | | | | | | |
| SURROGATE: Dibromofluoromethane | 105.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

RECEIVED JAN 0 3 2001

Richard Gillespie
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


December 22, 2000
Report # 12000871
Order # 118916
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfonds DHE 12335

Sample I.D.: MW-5
Collected: 12/13/00 00:00
Received: 12/16/00 10:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 100 | | | |
| Methyl-Tert-Butyl-Ether | 381 | ug/L | 5030/8260B | 100.000 | 12/18/2000 | 12/18/2000 09:48 | ME |
| Benzene | 4530 | ug/L | 5030/8260B | 100.000 | 12/18/2000 | 12/18/2000 09:48 | ME |
| Toluene | 38100 | ug/L | 5030/8260B | 100.000 | 12/18/2000 | 12/18/2000 09:48 | ME |
| Ethylbenzene | 2520 | ug/L | 5030/8260B | 100.000 | 12/18/2000 | 12/18/2000 09:48 | ME |
| m & p-Xylene | 9590 | ug/L | 5030/8260B | 100.000 | 12/18/2000 | 12/18/2000 09:48 | ME |
| o-Xylene | 5050 | ug/L | 5030/8260B | 100.000 | 12/18/2000 | 12/18/2000 09:48 | ME |
| Naphthalene | 4770 | ug/L | 5030/8260B | 100.000 | 12/18/2000 | 12/18/2000 09:48 | ME |
| SURROGATE: Toluene-D8 | 107.25% | | | | | | |
| SURROGATE: Bromofluorobenzene | 109.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 102.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
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Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


December 22, 2000
Report # 12000871
Order # 118917
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfonds DHE 12335

Sample I.D.: MW-6
Collected: 12/13/00 00:00
Received: 12/16/00 10:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 14.8 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:29 | ME |
| Benzene | 47.9 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:29 | ME |
| Toluene | 460 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:29 | ME |
| Ethylbenzene | 35.4 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:29 | ME |
| m & p-Xylene | 218 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:29 | ME |
| o-Xylene | 114 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:29 | ME |
| Naphthalene | 7.19 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:29 | ME |
| SURROGATE: Toluene-D8 | 99.50% | | | | | | |
| SURROGATE: Bromofluorobenzene | 122.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 97.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


December 22, 2000
Report # 12000871
Order # 118918
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfonds DHE 12335

Sample I.D.: MW-7
Collected: 12/13/00 00:00
Received: 12/16/00 10:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 52.9 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:32 | ME |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:32 | ME |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:32 | ME |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:32 | ME |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:32 | ME |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:32 | ME |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:32 | ME |
| SURROGATE: Toluene-D8 | 104.50% | | | | | | |
| SURROGATE: Bromofluorobenzene | 117.25% | | | | | | |
| SURROGATE: Dibromofluoromethane | 115.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
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Company Representative

Richard Gillespie
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


December 22, 2000
Report # 12000871
Order # 118919
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfonds DHE 12335

Sample I.D.: MW-8
Collected: 12/13/00 00:00
Received: 12/16/00 10:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 11:59 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 11:59 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 11:59 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 11:59 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 11:59 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 11:59 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 11:59 | PMD |
| SURROGATE: Toluene-D8 | 104.50% | | | | | | |
| SURROGATE: Bromofluorobenzene | 103.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 95.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


December 22, 2000
Report # 12000871
Order # 118920
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfonds DHE 12335

Sample I.D.: MW-9
Collected: 12/13/00 00:00
Received: 12/16/00 10:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 26.4 | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 09:59 | PMD |
| Benzene | 9.14 | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 09:59 | PMD |
| Toluene | 657 | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 09:59 | PMD |
| Ethylbenzene | 108 | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 09:59 | PMD |
| m & p-Xylene | 1340 | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 09:59 | PMD |
| o-Xylene | 619 | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 09:59 | PMD |
| Naphthalene | 47.4 | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 09:59 | PMD |
| SURROGATE: Toluene-D8 | 107.50% | | | | | | |
| SURROGATE: Bromofluorobenzene | 104.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 100.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
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130 Centrum Drive
Suite 3B
Irmo, SC 29063


December 22, 2000
Report # 12000871
Order # 118921
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfonds DHE 12335

Sample I.D.: MW-11
Collected: 12/13/00 00:00
Received: 12/16/00 10:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 26.3 | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 09:55 | PMD |
| Benzene | 2.51 | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 09:55 | PMD |
| Toluene | 91.0 | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 09:55 | PMD |
| Ethylbenzene | 15.0 | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 09:55 | PMD |
| m & p-Xylene | 69.7 | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 09:55 | PMD |
| o-Xylene | 34.7 | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 09:55 | PMD |
| Naphthalene | 17.2 | ug/L | 5030/8260B | 1.000 | 12/17/2000 | 12/17/2000 09:55 | PMD |
| SURROGATE: Toluene-D8 | 102.25% | | | | | | |
| SURROGATE: Bromofluorobenzene | 101.50% | | | | | | |
| SURROGATE: Dibromofluoromethane | 91.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


December 22, 2000
Report # 12000871
Order # 118922
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfonds DHE 12335

Sample I.D.: MW-12
Collected: 12/13/00 00:00
Received: 12/16/00 10:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 4230 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 10:03 | PMD |
| Benzene | 119 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 10:03 | PMD |
| Toluene | 9.10 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 10:03 | PMD |
| Ethylbenzene | 2.11 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 10:03 | PMD |
| m & p-Xylene | 15.0 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 10:03 | PMD |
| o-Xylene | 11.7 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 10:03 | PMD |
| Naphthalene | 31.7 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 10:03 | PMD |
| SURROGATE: Toluene-D8 | 104.75% | | | | | | |
| SURROGATE: Bromofluorobenzene | 110.25% | | | | | | |
| SURROGATE: Dibromofluoromethane | 86.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

**Richard Gillespie**
**H2O Environmental, Inc.**
**130 Centrum Drive**
**Suite 3B**
**Irmo, SC 29063**


**December 22, 2000**
**Report # 12000871**
**Order # 118923**
**South Carolina Cert ID# 96023**

**Site Location/Project**
**SC.**
**Crawfonds DHE 12335**

**Sample I.D.: MW-13**
**Collected: 12/13/00 00:00**
**Received: 12/16/00 10:30**
**Collected by: Client**

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 4350 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 | 10:00 | PMD |
| Benzene | 29.9 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 | 10:00 | PMD |
| Toluene | 3.81 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 | 10:00 | PMD |
| Ethylbenzene | 1.00 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 | 10:00 | PMD |
| m & p-Xylene | 5.74 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 | 10:00 | PMD |
| o-Xylene | 70.9 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 | 10:00 | PMD |
| Naphthalene | 29.8 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 | 10:00 | PMD |
| SURROGATE: Toluene-D8 | 105.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 109.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 96.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
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**Company Representative**

Richard Gillespie
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


December 22, 2000
Report # 12000871
Order # 118924
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfonds DHE 12335

Sample I.D.: MW-14
Collected: 12/13/00 00:00
Received: 12/16/00 10:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 129 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:57 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:57 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:57 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:57 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:57 | PMD |
| o-Xylene | 2.13 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:57 | PMD |
| Naphthalene | 2.33 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 09:57 | PMD |
| SURROGATE: Toluene-D8 | 103.50% | | | | | | |
| SURROGATE: Bromofluorobenzene | 107.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 94.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


December 22, 2000
Report # 12000871
Order # 118925
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfonds DHE 12335

Sample I.D.: MW-15
Collected: 12/13/00 00:00
Received: 12/16/00 10:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:01 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:01 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:01 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:01 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:01 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:01 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:01 | PMD |
| SURROGATE: Toluene-D8 | 105.00% | | | | | | |
| SURROGATE: Bromofluorobenzene | 104.50% | | | | | | |
| SURROGATE: Dibromofluoromethane | 91.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
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Company Representative

Richard Gillespie
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


December 22, 2000
Report # 12000871
Order # 118926
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfonds DHE 12335

Sample I.D.: MW-16
Collected: 12/13/00 00:00
Received: 12/16/00 10:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 30.6 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:02 | PMD |
| Benzene | 10.7 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:02 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:02 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:02 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:02 | PMD |
| o-Xylene | 2.66 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:02 | PMD |
| Naphthalene | 1.96 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:02 | PMD |
| SURROGATE: Toluene-D8 | 104.50% | | | | | | |
| SURROGATE: Bromofluorobenzene | 106.50% | | | | | | |
| SURROGATE: Dibromofluoromethane | 99.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
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Company Representative

Richard Gillespie
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


December 22, 2000
Report # 12000871
Order # 118927
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfonds DHE 12335

Sample I.D.: MW-17
Collected: 12/13/00 00:00
Received: 12/16/00 10:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 6.98 | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:02 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:02 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:02 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:02 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:02 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:02 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:02 | PMD |
| SURROGATE: Toluene-D8 | 104.75% | | | | | | |
| SURROGATE: Bromofluorobenzene | 110.25% | | | | | | |
| SURROGATE: Dibromofluoromethane | 95.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
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Company Representative

Richard Gillespie
H2O Environmental, Inc.
130 Centrum Drive
Suite 3B
Irmo, SC 29063


December 22, 2000
Report # 12000871
Order # 118928
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawfonds DHE 12335

Sample I.D.: CLS-WW
Collected: 12/13/00 00:00
Received: 12/16/00 10:30
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:03 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:03 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:03 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:03 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:03 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:03 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/18/2000 | 12/18/2000 12:03 | PMD |
| SURROGATE: Toluene-D8 | 106.00% | | | | | | |
| SURROGATE: Bromofluorobenzene | 99.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 97.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

# Access Analytical - Chain of Custody Record

Project Submission #: 0012-871 | 118915 / 118928 RR | PO #: STL

Company Name: $H_2O$ ENV

Address:

City: IRMO State: SC Zip:

Project Name: Crawfords DITE 12335

Report To: Rick Gillespie

REQUESTED LAB ANALYSIS:

| Sample Label | Date Collected | Time Collected | Matr. | # of Cont | PARAMETER: BTEX/MTBE/NAPH | NOTES / COMMENTS |
|---|---|---|---|---|---|---|
| mw-4 | 12-13-00 | | W | 2 | ✓ | 118915 |
| mw-5 | | | | | | 118916 |
| mw-6 | | | | | | 118917 |
| mw-7 | | | | | | 118918 |
| mw-8 | | | | | | 118919 |
| mw-9 | | | | | | 118920 |
| mw-11 | | | | | | 118921 |
| mw-12 | | | | | | 118922 |
| mw-13 | | | | | | 118923 |
| mw-14 | ↓ | | ↓ | ↓ | ↓ | 118924 |

**Turnaround Time Requested:**

✓ Std. *(5-7 Bus. days)*

___ RUSH*

*Date Required: _____

Samples Recd. on Ice?

✓ Yes

___ No

Project Location:

✓ SC

___ NC

___ Other _____ (specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| M. Wood | 12-13-00 | 1745 | Cheryl Barr |
| Cheryl Barr | 12/15/00 | 1700 | Fedex |
| Fedex | | | |
| | 12/16/a | 1030 | Rukhsana/STLNT |

Access Analytical, Inc.
1248 Lake Murray Blvd.
Irmo, SC 29063
Phone: (803) 781-4243
Fax: 781-4303
Toll Free (888) 315-4243

Original Copy - Returned w/Report
Yellow Copy - Access Analytical Copy
Pink Copy - Client Copy

# Access Analytical - Chain of Custody Record

Project Submission #: 00|12-871 RR

PO #:

Company Name: H2O ENV

Address:

City: IRMO State: SC Zip:

Project Name: Crawford DHE 12335

Report To: Rick Gillespie

REQUESTED LAB ANALYSIS:

PARAMETER: BTEX/MTBE/NAPH

| Sample Label | Date Collected | Time Collected | Matr | # of Cont | | NOTES / COMMENTS |
|---|---|---|---|---|---|---|
| MW-15 | 12-13-00 | | W | 2 | ✓ | 118925 |
| MW-16 | ↓ | | ↓ | ↓ | ↓ | 118926 |
| MW-17 | | | | | | 118927 |
| CLS-WW | | | | | | 118928 |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

**Turnaround Time Requested:**

✓ Std. *(5-7 Bus. days)*

___ RUSH*

*Date Required: _____

Samples Recd. on Ice?

✓ Yes

___ No

Project Location:

✓ SC

___ NC

___ Other _____ (specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| M. Woods | 12-14-00 | 1745 | Cheryl Bass |
| Cheryl Bass | 12/15/00 | 1710 | Fedex |
| Fedex | | | |
| | 12/16/00 | 10 30 | Rukhsana/STCMS |

Original Copy - Returned w/Report
Yellow Copy - Access Analytical Copy
Pink Copy - Client Copy

ACCESS ANALYTICAL, INC.
1248 Lake Murray Blvd.
Irmo, SC 29063
Phone: (803) 781-4243
Fax: 781-4303
Toll Free (888) 315-4243

# ATTACHMENT 4
# MATERIAL MANIFEST

[redacted]

Friday, May 5, 2000
Be onsite at _____

# MATERIAL MANIFEST

**EMERGENCY PHONE NO.**
**(800) 831-7715**

**ESI** ECOLOGICAL SERVICES, INC.
620 North I-85 Service Road • Charlotte, NC 28216
Phone: 704-399-4000 • Fax: 704-399-4090

| Manifest Document No. | |
|---|---|
| C-2037 | |
| Page 1 | of 1 |
| ESI Job No. | |
| C-2037 | |

## GENERATOR INFORMATION

| Name | US EPA ID No. |
|---|---|
| H2O Environmental<br>Irmo, SC | |

| Street Address | Mailing Address | Phone No. / Contact |
|---|---|---|
| Crawford's Grocery<br>5870 Highway 28 North<br>Abbeville, SC | | Phone No. 803-749-4080<br>Contact Hudson |

## Description of Materials

| | HM | USDOT Proper Shipping Name (Complete All Items for Hazardous Materials) | Hazard Class or Div. | UN/NA ID No. | Packing Group | Containers Qty | Containers Type | Total Quantity | Unit Wt./Vol. |
|---|---|---|---|---|---|---|---|---|---|
| a. | | waste water, non-hazardous (liquid & product) | | | | 1 | 3200 VAC | 625 gals | 10gal PerT |
| b. | | | | | | | | | |
| c. | | | | | | | | | |

| ADDITIONAL INFORMATION | ERG. No. | ESI Profile Code | Facility Use |
|---|---|---|---|
| a. Total hoursaonsite = | | | |
| b. Well information = four 2" wells | | | |
| c. | | | |

## GENERATOR'S CERTIFICATION

*This is to certify that the above-described materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. I further certify that none of the materials described above are a hazardous waste as defined by EPA 40 CFR Part 261 or any applicable state law, and unless specifically identified above, the materials contain less than 1,000 ppm total halogens and do not contain quantifiable levels (2ppm) of PCB'S as defined by EPA 40 CFR Parts 279 and 761.*

| Printed / Typed Name | Signature | Mo. | / Day | / Yr. |
|---|---|---|---|---|
| H2O Rep./ Mike Woodward | M. Ward | 05 | 05 | 00 |

## TRANSPORTER INFORMATION

| Transporter | Ecological Services, Inc. |
|---|---|
| Address | 620 I-85 Service Road<br>Charlotte, NC 28216 |
| Transporter or EPA ID No. | NCD98622799 |
| Unit No. | |
| Phone | 704-399-4000 |

*I hereby acknowledge receipt of the above-described materials for transport from the generator site listed above.*
Signature M. Ward 05/05/00 Shipment Date

*I hereby acknowledge the above-described materials were received from the generator site and were transported to the facility listed below.*
Ecological Services, Inc.
620 North I-85 Service Road, Charlotte, NC 28216

## FACILITY INFORMATION

| Facility | Ecological Services, Inc. |
|---|---|
| Address | 620 I-85 Service Road<br>Charlotte, NC 28216 |
| Facility or EPA ID No. | NCD98622799 |
| Phone | 704-399-4000 |
| Contact | Ralph Rogers |

*I hereby acknowledge the receipt of the materials covered by this manifest except for any discrepancy noted below.*
Signature [signature] 05/05/00 Delivery Date

Discrepancies / Routing Codes / Handling Methods
a.
b.

RECEIVED
APR 1 8 2001
Underground Storage
Tank Program

March 15, 2001

RECEIVED
MAR 2 9 2001
Underground Storage
Tank Program

Mr. John Abernathy
Underground Storage Tank Program
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: 3rd Quarterly Report
Crawford's Country Store
5870 Hwy 28 North
Antreville, South Carolina
SCDHEC Site ID # 12335

Dear Mr. Abernathy:

On February 4, 2000, the South Carolina Department of Health and Environmental Control (SCDHEC) provided notice to proceed to $H_2O$ Environmental, Inc. ($H_2O$) to perform Corrective Action at Crawford's Country Store located at 5870 Highway 28 North, Antreville, South Carolina. The objective of the project is to reduce the Chemicals of Concern (COC) in monitoring wells OMW-1, MW-2 through MW-5, MW-7 through MW-15, DMW-17, CP-WW and CLS-WW to the site specific target levels (SSTLs). A chronological summary of site activities is provided below:

| | |
|---|---|
| 2/4/00 | SCDHEC awarded Bid Number SB-9570-12/02/99-TC |
| 3/02/00 | Corrective Action Plan/Engineering Report submitted to SCDHEC |
| 4/18/00 | CAP/ER approved |
| 4/26/00 | Initial groundwater sampling event |
| 5/17/00 | Initial groundwater results submitted |
| 5/22/00-5/31/00 | System installed |
| 5/31/00 | System was inspected and approved Todd Adams of SCDHEC |
| 5/31/00 | Invoice submitted for payment of 40% of the contract amount |
| 6/14/00 | System start-up |
| 8/01/00 | 1st quarter sampling event |
| 8/28/99 | 1st quarter report submitted |
| 9/13/00 | Free product recovery from OMW-1, MW-2 and MW-3 |
| 12/13/00 | 2nd quarter sampling event |
| 2/16/01 | 2nd quarter report submitted |
| 2/6/01 | 3rd quarter sampling event |

US
DOCKETING

An air injection/vapor extraction system was installed in May 2000 and put in operation in June 2000. The system consists of ten air injection/vapor extraction wells SV-1 through SV-10. In order to effectively target the source area, $H_2O$ is air sparging in injection/vapor extraction wells SV-1 through SV-6 and extracting vapor from injection/vapor extraction wells SV-1 through SV-8. Inspection of the system

mechanical problems with the air compressor. The system is being repaired and will be put back on site as soon as possible. $H_2O$ estimates the system will be operational the week of March 19, 2001. Refer to Figure 1, Attachment 1 for a Site Plan depicting the system layout. The following table summarizes the general operating characteristics of the system.

| Summary of System Operating Characteristics | | | | |
|---|---|---|---|---|
| Well ID | Activity | PSI | CFM | IWG |
| SV-1 - SV-8 | Vapor Extraction | – | – | 55 |
| SV-1 - SV-6 | Air Sparging | 10 | 5 | – |

An air sample was collected from the effluent of the vapor extraction system on August 1, 2000. Based on the review of the laboratory analysis, it is estimated that contaminant emissions will not exceed 1,000 pounds per month. No air sample was collected this quarter, as the system was not operational at the time of the site visit.

On February 6, 2001 $H_2O$ Environmental Inc. personnel gauged and collected groundwater samples from monitoring wells MW-4 through MW-9, MW-11 through MW-17, and water well CLS-WW at the site. Water well CP-WW located at the Green residence was not operational at the time of the sampling event and a groundwater sample could not be collected. A new water well has apparently been installed and is currently being used by the Green residence. Monitoring wells OMW-1, MW-2, MW-3 and MW-10 contain free product. These monitoring wells were gauged but groundwater samples were not collected. The groundwater samples were analyzed for Benzene, Toluene, Ethylbenzene, total Xylenes (BTEX), Methyl-Tert-Butyl Ether (MTBE), and Naphthalene. A review of the groundwater elevation data indicated a groundwater flow direction to the south-southeast. Table 1, Attachment 2, summarizes field data collected during monitoring well purging. The groundwater elevations are summarized on Table 2, Attachment 2, and depicted graphically on Figure 2, Attachment 1. The groundwater quality for Chemicals of Concern is summarized on Table 3, Attachment 2, and depicted graphically on Figure 3, Attachment 1. A copy of the laboratory analytical report is provided in Attachment 3.

Free product recovery efforts were conducted on February 6, 2001 from monitoring wells OMW-1 and MW-3. Approximately 5 gallons of product were generated during the event. Liquid level measurements collected from monitoring well MW-2 and MW-10 indicated a sheen on the date measured. Refer to Figure 1, Attachment 1 for a Site Plan depicting the location of the referenced monitoring wells. Table 2, Attachment 2 summarizes free product thicknesses encountered during this quarter. Product generated is placed on-site into a 55-gallon drum. Any disposal manifests will be forwarded to DHEC upon receipt.

| Monitoring Well | Depth to product | Depth to Water | Product Thickness |
|---|---|---|---|
| OMW-1 | 19.89 | 18.11 | 1.78 |
| MW-2 | 18.89+ | 18.89 | sheen |
| MW-3 | 19.26 | 18.30 | 0.96 |
| MW-10 | 18.84+ | 18.84 | sheen |

Note: All measurements in units of feet.

Review of the analytical data indicates monitoring wells MW-14, MW-15 and Water well CLS-WW are below the established SSTL's. Groundwater samples collected from MW-4, MW-5, MW-10, MW-11, MW-12 and MW-13 indicate concentrations remain above the established SSTL's. Based on the concentrations, $H_2O$ will continue to operate the remediation system. If you have any questions or comments please do not hesitate to contact me at (803) 749-4080.

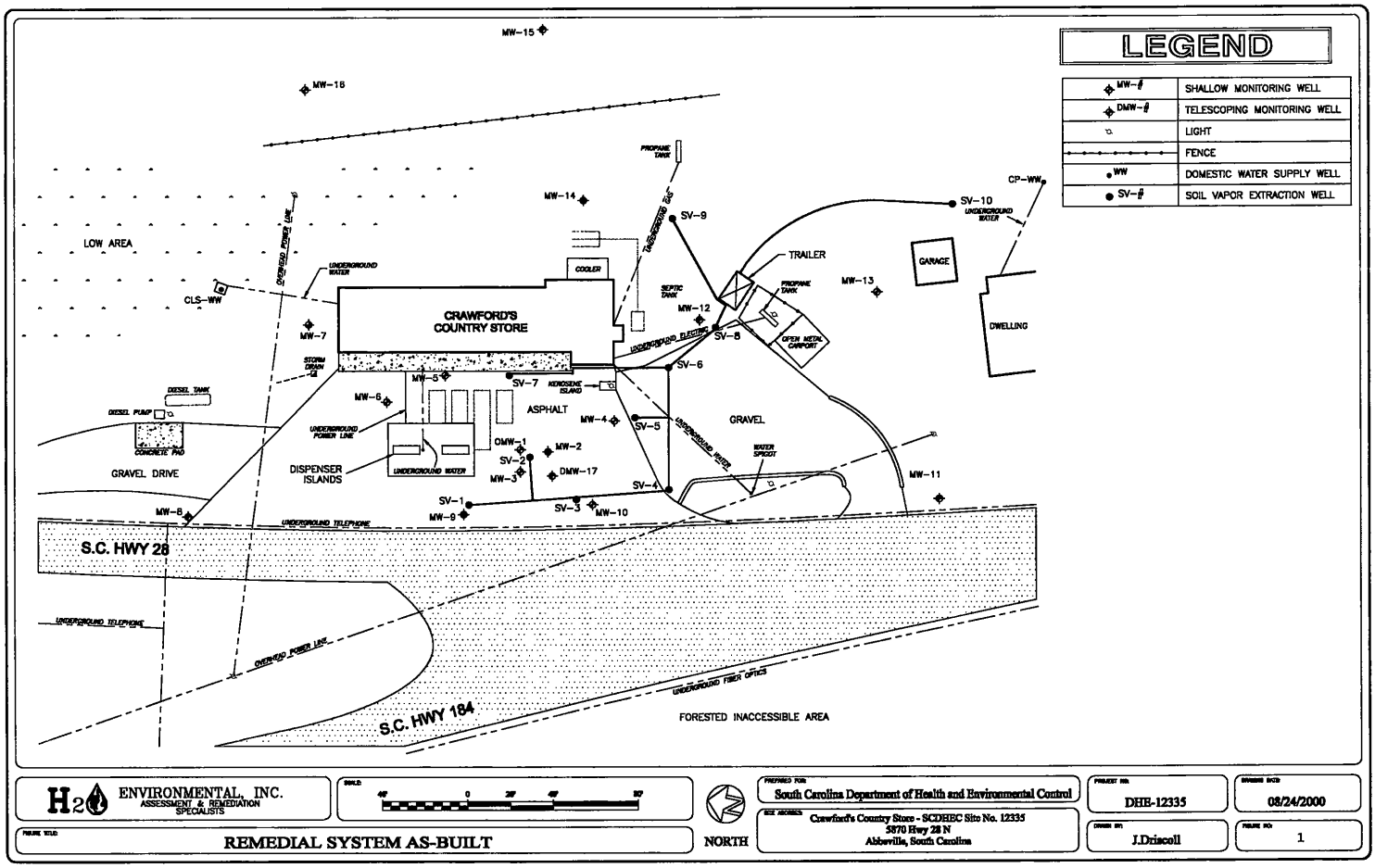
Sincerely,

**$H_2O$ Environmental, Inc.**
Class I Site Rehabilitation Contractor No. 32

Scott Johnston
Division Director

Richard D. Gillespie, P.G.
License Number 2199 3-16-01

# ATTACHMENT 1
# FIGURES




## LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO.: DHE-12335

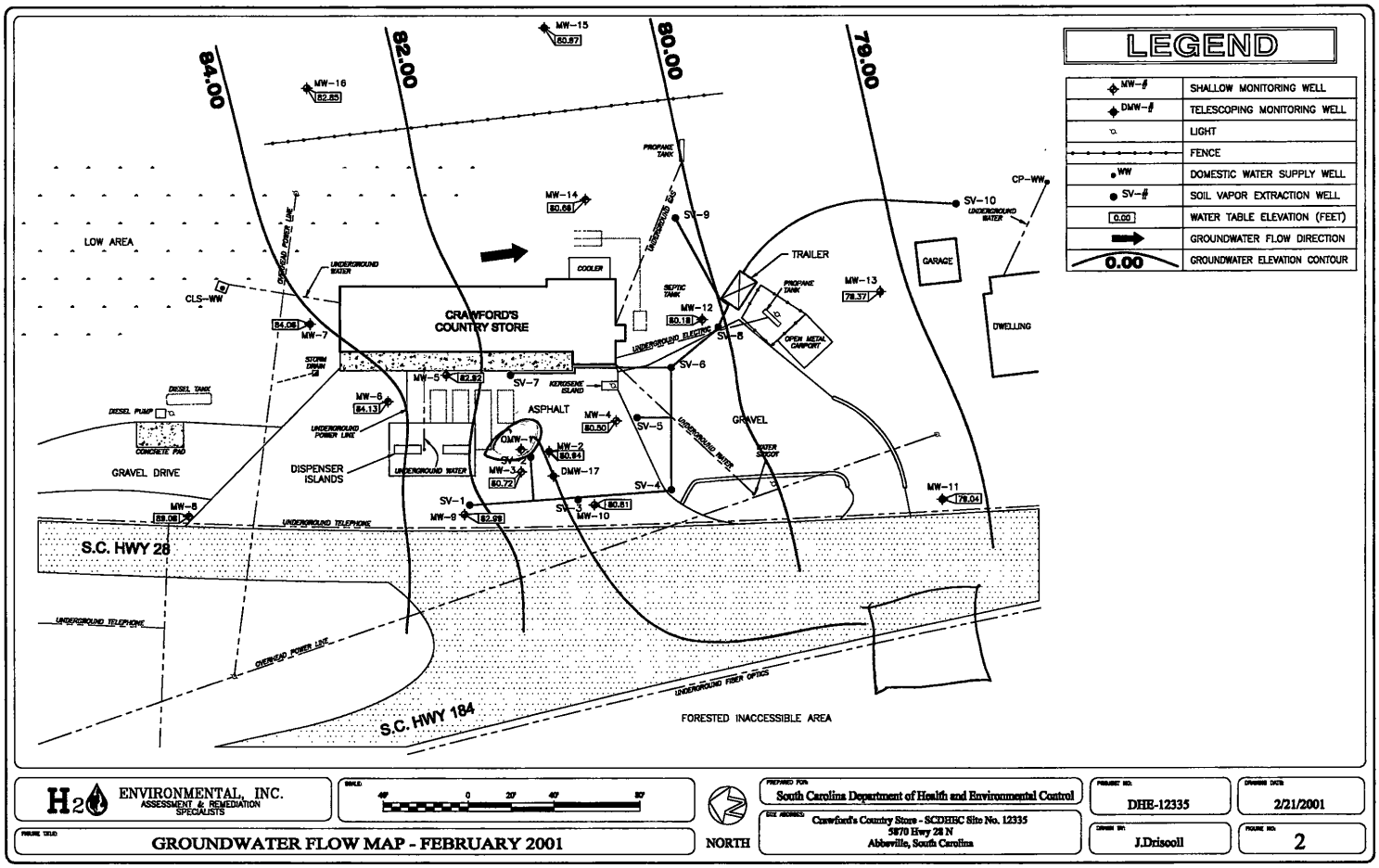
DRAWING DATE: 08/24/2000

DRAWN BY: J.Driscoll

FIGURE NO.: 1

FIGURE TITLE:

# REMEDIAL SYSTEM AS-BUILT




H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

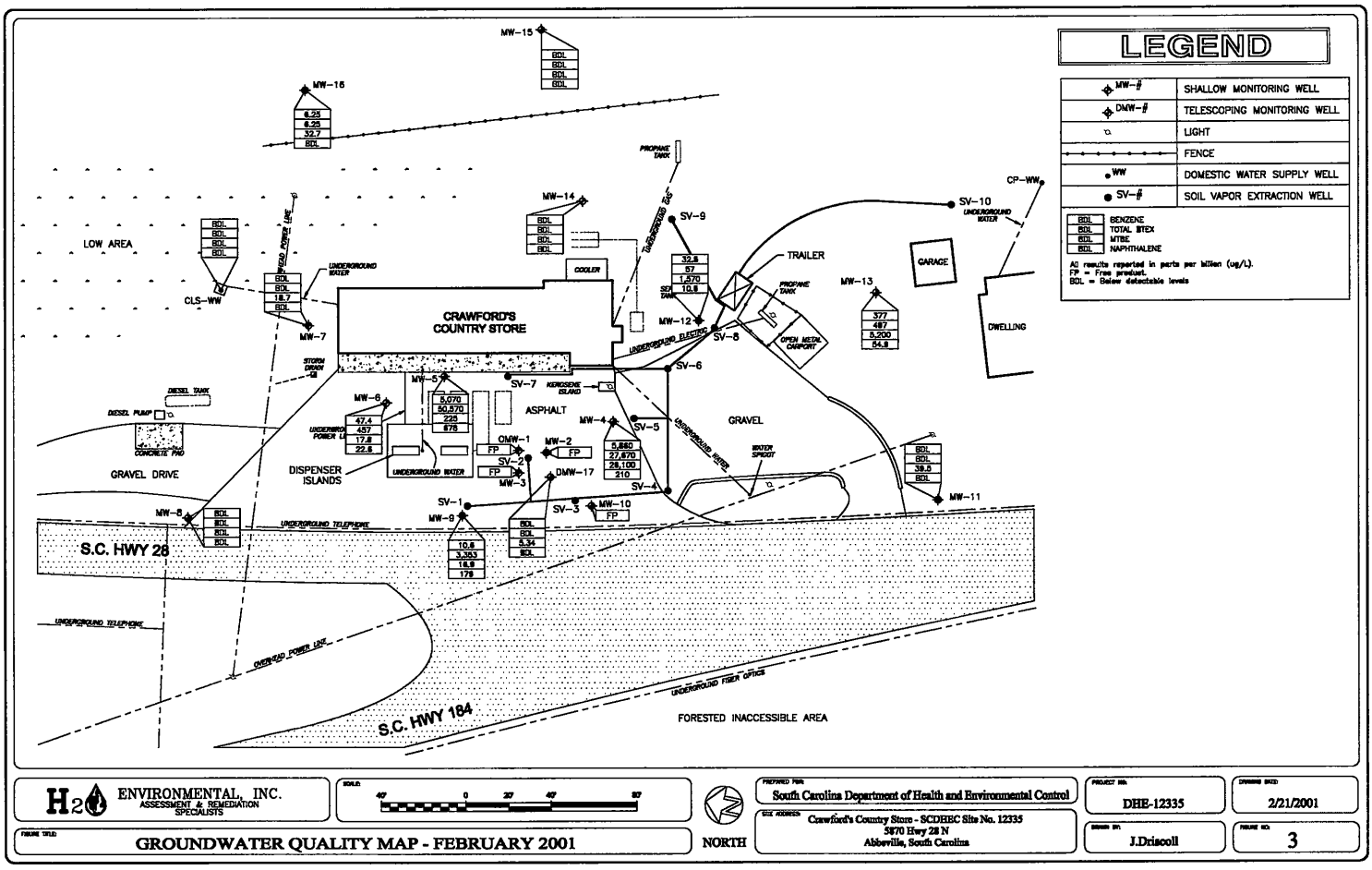
PROJECT NO.: DHE-12335

DRAWING DATE: 2/21/2001

DRAWN BY: J.Driscoll

FIGURE NO.: 2

FIGURE TITLE: GROUNDWATER FLOW MAP - FEBRUARY 2001




H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
3870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO.: DHE-12335

DRAWING DATE: 2/21/2001

DRAWN BY: J.Driscoll

FIGURE NO.: 3

FIGURE TITLE:

# GROUNDWATER QUALITY MAP - FEBRUARY 2001

# ATTACHMENT 2
# TABLES

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 8/5/99 | 17.95 | 22' | 2" | NM | NM | NM | NM | NM |
| | 4/26/00 | 15.68 | 22' | 2" | NM | NM | NM | NM | NM |
| | 8/1/00 | 21.50 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/13/00 | 21.46 | 22' | 2" | NM | NM | NM | NM | NM |
| | 2/6/01 | 19.89 | 22' | 2" | NM | NM | NM | NM | NM |
| MW-2 | 8/5/99 | 19.19 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/00 | 15.80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/00 | 22.30 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/00 | 21.36 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/01 | 18.89 | 25' | 2" | NM | NM | NM | NM | NM |
| MW-3 | 8/5/99 | 17.96 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/00 | 15.73 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/00 | 20.85 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/00 | 22.18 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/01 | 19.26 | 25' | 2" | NM | NM | NM | NM | NM |
| MW-4 | 8/5/00 | 17.59 | 25' | 2" | 3.7 | 4.3 | 75.7 | 2.06 | 21.0 |
| | 4/26/00 | 16.51 | 25' | 2" | 4.2 | 6.0 | 0.78 | 1.82 | 20.2 |
| | 8/1/00 | 20.63 | 25' | 2" | 2.1 | 5.4 | 0.52 | 3.91 | 21.9 |
| | 12/13/00 | 20.81 | 25' | 2" | 2.0 | 5.5 | NM | 1.90 | 18.5 |
| | 2/6/01 | 19.09 | 25' | 2" | 2.9 | NM | NM | NM | NM |
| MW-5 | 8/5/99 | 15.95 | 25' | 2" | 4.4 | 4.5 | 111.8 | 1.65 | 21.0 |
| | 4/26/00 | 14.35 | 25' | 2" | 5.2 | 6.2 | 0.92 | 2.73 | 19.4 |
| | 8/1/00 | 19.18 | 25' | 2" | 2.8 | 5.1 | 0.5 | 1.25 | 20.8 |
| | 12/13/00 | 19.68 | 25' | 2" | 2.6 | 5.3 | NM | 2.51 | 18.4 |
| | 2/6/01 | 16.50 | 25' | 2" | 4.2 | NM | NM | NM | NM |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-6 | 8/5/99 | 15.44 | 25' | 2" | 4.7 | 4.6 | 96 | 2.35 | 22.0 |
| | 4/26/00 | 13.65 | 25' | 2" | 5.6 | 6.1 | 0.92 | 1.72 | 18.6 |
| | 8/1/00 | 18.75 | 25' | 2" | 3.1 | 4.95 | 0.48 | 2.23 | 20.4 |
| | 12/13/00 | 18.23 | 25' | 2" | 3.3 | 5.14 | NM | 1.42 | 18.4 |
| | 2/6/01 | 15.34 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| MW-7 | 8/5/99 | 15.41 | 25' | 2" | 4.7 | 4.6 | 92.8 | 2.74 | 19.0 |
| | 4/26/00 | 13.54 | 25' | 2" | 5.6 | 6.2 | 0.91 | 2.46 | 17.4 |
| | 8/1/00 | 18.72 | 25' | 2" | 3.1 | 5.2 | 0.45 | 2.31 | 18.7 |
| | 12/13/00 | 18.01 | 25' | 2" | 3.4 | 5.6 | NM | 1.96 | 16.5 |
| | 2/6/01 | 15.41 | 25' | 2" | 3.4 | NM | NM | NM | NM |
| MW-8 | 8/5/00 | 14.59 | 25' | 2" | 5.1 | 4.9 | 45.4 | 3.01 | 21.0 |
| | 4/26/00 | 11.56 | 25' | 2" | 6.6 | 6.3 | 0.72 | 2.06 | 18.4 |
| | 8/1/00 | 19.18 | 25' | 2" | 2.8 | 5.3 | 0.53 | 0.81 | 23.0 |
| | 12/13/00 | 17.96 | 25' | 2" | 3.4 | 5.4 | NM | 1.93 | 18.7 |
| | 2/6/01 | 13.34 | 25' | 2" | 5.7 | NM | NM | NM | NM |
| MW-9 | 8/5/00 | 16.74 | 25' | 2" | 4.0 | 4.9 | 57.2 | 1.47 | 22.0 |
| | 4/26/00 | 15.09 | 25' | 2" | 4.8 | 5.9 | 0.72 | 1.45 | 20.4 |
| | 8/1/00 | 21.2 | 25' | 2" | 1.9 | 5.7 | 0.59 | 2.62 | 23.9 |
| | 12/13/00 | 19.73 | 25' | 2" | 2.6 | 5.4 | NM | 1.12 | 18.6 |
| | 2/6/01 | 17.54 | 25' | 2" | 3.6 | NM | NM | NM | NM |
| MW-10 | 8/5/99 | 18.06 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/00 | 15.75 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/00 | 20.50 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/00 | 19.40 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/01 | 18.84 | 25' | 2" | NM | NM | NM | NM | NM |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-11 | 8/5/99 | 15.60 | 25' | 2" | 4.6 | 4.8 | 42.7 | 6.38 | 22.0 |
| | 4/26/00 | 13.65 | 25' | 2" | 5.6 | 6.2 | 0.6 | 4.48 | 20.8 |
| | 8/1/00 | 18.61 | 25' | 2" | 3.1 | 5.6 | 0.31 | 4.79 | 21.4 |
| | 12/13/00 | 19.01 | 25' | 2" | 2.9 | 5.7 | NM | 5.15 | 19.8 |
| | 2/6/01 | 17.43 | 25' | 2" | 3.7 | NM | NM | NM | NM |
| MW-12 | 8/5/99 | 17.33 | 25' | 2" | 3.8 | 4.6 | 129.2 | 2.09 | 19.0 |
| | 4/26/00 | 16.06 | 25' | 2" | 4.4 | 6.3 | 1.03 | 2.9 | 18.5 |
| | 8/1/00 | 20.15 | 25' | 2" | 2.4 | 4.5 | 0.67 | 5.01 | 19.6 |
| | 12/13/00 | 23.7 | 25' | 2" | 0.6 | 5.4 | NM | 2.9 | 17.1 |
| | 2/6/01 | 18.45 | 25' | 2" | 3.2 | NM | NM | NM | NM |
| MW-13 | 8/5/99 | 21.26 | 25' | 2" | 1.8 | 4.2 | 51.7 | 2.32 | 18.0 |
| | 4/26/00 | 20.02 | 25' | 2" | 2.4 | 6.3 | 0.62 | 3.00 | 18.5 |
| | 8/1/00 | 24.05 | 25' | 2" | 0.5 | 5.2 | 0.42 | 2.14 | 19.7 |
| | 12/13/00 | 24.13 | 25' | 2" | 0.4 | 5.5 | NM | 1.04 | 15.9 |
| | 2/6/01 | 22.43 | 25' | 2" | 1.3 | NM | NM | NM | NM |
| MW-14 | 8/5/99 | 7.96 | 25' | 2" | 8.3 | 5.0 | 312 | 0.80 | 19.0 |
| | 4/26/00 | 6.46 | 25' | 2" | 9.1 | 6.1 | 1.56 | 1.72 | 15.5 |
| | 8/1/00 | 10.8 | 25' | 2" | 5.4 | 5.4 | 0.93 | 1.43 | 18.8 |
| | 12/13/00 | 10.8 | 25' | 2" | 5.4 | 5.5 | NM | 1.72 | 14.7 |
| | 2/6/01 | 8.72 | 25' | 2" | 5.4 | NM | NM | NM | NM |
| MW-15 | 8/5/99 | 6.28 | 25' | 2" | 9.2 | 4.8 | 86.5 | 0.87 | 18.0 |
| | 4/26/00 | 4.75 | 25' | 2" | 9.9 | 6.5 | 0.6 | 3.32 | 16.2 |
| | 8/1/00 | 9.11 | 25' | 2" | 7.8 | 5.5 | 0.41 | 3.17 | 19.5 |
| | 12/13/00 | 8.57 | 25' | 2" | 8.0 | 5.6 | NM | 1.93 | 15.1 |
| | 2/6/01 | 6.36 | 25' | 2" | 9.1 | NM | NM | NM | NM |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-16 | 8/5/99 | 11.22 | 25' | 2" | 6.7 | 4.9 | 49 | 0.79 | 18.0 |
| | 4/26/00 | 9.50 | 25' | 2" | 7.6 | 6.5 | 0.61 | 1.66 | 15.5 |
| | 8/1/00 | 14.35 | 25' | 2" | 5.2 | 6.0 | 0.95 | 1.64 | 19.3 |
| | 12/13/00 | 13.45 | 25' | 2" | 5.6 | 5.8 | NM | 2.27 | 15.6 |
| | 2/6/01 | 10.89 | 25' | 2" | 6.9 | NM | NM | NM | NM |
| MW-17 | 8/5/99 | 16.16 | 75' | 2" | 28.8 | 5.6 | 90.8 | 2.76 | 20.5 |
| | 4/26/00 | 16.8 | 75' | 2" | 28.5 | 6.4 | 0.86 | 6.1 | 20.8 |
| | 8/1/00 | 19.27 | 75' | 2" | 27.3 | 6.2 | 0.59 | 3.12 | 22.5 |
| | 12/13/00 | 19.20 | 75' | 2" | 27.3 | NM | NM | NM | NM |
| | 2/6/01 | 16.82 | 75' | 2" | 28.5 | NM | NM | NM | NM |

NOTES:
NS - Not sampled
Temperature in Degrees Celcius
Dissolved Oxygen in mg/L
Depth to Water and Depth to bottom in units of feet
Well volumes (Gallons)
Specific Conductivity (umhos/cm)

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| OMW-1 | 01-Dec-97 | 99.82 | 17.13 | - | 82.69 |
| | 05-Aug-99 | | 17.95 | 1.05 | 81.87 |
| | 26-Apr-00 | | 15.68 | 0.99 | 84.14 |
| | 01-Aug-00 | | 21.50 | 1.40 | 78.32 |
| | 13-Dec-00 | | 21.46 | 1.70 | 78.36 |
| | 06-Feb-01 | | 19.89 | 1.78 | 79.93 |
| MW-2 | 01-Dec-97 | 99.83 | 17.43 | - | 82.40 |
| | 05-Aug-99 | | 19.19 | 2.29 | 80.64 |
| | 26-Apr-00 | | 15.80 | 2.18 | 84.03 |
| | 01-Aug-00 | | 22.30 | 2.10 | 77.53 |
| | 13-Dec-00 | | 21.36 | 0.84 | 78.47 |
| | 06-Feb-01 | | 18.89 | sheen | 80.94 |
| MW-3 | 01-Dec-97 | 99.98 | 17.00 | - | 82.98 |
| | 05-Aug-99 | | 17.96 | 1.01 | 82.02 |
| | 26-Apr-00 | | 15.73 | 0.68 | 84.25 |
| | 01-Aug-00 | | 20.85 | 0.78 | 79.13 |
| | 13-Dec-00 | | 22.18 | 2.22 | 77.80 |
| | 06-Feb-01 | | 19.26 | 0.96 | 80.72 |
| MW-4 | 01-Dec-97 | 99.59 | 17.60 | - | 81.99 |
| | 05-Aug-99 | | 17.59 | - | 82.00 |
| | 26-Apr-00 | | 16.51 | - | 83.08 |
| | 01-Aug-00 | | 20.63 | - | 78.96 |
| | 13-Dec-00 | | 20.81 | - | 78.78 |
| | 06-Feb-01 | | 19.09 | - | 80.50 |
| MW-5 | 01-Dec-97 | 99.42 | 15.04 | - | 84.38 |
| | 05-Aug-99 | | 15.95 | - | 83.47 |
| | 26-Apr-00 | | 14.35 | - | 85.07 |
| | 01-Aug-00 | | 19.18 | - | 80.24 |
| | 13-Dec-00 | | 19.68 | - | 79.74 |
| | 06-Feb-01 | | 16.50 | - | 82.92 |
| MW-6 | 01-Dec-97 | 99.47 | 14.37 | - | 85.10 |
| | 05-Aug-99 | | 15.44 | - | 84.03 |
| | 26-Apr-00 | | 13.65 | - | 85.82 |
| | 01-Aug-00 | | 18.75 | - | 80.72 |
| | 13-Dec-00 | | 18.23 | - | 81.24 |
| | 06-Feb-01 | | 15.34 | - | 84.13 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-7 | 01-Dec-97 | 99.47 | 13.96 | - | 85.51 |
| | 05-Aug-99 | | 15.41 | - | 84.06 |
| | 26-Apr-00 | | 13.54 | - | 85.93 |
| | 01-Aug-00 | | 18.72 | - | 80.75 |
| | 13-Dec-00 | | 18.01 | - | 81.46 |
| | 06-Feb-01 | | 15.41 | - | 84.06 |
| MW-8 | 01-Dec-97 | 102.42 | 12.53 | - | 89.89 |
| | 05-Aug-99 | | 14.59 | - | 87.83 |
| | 26-Apr-00 | | 11.56 | - | 90.86 |
| | 01-Aug-00 | | 19.18 | - | 83.24 |
| | 13-Dec-00 | | 17.96 | - | 84.46 |
| | 06-Feb-01 | | 13.34 | - | 89.08 |
| MW-9 | 01-Dec-97 | 100.53 | 16.17 | - | 84.36 |
| | 05-Aug-99 | | 16.74 | - | 83.79 |
| | 26-Apr-00 | | 15.09 | - | 85.44 |
| | 01-Aug-00 | | 21.20 | - | 79.33 |
| | 13-Dec-00 | | 19.73 | - | 80.80 |
| | 06-Feb-01 | | 17.54 | - | 82.99 |
| MW-10 | 01-Dec-97 | 99.65 | 17.40 | - | 82.25 |
| | 05-Aug-99 | | 18.06 | 1.01 | 81.59 |
| | 26-Apr-00 | | 15.75 | 1.65 | 83.90 |
| | 01-Aug-00 | | 20.50 | 0.03 | 79.15 |
| | 13-Dec-00 | | 19.40 | 0.01 | 80.25 |
| | 06-Feb-01 | | 18.84 | sheen | 80.81 |
| MW-11 | 01-Dec-97 | 96.47 | 15.74 | - | 80.73 |
| | 05-Aug-99 | | 15.60 | - | 80.87 |
| | 26-Apr-00 | | 13.65 | - | 82.82 |
| | 01-Aug-00 | | 18.61 | - | 77.86 |
| | 13-Dec-00 | | 19.01 | - | 77.46 |
| | 06-Feb-01 | | 17.43 | - | 79.04 |
| MW-12 | 01-Dec-97 | 98.63 | 17.03 | - | 81.60 |
| | 05-Aug-99 | | 17.33 | - | 81.30 |
| | 26-Apr-00 | | 16.06 | - | 82.57 |
| | 01-Aug-00 | | 20.15 | - | 78.48 |
| | 13-Dec-00 | | 23.70 | - | 74.93 |
| | 06-Feb-01 | | 18.45 | - | 80.18 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-13 | 01-Dec-97 | 100.80 | 21.05 | - | 79.75 |
| | 05-Aug-99 | | 21.26 | - | 79.54 |
| | 26-Apr-00 | | 20.02 | - | 80.78 |
| | 01-Aug-00 | | 24.05 | - | 76.75 |
| | 13-Dec-00 | | 24.13 | - | 76.67 |
| | 06-Feb-01 | | 22.43 | - | 78.37 |
| MW-14 | 01-Dec-97 | 89.38 | 7.27 | - | 82.11 |
| | 05-Aug-99 | | 7.96 | - | 81.42 |
| | 26-Apr-00 | | 6.46 | - | 82.92 |
| | 11-Aug-00 | | 10.80 | - | 78.58 |
| | 13-Dec-00 | | 10.80 | - | 78.58 |
| | 06-Feb-01 | | 8.72 | - | 80.66 |
| MW-15 | 01-Dec-97 | 87.33 | 5.10 | - | 82.23 |
| | 05-Aug-99 | | 6.28 | - | 81.05 |
| | 26-Apr-00 | | 4.75 | - | 82.58 |
| | 01-Aug-00 | | 9.11 | - | 78.22 |
| | 13-Dec-00 | | 8.57 | - | 78.76 |
| | 06-Feb-01 | | 6.36 | - | 80.97 |
| MW-16 | 01-Dec-97 | 93.74 | 9.69 | - | 84.05 |
| | 05-Aug-99 | | 11.22 | - | 82.52 |
| | 26-Apr-00 | | 9.50 | - | 84.24 |
| | 01-Aug-00 | | 14.35 | - | 79.39 |
| | 13-Dec-00 | | 13.45 | - | 80.29 |
| | 06-Feb-01 | | 10.89 | - | 82.85 |
| DMW-17 | 01-Dec-97 | 100.08 | 15.53 | - | 84.55 |
| | 05-Aug-99 | | 16.16 | - | 83.92 |
| | 26-Apr-00 | | 16.80 | - | 83.28 |
| | 01-Aug-00 | | 19.27 | - | 80.81 |
| | 13-Dec-00 | | 19.20 | - | 80.88 |
| | 06-Feb-01 | | 16.82 | - | 83.26 |

**Notes:**
TOC - Top-of-Casing elevation refrenced to common datum.
NM - Not measured.
All measurments in units of feet.
- = No Data

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| OMW-1 | 1-Dec-97 | 14.9 | 85.5 | 5.2 | 24.8 | 130 | 96 | BDL |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-2 | 1-Dec-97 | 9,900 | 42,300 | 2,040 | 12,100 | 66,340 | 242,000 | 71.2 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-3 | 1-Dec-97 | 9,820 | 54,500 | 2,160 | 11,900 | 78,380 | 81,200 | 445 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-4 | 1-Dec-97 | 8,140 | 21,000 | 1,510 | 11,500 | 42,150 | 215,000 | 813 |
| | 5-Aug-99 | 14,200 | 34,600 | 2,750 | 15,900 | 67,450 | 109,000 | <5 |
| | 26-Apr-00 | 13,400 | 33,200 | 3,420 | 13,270 | 63,290 | 102,000 | 1,060 |
| | 1-Aug-00 | 10,100 | 23,300 | 1,740 | 11,410 | 46,550 | 109,000 | 559 |
| | 13-Dec-00 | 6,730 | 16,300 | 635 | 4,170 | 27,835 | 32,300 | 742 |
| | 6-Feb-01 | 5,860 | 13,500 | 1,080 | 7,230 | 27,670 | 26,100 | 210 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | <5 |
| MW-5 | 1-Dec-97 | 5,930 | 47,600 | 2,100 | 12,600 | 68,230 | BDL | 125 |
| | 5-Aug-99 | 6,400 | 61,600 | 2,460 | 12,100 | 82,560 | 410 | 335 |
| | 26-Apr-00 | 6,680 | 48,300 | 2,390 | 9,610 | 66,980 | 681 | 609 |
| | 1-Aug-00 | 4,250 | 40,300 | 1,960 | 12,530 | 59,040 | 258 | 396 |
| | 13-Dec-00 | 4,530 | 38,100 | 2,520 | 14,640 | 59,790 | 381 | 4770 |
| | 6-Feb-01 | 5,070 | 30,800 | 2,200 | 12,500 | 50,570 | 225 | 678 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-6 | 1-Dec-97 | 5.5 | 137 | 6.0 | 149 | 297.5 | BDL | BDL |
| | 5-Aug-99 | 4.1 | 1.1 | 3.7 | 16.7 | 25.6 | 5 | BDL |
| | 26-Apr-00 | 13.0 | 19.2 | 15 | 48 | 95.2 | 27.2 | 6.44 |
| | 1-Aug-00 | 117 | 1820 | 128 | 877 | 2942 | 10.7 | 32.2 |
| | 13-Dec-00 | 47.9 | 460 | 35.4 | 332 | 875 | 14.8 | 7.2 |
| | 6-Feb-01 | 47.4 | 143 | 47.6 | 219.2 | 457 | 17.8 | 22.6 |
| MW-7 | 1-Dec-97 | 1.1 | 1.7 | BDL | 1.1 | 3.9 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 41 | <1 |
| | 26-Apr-00 | 2.13 | 13.5 | BDL | 1.59 | 17.2 | 68.9 | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 53.8 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 52.9 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 18.7 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-8 | 1-Dec-97 | BDL | 2.4 | 1.2 | 5.4 | 9.0 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 1.58 | 8.53 | BDL | BDL | 10.1 | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-9 | 1-Dec-97 | 77 | 14,000 | 2,390 | 20,700 | 37,167 | 114 | 384 |
| | 5-Aug-99 | 110 | 4,280 | 2,450 | 17,000 | 23,840 | 150 | <500 |
| | 26-Apr-00 | 163 | 2,640 | 3,520 | 14,760 | 21,083 | BDL | 2,090 |
| | 1-Aug-00 | 187 | 18,400 | 1,010 | 16,070 | 35,667 | BDL | 909 |
| | 13-Dec-00 | 9.14 | 657 | 108 | 1,340 | 2,114 | 26.0 | 47 |
| | 6-Feb-01 | 10.6 | 254 | 181 | 2,907 | 3,353 | 16.9 | 179 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-10 | 1-Dec-97 | 6,220 | 46,300 | 2,320 | 14,800 | 69,640 | 938 | 542 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-11 | 1-Dec-97 | 1.4 | 3.4 | BDL | 4.7 | 9.5 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 7 | <5 |
| | 26-Apr-00 | 1.18 | 3.96 | BDL | BDL | 5.1 | 4.69 | 9.98 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | 2.51 | 91.0 | 15.0 | 104.4 | 212.9 | 26.3 | 17.2 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 39.5 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | - | 7 | <5 |
| MW-12 | 1-Dec-97 | 7,970 | 382 | 266 | 1,540 | 10,158 | 99,900 | 119 |
| | 5-Aug-99 | 5,000 | 260 | <200 | <200 | 5,260 | 41,200 | <1000 |
| | 26-Apr-00 | 135 | 4.51 | BDL | 11.0 | 151 | 6,800 | 18.2 |
| | 1-Aug-00 | 1670 | 17.1 | 4.33 | 114.9 | 1806 | 44,200 | BDL |
| | 13-Dec-00 | 119 | 9.1 | 2.11 | 26.7 | 157 | 4,230 | 31.7 |
| | 6-Feb-01 | 32.5 | 9.3 | 1.51 | 13.8 | 57 | 1,570 | 10.6 |
| SSTL | | 5 | 260 | <200 | <200 | - | 40 | 25 |
| MW-13 | 1-Dec-97 | BDL | 1.4 | BDL | 1.6 | 3 | 82.3 | BDL |
| | 5-Aug-99 | 3 | <1 | <1 | <1 | 3 | 604 | <5 |
| | 26-Apr-00 | 188 | 149 | BDL | BDL | 337 | 3,150 | BDL |
| | 1-Aug-00 | 207 | 5.74 | BDL | 32.8 | 245 | 3,641 | 24.3 |
| | 13-Dec-00 | 29.9 | 3.81 | 1.0 | 76.6 | 111 | 4,350 | 29.8 |
| | 6-Feb-01 | 377 | 12.10 | 2.8 | 105.2 | 497 | 5,200 | 54.9 |
| SSTL | | 3.0 | <1 | <1 | <1 | 3 | 40 | <5 |
| MW-14 | 1-Dec-97 | 1.1 | 1.4 | BDL | 2.7 | 5 | 76.5 | BDL |
| | 5-Aug-99 | 57 | 7 | 1 | 23 | 88 | 606 | 5 |
| | 26-Apr-00 | BDL | 1.38 | BDL | BDL | 1.38 | 1.11 | BDL |
| | 1-Aug-00 | 138 | 4.04 | BDL | 39.04 | 181.08 | 35.3 | 13.0 |
| | 13-Dec-00 | BDL | BDL | BDL | 2.13 | 2.13 | 129 | 2.33 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | 7 | 1 | 23 | - | 40 | 5 |
| MW-15 | 1-Dec-97 | 1.0 | 1.6 | BDL | 2.5 | 5 | BDL | BDL |
| | 5-Aug-99 | 3 | 6 | 1 | 6 | 16 | 27 | <5 |
| | 26-Apr-00 | 1.01 | 1.32 | BDL | BDL | 2.33 | 2.82 | 5.66 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 2.77 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 3 | 6 | 1 | 6 | - | 27 | <5 |

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-16 | 1-Dec-97 | BDL | 1.2 | BDL | 1.3 | 2.5 | BDL | BDL |
| | 5-Aug-99 | 2.2 | 8.8 | 1.6 | 7.1 | 19.7 | 4 | BDL |
| | 26-Apr-00 | 2.17 | 1.27 | BDL | BDL | 3.4 | 10.1 | BDL |
| | 1-Aug-00 | 5.02 | 3.01 | BDL | 3.5 | 11.5 | 16.1 | 1.35 |
| | 13-Dec-00 | 10.7 | BDL | BDL | 2.66 | 13.4 | 30.6 | 1.96 |
| | 6-Feb-01 | 6.25 | BDL | BDL | BDL | 6.25 | 32.7 | BDL |
| DMW-17 | 1-Dec-97 | 1.6 | 3.8 | 2.3 | 12.7 | 20.3 | BDL | BDL |
| | 5-Aug-99 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 26-Apr-00 | 1.06 | 1.24 | BDL | BDL | 2.3 | 8.97 | BDL |
| | 1-Aug-00 | BDL | 3.02 | BDL | BDL | 3.02 | 7.75 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 6.98 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 5.34 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | - | <1 | <1 |
| CP-WW | 1-Dec-97 | BDL | 1.2 | BDL | BDL | 1.2 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 2.96 | 1.09 | BDL | BDL | 4.1 | 315 | BDL |
| | 1-Aug-00 | 3.23 | 2.56 | BDL | 1.09 | 7 | 224 | BDL |
| | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | <1 | <1 | <1 | <1 | - | <1 | <1 |
| CLS-WW | 1-Dec-97 | 81.3 | 1.1 | BDL | 9.6 | 92 | 34.5 | BDL |
| | 5-Aug-99 | 81 | 1 | <1 | 10 | 92 | 35 | <5 |
| | 26-Apr-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | <1 | <1 | 10 | - | 35 | <5 |

**Notes:**

All results reported in parts per billion (ug/L) unless otherwise noted.

SSTL = Site specific target levels referenced in bid

FP = Free Product; NS = Not Sampled

BDL = Below detecatable Levels

Total BTEX = Summation of benzene, toluene, ethylbenzene and xylenes

MTBE = Methyl-tert-buytl-ether

# ATTACHMENT 3
# LABORATORY ANALYTICAL REPORT

# ACCESS ANALYTICAL, INC.

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 12, 2001
Report # 102000360
Order # 135959
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's DHE-12335

Sample I.D.: MW-4
Collected: 02/06/01 00:00
Received: 02/08/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 100 | | | |
| Methyl-Tert-Butyl-Ether | 26100 | ug/L | 5030/8260B | 100.000 | 02/08/2001 | 02/08/2001 14:55 | ME |
| Benzene | 5860 | ug/L | 5030/8260B | 100.000 | 02/08/2001 | 02/08/2001 14:55 | ME |
| Toluene | 13500 | ug/L | 5030/8260B | 100.000 | 02/08/2001 | 02/08/2001 14:55 | ME |
| Ethylbenzene | 1080 | ug/L | 5030/8260B | 100.000 | 02/08/2001 | 02/08/2001 14:55 | ME |
| m & p-Xylene | 4670 | ug/L | 5030/8260B | 100.000 | 02/08/2001 | 02/08/2001 14:55 | ME |
| o-Xylene | 2560 | ug/L | 5030/8260B | 100.000 | 02/08/2001 | 02/08/2001 14:55 | ME |
| Naphthalene | 210 | ug/L | 5030/8260B | 100.000 | 02/08/2001 | 02/08/2001 14:55 | ME |
| SURROGATE: Toluene-D8 | 97.00% | | | | | | |
| SURROGATE: Bromofluorobenzene | 95.25% | | | | | | |
| SURROGATE: Dibromofluoromethane | 96.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

RECEIVED FEB 15 2001

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 12, 2001
Report # 102000360
Order # 135960
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's DHE-12335

Sample I.D.: MW-5
Collected: 02/06/01 00:00
Received: 02/08/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 100 | | | | |
| Methyl-Tert-Butyl-Ether | 225 | ug/L | 5030/8260B | 100.000 | 02/08/2001 | 02/08/2001 | 14:58 | ME |
| Benzene | 5070 | ug/L | 5030/8260B | 100.000 | 02/08/2001 | 02/08/2001 | 14:58 | ME |
| Toluene | 30800 | ug/L | 5030/8260B | 100.000 | 02/08/2001 | 02/08/2001 | 14:58 | ME |
| Ethylbenzene | 2200 | ug/L | 5030/8260B | 100.000 | 02/08/2001 | 02/08/2001 | 14:58 | ME |
| m & p-Xylene | 8320 | ug/L | 5030/8260B | 100.000 | 02/08/2001 | 02/08/2001 | 14:58 | ME |
| o-Xylene | 4180 | ug/L | 5030/8260B | 100.000 | 02/08/2001 | 02/08/2001 | 14:58 | ME |
| Naphthalene | 678 | ug/L | 5030/8260B | 100.000 | 02/08/2001 | 02/08/2001 | 14:58 | ME |
| SURROGATE: Toluene-D8 | 96.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 111.75% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 101.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 12, 2001
Report # 102000360
Order # 135961
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's DHE-12335

Sample I.D.: MW-6
Collected: 02/06/01 00:00
Received: 02/08/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 17.8 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:00 | ME |
| Benzene | 47.4 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:00 | ME |
| Toluene | 143 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:00 | ME |
| Ethylbenzene | 47.6 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:00 | ME |
| m & p-Xylene | 140 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:00 | ME |
| o-Xylene | 79.2 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:00 | ME |
| Naphthalene | 22.6 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:00 | ME |
| SURROGATE: Toluene-D8 | 101.75% | | | | | | |
| SURROGATE: Bromofluorobenzene | 103.25% | | | | | | |
| SURROGATE: Dibromofluoromethane | 101.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 12, 2001
Report # 102000360
Order # 135962
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's DHE-12335

Sample I.D.: MW-7
Collected: 02/06/01 00:00
Received: 02/08/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 18.7 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:52 | ME |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:52 | ME |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:52 | ME |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:52 | ME |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:52 | ME |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:52 | ME |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:52 | ME |
| SURROGATE: Toluene-D8 | 95.00% | | | | | | |
| SURROGATE: Bromofluorobenzene | 94.25% | | | | | | |
| SURROGATE: Dibromofluoromethane | 97.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 12, 2001
Report # 102000360
Order # 135963
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's DHE-12335

Sample I.D.: MW-8
Collected: 02/06/01 00:00
Received: 02/08/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:54 | ME |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:54 | ME |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:54 | ME |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:54 | ME |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:54 | ME |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:54 | ME |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:54 | ME |
| SURROGATE: Toluene-D8 | 99.50% | | | | | | |
| SURROGATE: Bromofluorobenzene | 109.50% | | | | | | |
| SURROGATE: Dibromofluoromethane | 101.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 12, 2001
Report # 102000360
Order # 135964
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's DHE-12335

Sample I.D.: MW-9
Collected: 02/06/01 00:00
Received: 02/08/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 16.9 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:02 | ME |
| Benzene | 10.6 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:02 | ME |
| Toluene | 254 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:02 | ME |
| Ethylbenzene | 181 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:02 | ME |
| m & p-Xylene | 2090 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:02 | ME |
| o-Xylene | 817 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:02 | ME |
| Naphthalene | 179 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:02 | ME |
| SURROGATE: Toluene-D8 | 99.75% | | | | | | |
| SURROGATE: Bromofluorobenzene | 103.25% | | | | | | |
| SURROGATE: Dibromofluoromethane | 107.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

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H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 12, 2001
Report # 102000360
Order # 135965
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's DHE-12335

Sample I.D.: MW-11
Collected: 02/06/01 00:00
Received: 02/08/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 39.5 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:55 | ME |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:55 | ME |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:55 | ME |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:55 | ME |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:55 | ME |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:55 | ME |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:55 | ME |
| SURROGATE: Toluene-D8 | 98.25% | | | | | | |
| SURROGATE: Bromofluorobenzene | 99.50% | | | | | | |
| SURROGATE: Dibromofluoromethane | 103.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 12, 2001
Report # 102000360
Order # 135967
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's DHE-12335

Sample I.D.: MW-12
Collected: 02/06/01 00:00
Received: 02/08/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 1570 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:04 | ME |
| Benzene | 32.5 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:04 | ME |
| Toluene | 9.30 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:04 | ME |
| Ethylbenzene | 1.51 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:04 | ME |
| m & p-Xylene | 9.49 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:04 | ME |
| o-Xylene | 4.27 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:04 | ME |
| Naphthalene | 10.6 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:04 | ME |
| SURROGATE: Toluene-D8 | 103.25% | | | | | | |
| SURROGATE: Bromofluorobenzene | 102.25% | | | | | | |
| SURROGATE: Dibromofluoromethane | 101.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 12, 2001
Report # 102000360
Order # 135968
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's DHE-12335

Sample I.D.: MW-13
Collected: 02/06/01 00:00
Received: 02/08/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 5200 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:06 | ME |
| Benzene | 377 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:06 | ME |
| Toluene | 12.1 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:06 | ME |
| Ethylbenzene | 2.77 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:06 | ME |
| m & p-Xylene | 15.0 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:06 | ME |
| o-Xylene | 90.2 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:06 | ME |
| Naphthalene | 54.9 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 14:06 | ME |
| SURROGATE: Toluene-D8 | 103.25% | | | | | | |
| SURROGATE: Bromofluorobenzene | 94.75% | | | | | | |
| SURROGATE: Dibromofluoromethane | 99.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 12, 2001
Report # 102000360
Order # 135969
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's DHE-12335

Sample I.D.: MW-14
Collected: 02/06/01 00:00
Received: 02/08/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:56 | ME |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:56 | ME |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:56 | ME |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:56 | ME |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:56 | ME |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:56 | ME |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:56 | ME |
| SURROGATE: Toluene-D8 | 102.25% | | | | | | |
| SURROGATE: Bromofluorobenzene | 100.75% | | | | | | |
| SURROGATE: Dibromofluoromethane | 99.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 12, 2001
Report # 102000360
Order # 135970
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's DHE-12335

Sample I.D.: MW-16
Collected: 02/06/01 00:00
Received: 02/08/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 32.7 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:57 | ME |
| Benzene | 6.25 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:57 | ME |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:57 | ME |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:57 | ME |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:57 | ME |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:57 | ME |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:57 | ME |
| SURROGATE: Toluene-D8 | 102.50% | | | | | | |
| SURROGATE: Bromofluorobenzene | 108.50% | | | | | | |
| SURROGATE: Dibromofluoromethane | 100.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
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Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 12, 2001
Report # 102000360
Order # 135971
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's DHE-12335

Sample I.D.: DMW-17
Collected: 02/06/01 00:00
Received: 02/08/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 5.34 | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:57 | ME |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:57 | ME |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:57 | ME |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:57 | ME |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:57 | ME |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:57 | ME |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:57 | ME |
| SURROGATE: Toluene-D8 | 97.00% | | | | | | |
| SURROGATE: Bromofluorobenzene | 108.75% | | | | | | |
| SURROGATE: Dibromofluoromethane | 104.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 12, 2001
Report # 102000360
Order # 135972
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's DHE-12335

Sample I.D.: CLS-WW
Collected: 02/06/01 00:00
Received: 02/08/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:58 | ME |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:58 | ME |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:58 | ME |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:58 | ME |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:58 | ME |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:58 | ME |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:58 | ME |
| SURROGATE: Toluene-D8 | 98.50% | | | | | | |
| SURROGATE: Bromofluorobenzene | 97.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 96.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 12, 2001
Report # 102000360
Order # 136029
South Carolina Cert ID# 96023

Site Location/Project
SC.
Crawford's DHE-12335

Sample I.D.: MW-15
Collected: 02/06/01 00:00
Received: 02/08/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:59 | ME |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:59 | ME |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:59 | ME |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:59 | ME |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:59 | ME |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:59 | ME |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 02/09/2001 | 02/09/2001 13:59 | ME |
| SURROGATE: Toluene-D8 | 106.25% | | | | | | |
| SURROGATE: Bromofluorobenzene | 112.25% | | | | | | |
| SURROGATE: Dibromofluoromethane | 98.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
NC.=#539, ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

# Access Analytical - Chain of Custody Record

Project Submission #: 01/2-360 135959 - 135972 A.B.

PO #:

Company Name: H2O Environmental

Address: 121 Centrum Dr. #2

City: Irmo State: SC Zip: 29063

Project Name: Crawford's DHE-12335

Report To: Scott Johnston

REQUESTED LAB ANALYSIS:

PARAMETER: BTEX/MTBE/Naphth

| Sample Label | Date Collected | Time Collected | Matr | # of Cont | | |
|---|---|---|---|---|---|---|
| MW-4 | 2-6-01 | | GW | 2 | X | 135959 |
| MW-5 | | | | 2 | X | 135960 |
| MW-6 | | | | 2 | X | 135961 |
| MW-7 | | | | 2 | X | 135962 |
| MW-8 | | | | 2 | X | 135963 |
| MW-9 | | | | 2 | X | 135964 |
| MW-11 | | | | 2 | X | 135 965 |
| MW-12 | | | | 2 | X | 135 967 |
| MW-13 | | | | 2 | X | 135968 |
| MW-14 | | | | 2 | X | 135969 |


Access Analytical, Inc.
1248 Lake Murray Blvd.
Irmo, SC 29063
Phone: (803) 781-4243
Fax: 781-4303
Toll Free (888) 315-4243


NOTES / COMMENTS

As per Patti, add the extra sample (MW-15) that we've received this morning to COC. for the same Analysis. — A.B. 2/8/01

**Turnaround Time Requested:**

X Std. (5-7 Bus. days)

___ RUSH*

*Date Required: _____

Samples Reed on Ice?

___ Yes

___ No

Project Location:

X SC

___ NC

___ Other _____ (specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| Scott Johnston | 2-6-01 | 4:50 PM | Cheryl Barr |
| Cheryl Barr | 2/7/01 | 1700 | Fedex |
| Fedex | 2/8/01 | 1000 | Cathryn C. Brunetti, 512 |

Original Copy - Returned w/Report
Yellow Copy - Access Analytical Copy
Pink Copy - Client Copy

# Access Analytical - Chain of Custody Record

Project Submission #: 01/2-360 135959-135972 A.B. PO #:

Company Name: $H_2O$

Address: 121 Centpark Dr. #2

City: Irmo State: SC Zip: 29063

Project Name: Crawford DHE 12335

Report To: Scott Johnston

REQUESTED LAB ANALYSIS:

PARAMETER: BTEX/MTBE/Naphth

Access Analytical, Inc.
1248 Lake Murray Blvd.
Irmo, SC 29063
Phone: (803) 781-4243
Fax: 781-4303
Toll Free (888) 315-4243

| Sample Label | Date Collected | Time Collected | Matr | # of Cont | | NOTES / COMMENTS |
|---|---|---|---|---|---|---|
| MW-16 | 2-6-01 | | GW | 2 | X 135970 | |
| DMW-17 | " | | " | 2 | X 135971 | |
| CP-WW | " | | " | 2 | | No Sample Collected Pump Not Operational |
| CLS-WW | " | | " | 2 | X 135972 | |
| MW-15 | " | | " | 2 | X 136029 | |

**Turnaround Time Requested:**

X Std. (5-7 Bus. days)

___RUSH*

*Date Required:_____

Samples Recd on Ice?

___Yes

___No

Project Location:

X SC

___NC

___Other _____(specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| [signature] | 2-6-01 | 4:30PM | Cheryl Barr |
| Cheryl Barr | 2/7/01 | 1700 | Fedex |
| Fedex | 2/8/01 | 1000 | Anthony C. Bruce III, STL |

Original Copy - Returned w/Report
Yellow Copy - Access Analytical Copy
Pink Copy - Client Copy

passed original to Todd Adams on 5/2/00

April 28, 2000

RECEIVED

MAY 0 1 2000

Bureau of Underground
Storage Tank Management

Mr. Reed Corley, Project Manager
Underground Storage Tank Program
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: UIC permit addendum
Crawford's Grocery
5870 Highway 28 North
Abbeyville, South Carolina
SCDHEC Site ID # 12335

Dear Mr. Corley:

This letter is written to request permission to modify the existing UIC permit for the above referenced facility. $H_2O$ proposes the installation of one (1) additional sparge well located west of deep well DMW-17 (See Figure 5.0). The new sparge well (SV-10) will be constructed exactly like SV-1 through SV-9. Please see Figure 7.0 for the proposed well construction details. Upon your approval please forward the attached and amended UIC permit #505 to Todd Adams. If you have any questions or comments please do not hesitate to contact me at (803) 749-4080.

Sincerely,

**$H_2O$ Environmental, Inc.**

Noal Hudson
Geologist

Richard Gillespie 4/28/00
Richard Gillespie, P.G.
S.C. License No. 2199

USA DOCKETING 4944

$H_2O$ ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS
130 Centrum Drive, Suite 3B • Irmo, South Carolina 29063 • (803) 749-1080 • Fax 803-749-9211

| Form 1 UIC | DHEC | I. EPA ID NUMBER | | | |
|---|---|---|---|---|---|
| | | | | T/A | C |
| | Underground Injection Control Permit Application Ground-Water Protection Division (Collected under the Authority of Title 48 Chapter 1 of the 1976 South Carolina Code of Laws) | U | | | |

Read attached instructions before starting.

For Offical Use Only

| Application Approved month day year | Date Received month day year | Permit/Well Number |
|---|---|---|
| | | |

**Comments**

| II. Facility Name and Address | III. Owner/Operator and Address |
|---|---|
| Facility Name: Crawford's Country Store Site# 12335 | Owner/Operator Name: Harold Franklin Crawford |
| Street Address: 5870 Highway 28 North | Street Address: 5870 Highway 28 North |
| City: Abbeville, SC State: SC Zip Code: 29620 | City: Abbeville, SC State: SC Zip Code: 29620 |

**IV. Ownership Status (Mark "x")**

- [ ] A. Federal
- [xx] B. State
- [ ] C. Private
- [ ] D. Public
- [ ] E. Other (Explain)

**V. SIC Codes**

201-Petroleum

**VI. Well Status (Mark "x")**

- [ ] A. Operating — Date Started: month day year
- [ ] B. Modification/Conversion
- [xx] C. Proposed

**VII. Type of Permit Requested - Class and Type of Well (see reverse)**

| A. Class(es) enter code(s) | B. Type(s) enter code(s) | C. If class is "other" or type is code "x", explain | D. Number of Wells per type |
|---|---|---|---|
| V.a | I | Corrective Action Wells | 9 10 MW1 |

**VIII. Location of Wells or Approximate Center of field or Project**

| C | A. Latitude | | | | B. Longitude | | | |
|---|---|---|---|---|---|---|---|---|
| I | Deg | Min | Sec | | Deg | Min | Sec | |
| | 34 | 18 | 151 | | 82 | 32 | 473 | |

**IX. Attachments**

Complete the following questions on a separate sheet(s) and number accordingly; see instructions for Classes II, III, and V, complete and submit on a separate sheet(s) attachments A-U as appropriate. Attach maps where required. List attachments by letter which are applicable and include with your application.

**X. Certification**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and imprisonment.

| A. Name and Title (Type or Print) | B. Phone No. |
|---|---|
| Scott Johnston-Division Director | (803)749-4080 |
| C. Signature | D. Date Signed |
| [signature] | 1-10-99 |

# ATTACHMENTS FOR UIC PERMIT

**Attachment A**

Ten (10) proposed sparge wells will be used to inject clean air for sparging.

**Attachment B**

The construction details for the proposed sparge well S-1 through S-10 are attached (Figure 7.0).

**Attachment C**

Clean air will be injected into all sparge wells continually at a flow rate of approximately 3 CFM and 8 PSI, for a period of approximately 24 months.

The hydraulic conductivity of the site is approximately 3.169 ft/day and will accept the flows proposed.

**Attachment D**

The monitoring program is provided in the associated CAP.

**Attachment E** N/A

**Attachment F**

The site is a retail fueling station/convenience store.

**Attachment G** See CAP/ER

**Attachment H** Attached please find a USGS Quad Map and a site map.

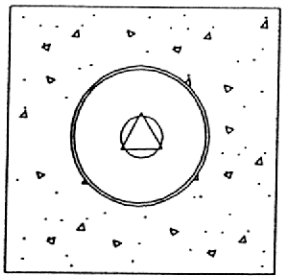
**Attachment I** See Expanded Assessment Report

**Attachment J** Shallow Surfical Aquifer

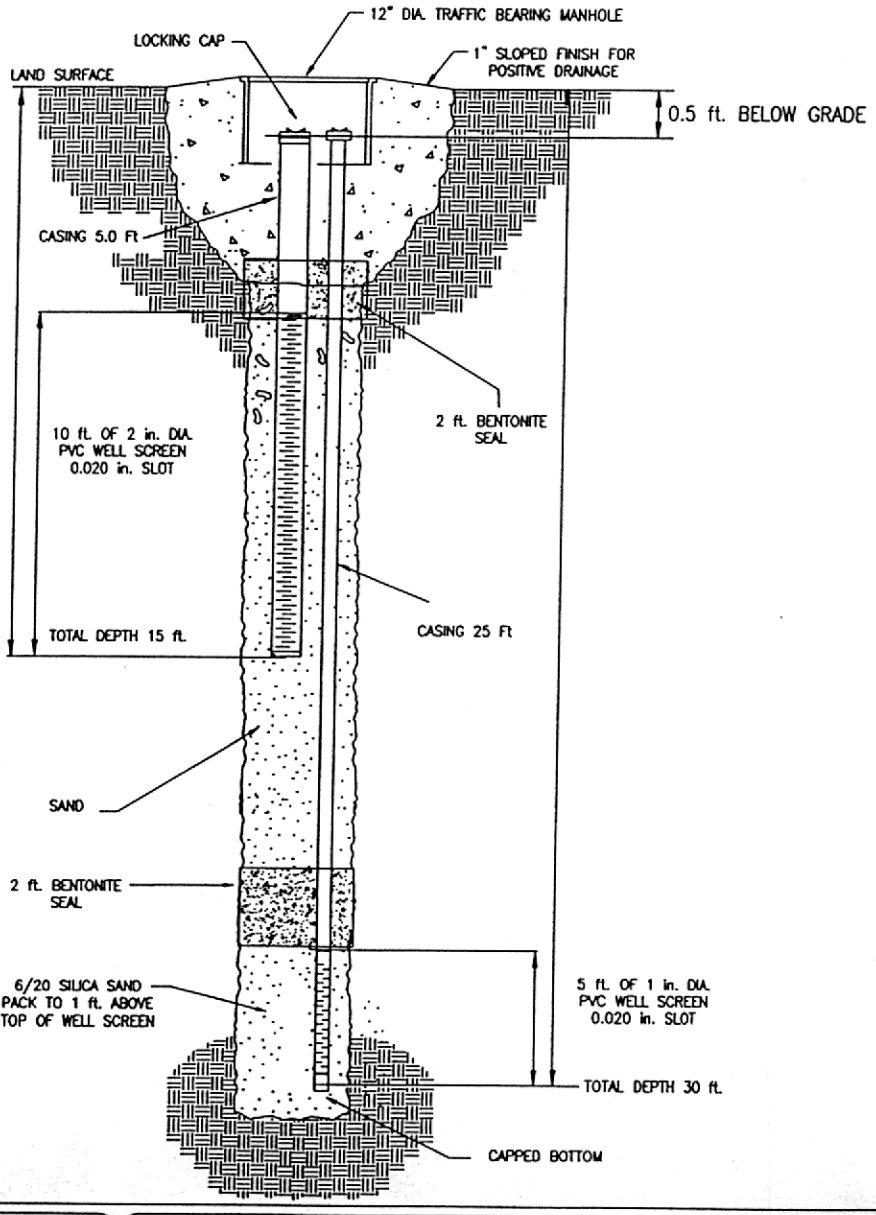
**Attachment K** See Expanded Assessment Report

# ATTACHMENT B

# WELL CONSTRUCTION DATA



2 ft x 2ft.
CONCRETE PAD




SCALE: NOT TO SCALE

PREPARED FOR: Crawford's Country Store

JOB DESIGNATION: DHE-12335

H2 ENVIRONMENTAL, INC.
ASSESSMENT AND REMEDIATION SPECIALISTS

SITE ADDRESS:
SCDHEC SITE 12335
5870 Highway 28 North
ABBEVILLE, SOUTH CAROLINA

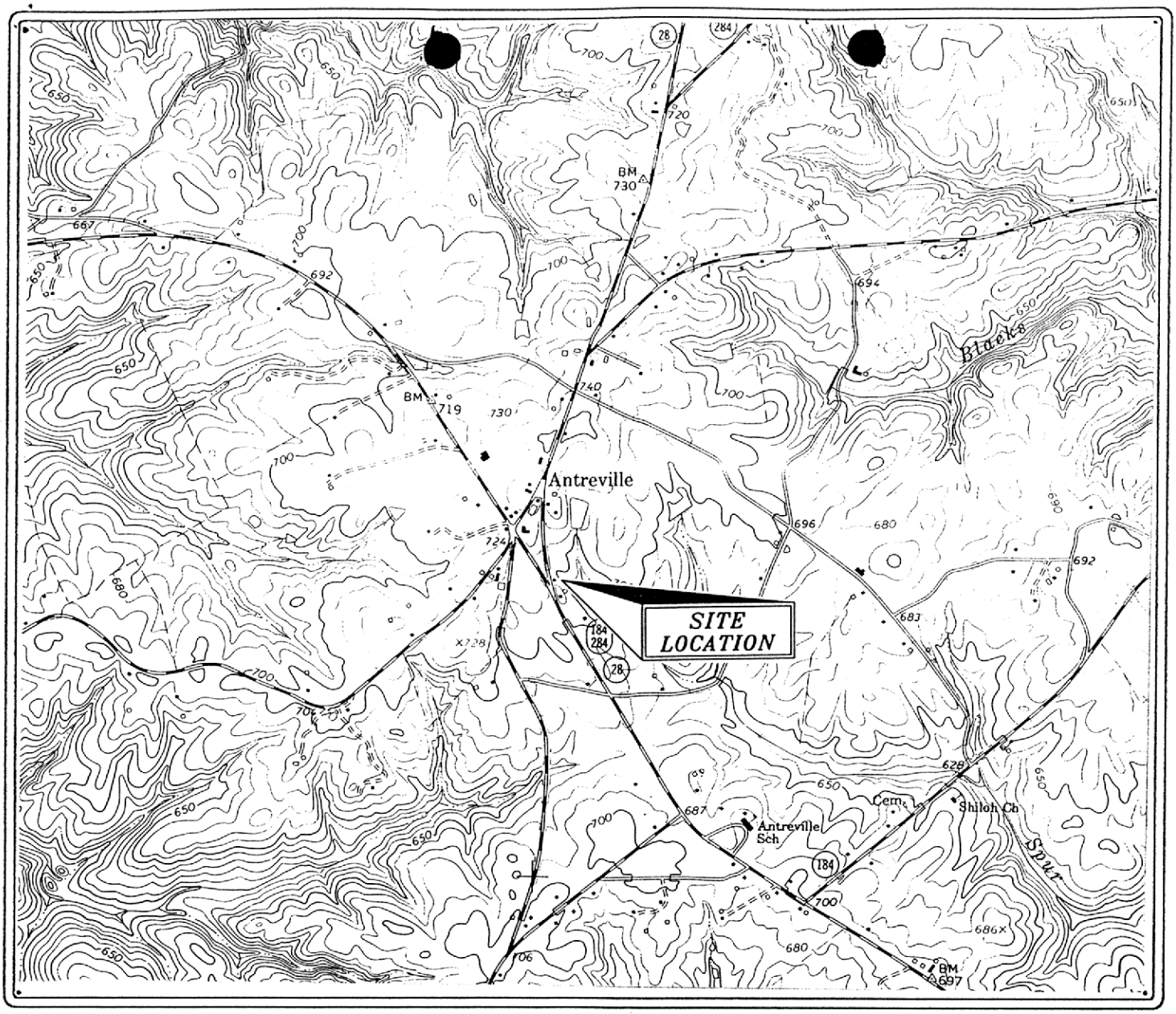
DRAWN BY:

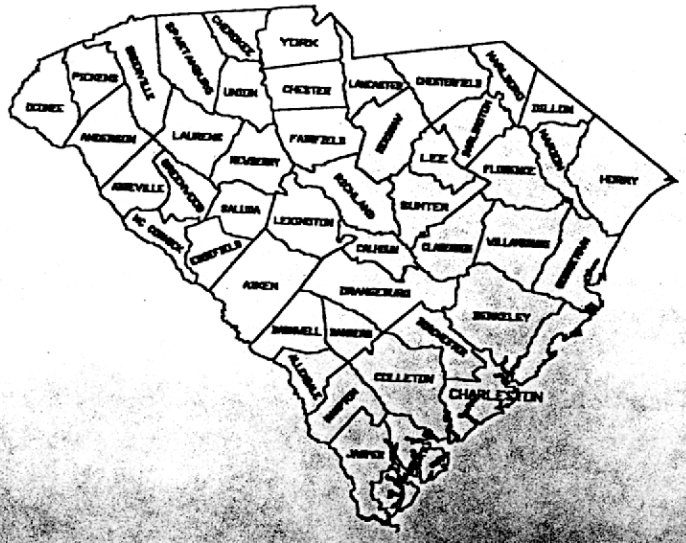
DATE DRAWN: 12/20/99

FIGURE TITLE: SPARGE AND VAPOR EXTRACTION WELL

FIGURE NUMBER: 7.0

# MAPS




U.S.G.S. SOURCE QUADRANGLE:

ANTREVILLE QUADRANGLE
S.C., 1973, 7.5 MINUTE MAPS
GEOLOGICAL SURVEY, DENVER, COLORADO

GRAPHIC SCALE IN FEET

2000 0 1000 2000 4000

$H_2O$ ENVIRONMENTAL, INC.
ASSESSMENT AND REMEDIATION SPECIALISTS

NORTH

PREPARED FOR:
SCDHEC

SITE ADDRESS:
CRAWFORD'S COUNTRY STORE
ABBEVILLE, SC
SCDHEC SITE 12535

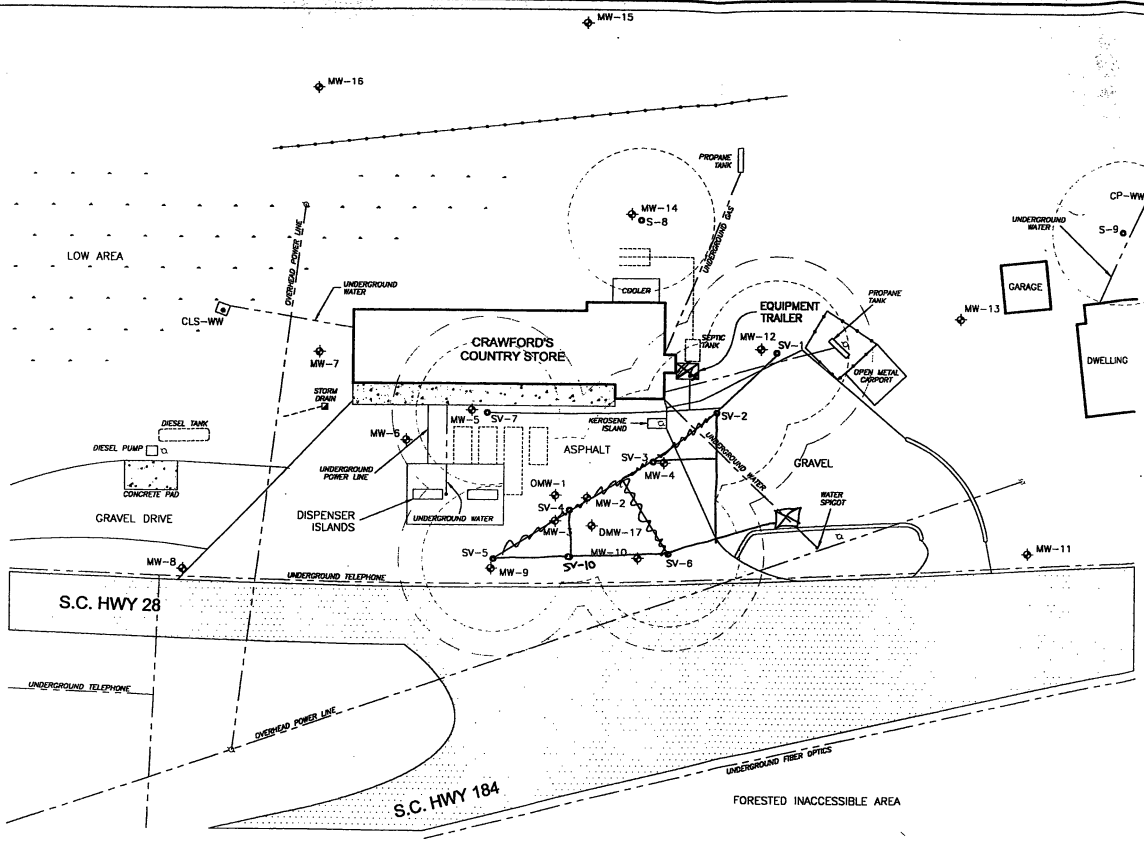
FIGURE TITLE:
U.S.G.S. SITE LOCATION MAP

DRAWN BY:

DATE DRAWN:
01/07/10

PROJECT NUMBER:
[illegible]

PAGE:
1




## LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SPARGE/VAPOR EXTRACTION WELL |
| S-# | SPARGE WELL |
| | PIPING TRENCH |
| | SPARGE WELL PROPOSED RADIUS OF INFLUENCE (30') |
| | VAPOR EXTRACTION WELL PROPOSED RADIUS OF INFLUENCE (40') |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

FIGURE TITLE: REMEDIATION SYSTEM LAYOUT

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO.: DHE-12335

DRAWING DATE: 5/12/2000

DRAWN BY: Driscoll

FIGURE: 5-0

October 18, 2001

RECEIVED
OCT 22 2001
Underground Storage
Tank Program

Mr. John Abernathy
Underground Storage Tank Program
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: 5th Quarterly Report
Crawford's Country Store
5870 Hwy 28 North
Antreville, South Carolina
SCDHEC Site ID # 12335

Dear Mr. Abernathy:

On February 4, 2000, the South Carolina Department of Health and Environmental Control (SCDHEC) provided notice to proceed to $H_2O$ Environmental, Inc. ($H_2O$) to perform Corrective Action at Crawford's Country Store located at 5870 Highway 28 North, Antreville, South Carolina. See Figure 1, Attachment 1 for a layout of the site and remediation system. The objective of the project is to reduce the Chemicals of Concern (COC) in monitoring wells OMW-1, MW-2 through MW-5, MW-7 through MW-15, DMW-17, CP-WW and CLS-WW to the site specific target levels (SSTLs). A chronological summary of site activities is provided below:

| | |
|---|---|
| 2/4/00 | SCDHEC awarded Bid Number SB-9570-12/02/99-TC |
| 3/02/00 | Corrective Action Plan/Engineering Report submitted to SCDHEC |
| 4/18/00 | CAP/ER approved |
| 4/26/00 | Initial groundwater sampling event |
| 5/17/00 | Initial groundwater results submitted |
| 5/22/00-5/31/00 | System installed |
| 5/31/00 | System was inspected and approved Todd Adams of SCDHEC |
| 5/31/00 | Invoice submitted for payment of 40% of the contract amount |
| 6/14/00 | System start-up |
| 8/01/00 | 1st quarter sampling event |
| 8/28/99 | 1st quarter report submitted |
| 9/13/00 | Free product recovery from OMW-1, MW-2 and MW-3 |
| 12/13/00 | 2nd quarter sampling event |
| 2/16/01 | 2nd quarter report submitted |
| 2/6/01 | 3rd quarter sampling event |
| 3/15/01 | 3rd quarter report submitted |

UST
50 leaks
DOCKETING

$H_2O$ ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS
130 Centrum Drive, Suite 3B • Irmo, South Carolina 29063 • 803•749•4080 • Fax 803•749•9911

| | |
|---|---|
| 6/5/01 | 4th quarter sampling event |
| 7/31/01 | 4th quarter report submitted |
| 9/13/01 | 5th quarter sampling event |

An air injection/vapor extraction system was installed in May 2000 and put in operation in June 2000. The system consists of ten air injection/vapor extraction wells SV-1 through SV-10. In order to target the source area, $H_2O$ is rotating air sparging in injection/vapor extraction wells SV-1 through SV-10 and extracting vapor from injection/vapor extraction wells SV-1 through SV-8. Refer to Figure 1, Attachment 1 for a map illustrating the system layout. The following table summarizes the general operating characteristics of the system.

| Summary of System Operating Characteristics | | | | |
|---|---|---|---|---|
| Well ID | Activity | PSI | CFM | IWG |
| SV-1 - SV-8 | Vapor Extraction | – | – | 55 |
| SV-1 - SV-10 | Air Sparging | 10 | 6 | – |

An air sample was collected from the effluent of the vapor extraction system on August 1, 2000. Based on the review of the laboratory analysis, it is estimated that contaminant emissions will not exceed 1,000 pounds per month. An air sample was not collected this quarter because the OVA field screening results were below detection limits.

On September 13, 2001 $H_2O$ Environmental Inc. personnel gauged and collected groundwater samples from monitoring wells MW-2, MW-4 through MW-17, and water well CLS-WW at the site. Water well CP-WW located at the Green residence was not operational at the time of the sampling event and a groundwater sample could not be collected. A new water well has apparently been installed and is currently being used by the Green residence. Monitoring wells OMW-1 and MW-3 contained free product and groundwater samples were not collected. The groundwater samples were analyzed for Benzene, Toluene, Ethylbenzene, total Xylenes (BTEX), Methyl-Tert-Butyl Ether (MTBE), and Naphthalene. A review of the groundwater elevation data indicated a groundwater flow direction to the south-southeast. Table 1, Attachment 2, summarizes field data collected during monitoring well purging. The groundwater elevations are summarized on Table 2, Attachment 2, and illustrated on Figure 2, Attachment 1. The groundwater quality for Chemicals of Concern is summarized on Table 3, Attachment 2, and illustrated on Figure 3, Attachment 1. A copy of the laboratory analytical report is provided in Attachment 3.

Free product was detected in monitoring wells OMW-1 and MW-3 this quarter having an average thickness of 0.02 feet which is down from an average of 0.29 feet reported last quarter. Liquid level measurements collected from monitoring well MW-2 and MW-10 indicated no measurable thickness of product on the date measured. Refer to Figure 1, Attachment 1 for a map illustrating the location of the referenced monitoring wells. The table below summarizes free product thicknesses encountered during this quarter. Product generated is placed on-site into a 55-gallon drum. Any disposal manifests will be forwarded to DHEC upon receipt.

| Monitoring Well | Depth to product | Depth to Water | Product Thickness |
|---|---|---|---|
| OMW-1 | 18.72 | 18.74 | 0.02 |
| MW-2 | -- | 19.03 | -- |
| MW-3 | 18.78 | 18.80 | 0.02 |
| MW-10 | -- | 19.16 | -- |

Note: All measurements in units of feet.

Review of the analytical data indicates monitoring wells MW-7, MW-8, MW-14, MW-15, and Water well CLS-WW are below the established SSTL's. Groundwater samples collected from MW-2, MW-4, MW-5, MW-9, MW-10, MW-11, MW-12, MW-13 and DMW-17 indicate concentrations above the established SSTL's. Free product is still present in OMW-1 and MW-3, however, based on the field data collected, the thickness has decreased considerably since last quarter. $H_2O$ will continue to operate the remediation system. If you have any questions or comments please do not hesitate to contact me at (803) 749-4080.

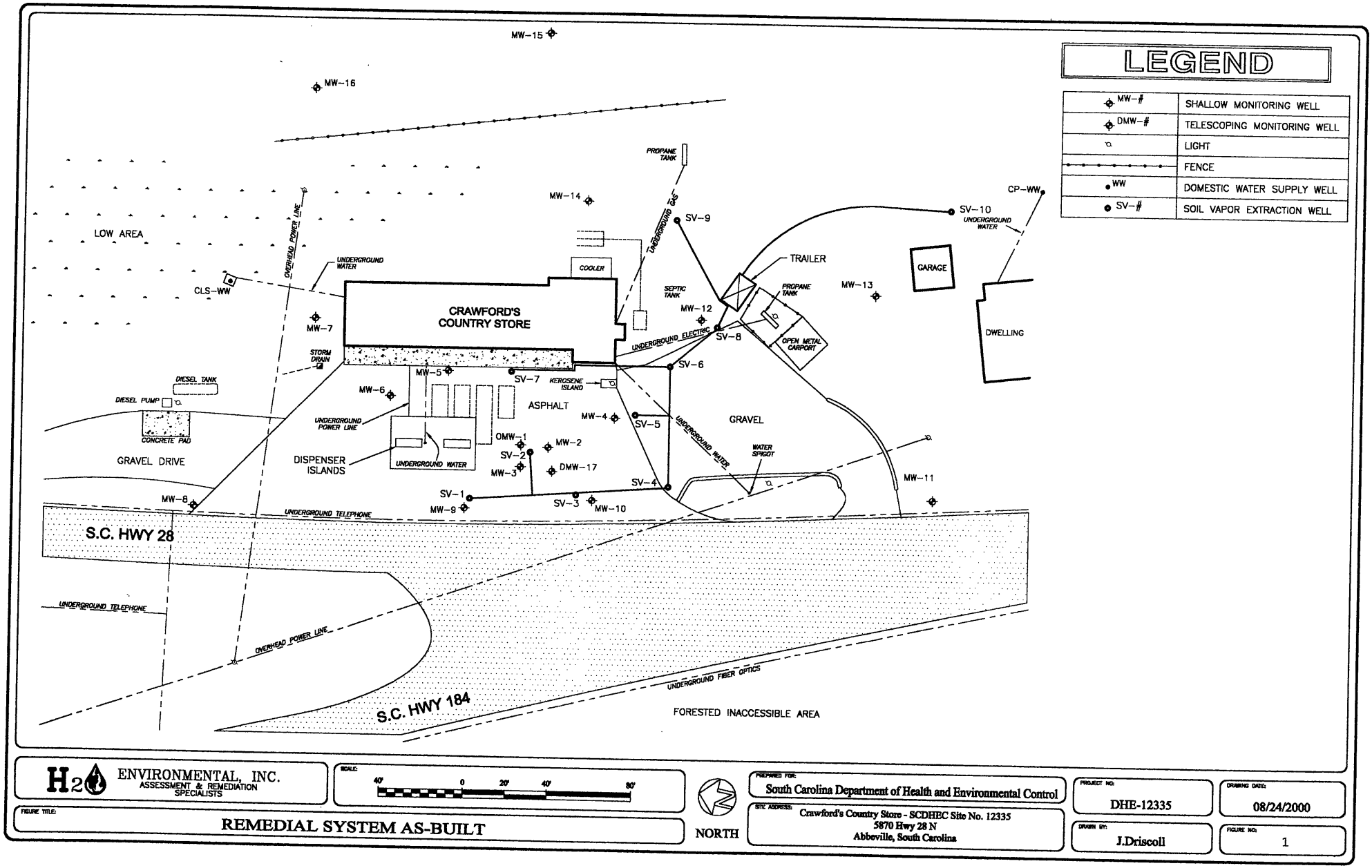
Sincerely,

**$H_2O$ Environmental, Inc.**
Class I Site Rehabilitation Contractor No. 32

Richard Gillespie

Richard D. Gillespie, P.G.
Senior Geologist 10-18-01
License Number 2199

# ATTACHMENT 1
# FIGURES




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

FIGURE TITLE: **REMEDIAL SYSTEM AS-BUILT**

PREPARED FOR: South Carolina Department of Health and Environmental Control

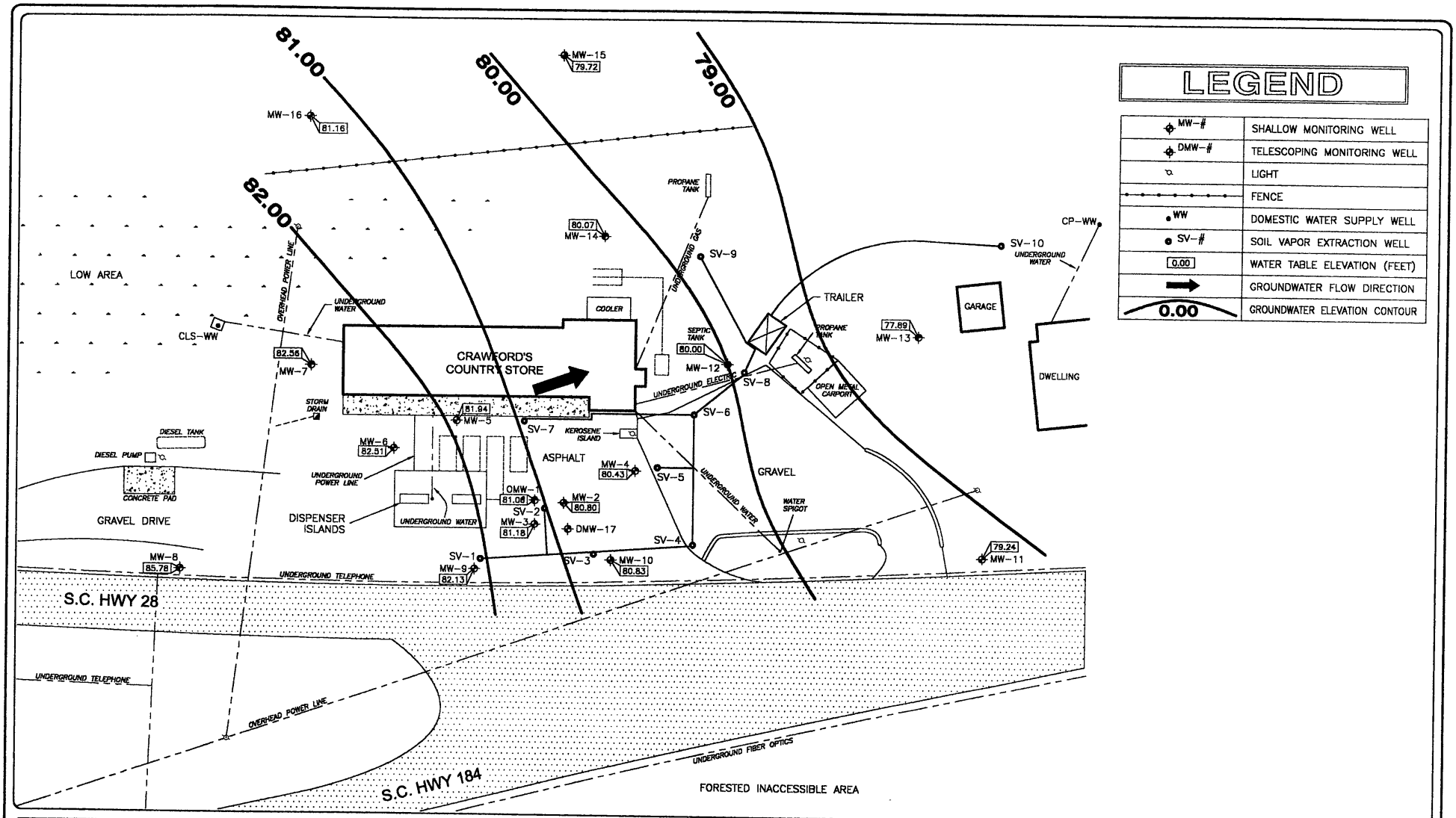
SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 08/24/2000

DRAWN BY: J.Driscoll

FIGURE NO: 1




H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

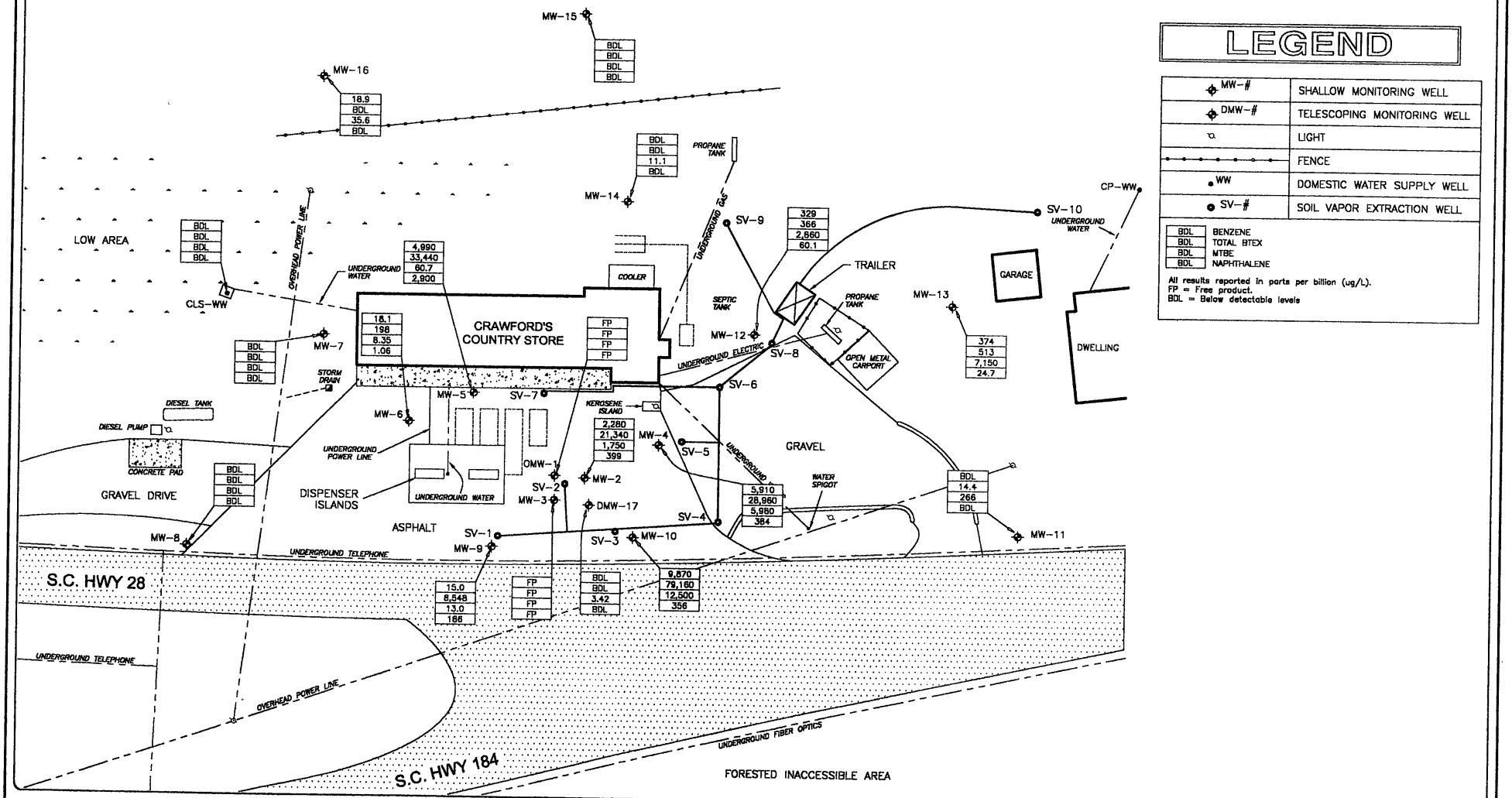
PROJECT NO: DHE-12335

DRAWING DATE: 9/28/2001

DRAWN BY: J.Driscoll

FIGURE NO: 2

FIGURE TITLE: GROUNDWATER FLOW MAP - 9/13/2001




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

| | |
|---|---|
| BDL | BENZENE |
| BDL | TOTAL BTEX |
| BDL | MTBE |
| BDL | NAPHTHALENE |

All results reported in parts per billion (ug/L).
FP = Free product.
BDL = Below detectable levels

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

FIGURE TITLE: GROUNDWATER QUALITY MAP - 9/13/2001

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 9/29/2001

DRAWN BY: J.Driscoll

FIGURE NO: 3

# ATTACHMENT 2
# TABLES

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 8/5/99 | 17.95 | 22' | 2" | NM | NM | NM | NM | NM |
| | 4/26/00 | 15.68 | 22' | 2" | NM | NM | NM | NM | NM |
| | 8/1/00 | 21.50 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/13/00 | 21.46 | 22' | 2" | NM | NM | NM | NM | NM |
| | 2/6/01 | 19.89 | 22' | 2" | NM | NM | NM | NM | NM |
| | 6/5/01 | 17.18 | 22' | 2" | NM | NM | NM | NM | NM |
| | 9/13/01 | 18.74 | 22' | 2" | NM | NM | NM | NM | NM |
| MW-2 | 8/5/99 | 19.19 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/00 | 15.80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/00 | 22.30 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/00 | 21.36 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/01 | 18.89 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/01 | 17.42 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/01 | 19.03 | 25' | 2" | NM | NM | NM | NM | NM |
| MW-3 | 8/5/99 | 17.96 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/00 | 15.73 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/00 | 20.85 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/00 | 22.18 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/01 | 19.26 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/01 | 17.41 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/01 | 18.80 | 25' | 2" | NM | NM | NM | NM | NM |
| MW-4 | 8/5/00 | 17.59 | 25' | 2" | 3.7 | 4.3 | 75.7 | 2.06 | 21.0 |
| | 4/26/00 | 16.51 | 25' | 2" | 4.2 | 6.0 | 0.78 | 1.82 | 20.2 |
| | 8/1/00 | 20.63 | 25' | 2" | 2.1 | 5.4 | 0.52 | 3.91 | 21.9 |
| | 12/13/00 | 20.81 | 25' | 2" | 2.0 | 5.5 | NM | 1.90 | 18.5 |
| | 2/6/01 | 19.09 | 25' | 2" | 2.9 | NM | NM | NM | NM |
| | 6/5/01 | 17.70 | 25' | 2" | 3.6 | 5.3 | NM | 1.80 | 21.8 |
| | 9/13/01 | 19.16 | 25' | 2" | 2.9 | NM | NM | 2.29 | 22.2 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-5 | 8/5/99 | 15.95 | 25' | 2" | 4.4 | 4.5 | 111.8 | 1.65 | 21.0 |
| | 4/26/00 | 14.35 | 25' | 2" | 5.2 | 6.2 | 0.92 | 2.73 | 19.4 |
| | 8/1/00 | 19.18 | 25' | 2" | 2.8 | 5.1 | 0.5 | 1.25 | 20.8 |
| | 12/13/00 | 19.68 | 25' | 2" | 2.6 | 5.3 | NM | 2.51 | 18.4 |
| | 2/6/01 | 16.50 | 25' | 2" | 4.2 | NM | NM | NM | NM |
| | 6/5/01 | 15.51 | 25' | 2" | 4.6 | 4.5 | NM | 1.88 | 21.5 |
| | 9/13/01 | 17.48 | 25' | 2" | 3.7 | NM | NM | 1.94 | 22.2 |
| MW-6 | 8/5/99 | 15.44 | 25' | 2" | 4.7 | 4.6 | 96 | 2.35 | 22.0 |
| | 4/26/00 | 13.65 | 25' | 2" | 5.6 | 6.1 | 0.92 | 1.72 | 18.6 |
| | 8/1/00 | 18.75 | 25' | 2" | 3.1 | 4.95 | 0.48 | 2.23 | 20.4 |
| | 12/13/00 | 18.23 | 25' | 2" | 3.3 | 5.14 | NM | 1.42 | 18.4 |
| | 2/6/01 | 15.34 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 6/5/01 | 14.84 | 25' | 2" | 5.0 | 5.57 | NM | 1.44 | 21.8 |
| | 9/13/01 | 16.96 | 25' | 2" | 3.9 | NM | NM | 1.80 | 20.9 |
| MW-7 | 8/5/99 | 15.41 | 25' | 2" | 4.7 | 4.6 | 92.8 | 2.74 | 19.0 |
| | 4/26/00 | 13.54 | 25' | 2" | 5.6 | 6.2 | 0.91 | 2.46 | 17.4 |
| | 8/1/00 | 18.72 | 25' | 2" | 3.1 | 5.2 | 0.45 | 2.31 | 18.7 |
| | 12/13/00 | 18.01 | 25' | 2" | 3.4 | 5.6 | NM | 1.96 | 16.5 |
| | 2/6/01 | 15.41 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 6/5/01 | 14.61 | 25' | 2" | 5.1 | 5.4 | NM | 2.25 | 19.9 |
| | 9/13/01 | 16.91 | 25' | 2" | 4.0 | NM | NM | 2.50 | 20.9 |
| MW-8 | 8/5/00 | 14.59 | 25' | 2" | 5.1 | 4.9 | 45.4 | 3.01 | 21.0 |
| | 4/26/00 | 11.56 | 25' | 2" | 6.6 | 6.3 | 0.72 | 2.06 | 18.4 |
| | 8/1/00 | 19.18 | 25' | 2" | 2.8 | 5.3 | 0.53 | 0.81 | 23.0 |
| | 12/13/00 | 17.96 | 25' | 2" | 3.4 | 5.4 | NM | 1.93 | 18.7 |
| | 2/6/01 | 13.34 | 25' | 2" | 5.7 | NM | NM | NM | NM |
| | 6/5/01 | 13.15 | 25' | 2" | 5.8 | 5.4 | NM | 2.02 | 21.5 |
| | 9/13/01 | 16.64 | 25' | 2" | 4.1 | NM | NM | 1.56 | 20.3 |

# TABLE 1
## SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-9 | 8/5/00 | 16.74 | 25' | 2" | 4.0 | 4.9 | 57.2 | 1.47 | 22.0 |
| | 4/26/00 | 15.09 | 25' | 2" | 4.8 | 5.9 | 0.72 | 1.45 | 20.4 |
| | 8/1/00 | 21.2 | 25' | 2" | 1.9 | 5.7 | 0.59 | 2.62 | 23.9 |
| | 12/13/00 | 19.73 | 25' | 2" | 2.6 | 5.4 | NM | 1.12 | 18.6 |
| | 2/6/01 | 17.54 | 25' | 2" | 3.6 | NM | NM | NM | NM |
| | 6/5/01 | 16.35 | 25' | 2" | 4.2 | NM | NM | NM | NM |
| | 9/13/01 | 18.40 | 25' | 2" | 3.2 | 4.4 | NM | 2.91 | 23.5 |
| MW-10 | 8/5/99 | 18.06 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/00 | 15.75 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/00 | 20.50 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/00 | 19.40 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/01 | 18.84 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/01 | 17.38 | 25' | 2" | 3.7 | 5.6 | NM | 1.4 | 22.9 |
| | 9/13/01 | 18.82 | 25' | 2" | 3.0 | 5.2 | NM | 3.20 | 23.2 |
| MW-11 | 8/5/99 | 15.60 | 25' | 2" | 4.6 | 4.8 | 42.7 | 6.38 | 22.0 |
| | 4/26/00 | 13.65 | 25' | 2" | 5.6 | 6.2 | 0.6 | 4.48 | 20.8 |
| | 8/1/00 | 18.61 | 25' | 2" | 3.1 | 5.6 | 0.31 | 4.79 | 21.4 |
| | 12/13/00 | 19.01 | 25' | 2" | 2.9 | 5.7 | NM | 5.15 | 19.8 |
| | 2/6/01 | 17.43 | 25' | 2" | 3.7 | NM | NM | NM | NM |
| | 6/5/01 | 15.96 | 25' | 2" | 4.4 | 5.8 | NM | 6.01 | 21.4 |
| | 9/13/01 | 17.23 | 25' | 2" | 3.8 | 4.6 | NM | 5.82 | 22.4 |
| MW-12 | 8/5/99 | 17.33 | 25' | 2" | 3.8 | 4.6 | 129.2 | 2.09 | 19.0 |
| | 4/26/00 | 16.06 | 25' | 2" | 4.4 | 6.3 | 1.03 | 2.9 | 18.5 |
| | 8/1/00 | 20.15 | 25' | 2" | 2.4 | 4.5 | 0.67 | 5.01 | 19.6 |
| | 12/13/00 | 23.7 | 25' | 2" | 0.6 | 5.4 | NM | 2.9 | 17.1 |
| | 2/6/01 | 18.45 | 25' | 2" | 3.2 | NM | NM | NM | NM |
| | 6/5/01 | 17.26 | 25' | 2" | 3.8 | 10.2 | NM | 2.07 | 19.3 |
| | 9/13/01 | 18.63 | 25' | 2" | 3.1 | NM | NM | 2.71 | 20.5 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-13 | 8/5/99 | 21.26 | 25' | 2" | 1.8 | 4.2 | 51.7 | 2.32 | 18.0 |
| | 4/26/00 | 20.02 | 25' | 2" | 2.4 | 6.3 | 0.62 | 3.00 | 18.5 |
| | 8/1/00 | 24.05 | 25' | 2" | 0.5 | 5.2 | 0.42 | 2.14 | 19.7 |
| | 12/13/00 | 24.13 | 25' | 2" | 0.4 | 5.5 | NM | 1.04 | 15.9 |
| | 2/6/01 | 22.43 | 25' | 2" | 1.3 | NM | NM | NM | NM |
| | 6/5/01 | 21.34 | 25' | 2" | 1.8 | NM | 5.4 | 2.61 | 19.6 |
| | 9/13/01 | 22.91 | 25' | 2" | 1.0 | NM | NM | NM | 20.3 |
| MW-14 | 8/5/99 | 7.96 | 25' | 2" | 8.3 | 5.0 | 312 | 0.80 | 19.0 |
| | 4/26/00 | 6.46 | 25' | 2" | 9.1 | 6.1 | 1.56 | 1.72 | 15.5 |
| | 8/1/00 | 10.8 | 25' | 2" | 6.9 | 5.4 | 0.93 | 1.43 | 18.8 |
| | 12/13/00 | 10.8 | 25' | 2" | 6.9 | 5.5 | NM | 1.72 | 14.7 |
| | 2/6/01 | 8.72 | 25' | 2" | 8.0 | NM | NM | NM | NM |
| | 6/5/01 | 7.32 | 25' | 2" | 8.6 | 5.8 | NM | 2.08 | 17.4 |
| | 9/13/01 | 9.31 | 25' | 2" | 7.7 | NM | NM | 1.77 | 21.0 |
| MW-15 | 8/5/99 | 6.28 | 25' | 2" | 9.2 | 4.8 | 86.5 | 0.87 | 18.0 |
| | 4/26/00 | 4.75 | 25' | 2" | 9.9 | 6.5 | 0.6 | 3.32 | 16.2 |
| | 8/1/00 | 9.11 | 25' | 2" | 7.8 | 5.5 | 0.41 | 3.17 | 19.5 |
| | 12/13/00 | 8.57 | 25' | 2" | 8.0 | 5.6 | NM | 1.93 | 15.1 |
| | 2/6/01 | 6.36 | 25' | 2" | 9.1 | NM | NM | NM | NM |
| | 6/5/01 | 5.68 | 25' | 2" | 9.4 | 6.1 | NM | 2.41 | 19.2 |
| | 9/13/01 | 7.61 | 25' | 2" | 8.5 | NM | NM | 2.90 | 21.2 |
| MW-16 | 8/5/99 | 11.22 | 25' | 2" | 6.7 | 4.9 | 49 | 0.79 | 18.0 |
| | 4/26/00 | 9.50 | 25' | 2" | 7.6 | 6.5 | 0.61 | 1.66 | 15.5 |
| | 8/1/00 | 14.35 | 25' | 2" | 5.2 | 6.0 | 0.95 | 1.64 | 19.3 |
| | 12/13/00 | 13.45 | 25' | 2" | 5.6 | 5.8 | NM | 2.27 | 15.6 |
| | 2/6/01 | 10.89 | 25' | 2" | 6.9 | NM | NM | NM | NM |
| | 6/5/01 | 10.34 | 25' | 2" | 7.2 | 6.5 | NM | 2.02 | 18.3 |
| | 9/13/01 | 12.58 | 25' | 2" | 6.1 | NM | NM | 1.87 | 21.5 |

# TABLE 1
## SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-17 | 8/5/99 | 16.16 | 75' | 2" | 28.8 | 5.6 | 90.8 | 2.76 | 20.5 |
| | 4/26/00 | 16.8 | 75' | 2" | 28.5 | 6.4 | 0.86 | 6.1 | 20.8 |
| | 8/1/00 | 19.27 | 75' | 2" | 27.3 | 6.2 | 0.59 | 3.12 | 22.5 |
| | 12/13/00 | 19.20 | 75' | 2" | 27.3 | NM | NM | NM | NM |
| | 2/6/01 | 16.82 | 75' | 2" | 28.5 | NM | NM | NM | NM |
| | 6/5/01 | 15.52 | 75' | 2" | 29.1 | 7.1 | NM | 2.67 | 21.8 |
| | 9/13/01 | 17.42 | 75' | 2" | 28.2 | NM | NM | 3.6 | 22.5 |

NOTES:

NS - Not sampled

Temperature in Degrees Celcius

Dissolved Oxygen in mg/L

Depth to Water and Depth to bottom in units of feet

Well volumes (Gallons)

Specific Conductivity (umhos/cm)

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| OMW-1 | 01-Dec-97 | 99.82 | 17.13 | - | 82.69 |
| | 05-Aug-99 | | 17.95 | 1.05 | 81.87 |
| | 26-Apr-00 | | 15.68 | 0.99 | 84.14 |
| | 01-Aug-00 | | 21.50 | 1.40 | 78.32 |
| | 13-Dec-00 | | 21.46 | 1.70 | 78.36 |
| | 06-Feb-01 | | 19.89 | 1.78 | 79.93 |
| | 05-Jun-01 | | 17.18 | 0.19 | 82.64 |
| | 16-Aug-01 | | 18.10 | 0.13 | 81.72 |
| | 13-Sep-01 | | 18.74 | 0.02 | 81.08 |
| MW-2 | 01-Dec-97 | 99.83 | 17.43 | - | 82.40 |
| | 05-Aug-99 | | 19.19 | 2.29 | 80.64 |
| | 26-Apr-00 | | 15.80 | 2.18 | 84.03 |
| | 01-Aug-00 | | 22.30 | 2.10 | 77.53 |
| | 13-Dec-00 | | 21.36 | 0.84 | 78.47 |
| | 06-Feb-01 | | 18.89 | sheen | 80.94 |
| | 05-Jun-01 | | 17.42 | sheen | 82.41 |
| | 16-Aug-01 | | 18.35 | - | 81.48 |
| | 13-Sep-01 | | 19.03 | - | 80.80 |
| MW-3 | 01-Dec-97 | 99.98 | 17.00 | - | 82.98 |
| | 05-Aug-99 | | 17.96 | 1.01 | 82.02 |
| | 26-Apr-00 | | 15.73 | 0.68 | 84.25 |
| | 01-Aug-00 | | 20.85 | 0.78 | 79.13 |
| | 13-Dec-00 | | 22.18 | 2.22 | 77.80 |
| | 06-Feb-01 | | 19.26 | 0.96 | 80.72 |
| | 05-Jun-01 | | 17.41 | 0.40 | 82.57 |
| | 16-Aug-01 | | 18.19 | 0.09 | 81.79 |
| | 13-Sep-01 | | 18.80 | 0.02 | 81.18 |
| MW-4 | 01-Dec-97 | 99.59 | 17.60 | - | 81.99 |
| | 05-Aug-99 | | 17.59 | - | 82.00 |
| | 26-Apr-00 | | 16.51 | - | 83.08 |
| | 01-Aug-00 | | 20.63 | - | 78.96 |
| | 13-Dec-00 | | 20.81 | - | 78.78 |
| | 06-Feb-01 | | 19.09 | - | 80.50 |
| | 05-Jun-01 | | 17.70 | - | 81.89 |
| | 13-Sep-01 | | 19.16 | - | 80.43 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-5 | 01-Dec-97 | 99.42 | 15.04 | - | 84.38 |
| | 05-Aug-99 | | 15.95 | - | 83.47 |
| | 26-Apr-00 | | 14.35 | - | 85.07 |
| | 01-Aug-00 | | 19.18 | - | 80.24 |
| | 13-Dec-00 | | 19.68 | - | 79.74 |
| | 06-Feb-01 | | 16.50 | - | 82.92 |
| | 05-Jun-01 | | 15.51 | - | 83.91 |
| | 13-Sep-01 | | 17.48 | - | 81.94 |
| MW-6 | 01-Dec-97 | 99.47 | 14.37 | - | 85.10 |
| | 05-Aug-99 | | 15.44 | - | 84.03 |
| | 26-Apr-00 | | 13.65 | - | 85.82 |
| | 01-Aug-00 | | 18.75 | - | 80.72 |
| | 13-Dec-00 | | 18.23 | - | 81.24 |
| | 06-Feb-01 | | 15.34 | - | 84.13 |
| | 05-Jun-01 | | 14.84 | - | 84.63 |
| | 13-Sep-01 | | 16.96 | - | 82.51 |
| MW-7 | 01-Dec-97 | 99.47 | 13.96 | - | 85.51 |
| | 05-Aug-99 | | 15.41 | - | 84.06 |
| | 26-Apr-00 | | 13.54 | - | 85.93 |
| | 01-Aug-00 | | 18.72 | - | 80.75 |
| | 13-Dec-00 | | 18.01 | - | 81.46 |
| | 06-Feb-01 | | 15.41 | - | 84.06 |
| | 05-Jun-01 | | 14.61 | - | 84.86 |
| | 13-Sep-01 | | 16.91 | - | 82.56 |
| MW-8 | 01-Dec-97 | 102.42 | 12.53 | - | 89.89 |
| | 05-Aug-99 | | 14.59 | - | 87.83 |
| | 26-Apr-00 | | 11.56 | - | 90.86 |
| | 01-Aug-00 | | 19.18 | - | 83.24 |
| | 13-Dec-00 | | 17.96 | - | 84.46 |
| | 06-Feb-01 | | 13.34 | - | 89.08 |
| | 05-Jun-01 | | 13.15 | - | 89.27 |
| | 13-Sep-01 | | 16.64 | - | 85.78 |
| MW-9 | 01-Dec-97 | 100.53 | 16.17 | - | 84.36 |
| | 05-Aug-99 | | 16.74 | - | 83.79 |
| | 26-Apr-00 | | 15.09 | - | 85.44 |
| | 01-Aug-00 | | 21.20 | - | 79.33 |
| | 13-Dec-00 | | 19.73 | - | 80.80 |
| | 06-Feb-01 | | 17.54 | - | 82.99 |
| | 05-Jun-01 | | 16.35 | - | 84.18 |
| | 13-Sep-01 | | 18.40 | - | 82.13 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-10 | 01-Dec-97 | 99.65 | 17.40 | - | 82.25 |
| | 05-Aug-99 | | 18.06 | 1.01 | 81.59 |
| | 26-Apr-00 | | 15.75 | 1.65 | 83.90 |
| | 01-Aug-00 | | 20.50 | 0.03 | 79.15 |
| | 13-Dec-00 | | 19.40 | 0.01 | 80.25 |
| | 06-Feb-01 | | 18.84 | sheen | 80.81 |
| | 05-Jun-01 | | 17.38 | - | 82.27 |
| | 16-Aug-01 | | 18.15 | - | 81.50 |
| | 13-Sep-01 | | 18.82 | - | 80.83 |
| MW-11 | 01-Dec-97 | 96.47 | 15.74 | - | 80.73 |
| | 05-Aug-99 | | 15.60 | - | 80.87 |
| | 26-Apr-00 | | 13.65 | - | 82.82 |
| | 01-Aug-00 | | 18.61 | - | 77.86 |
| | 13-Dec-00 | | 19.01 | - | 77.46 |
| | 06-Feb-01 | | 17.43 | - | 79.04 |
| | 05-Jun-01 | | 15.96 | - | 80.51 |
| | 13-Sep-01 | | 17.23 | - | 79.24 |
| MW-12 | 01-Dec-97 | 98.63 | 17.03 | - | 81.60 |
| | 05-Aug-99 | | 17.33 | - | 81.30 |
| | 26-Apr-00 | | 16.06 | - | 82.57 |
| | 01-Aug-00 | | 20.15 | - | 78.48 |
| | 13-Dec-00 | | 23.70 | - | 74.93 |
| | 06-Feb-01 | | 18.45 | - | 80.18 |
| | 05-Jun-01 | | 17.26 | - | 81.37 |
| | 13-Sep-01 | | 18.63 | - | 80.00 |
| MW-13 | 01-Dec-97 | 100.80 | 21.05 | - | 79.75 |
| | 05-Aug-99 | | 21.26 | - | 79.54 |
| | 26-Apr-00 | | 20.02 | - | 80.78 |
| | 01-Aug-00 | | 24.05 | - | 76.75 |
| | 13-Dec-00 | | 24.13 | - | 76.67 |
| | 06-Feb-01 | | 22.43 | - | 78.37 |
| | 05-Jun-01 | | 21.34 | - | 79.46 |
| | 13-Sep-01 | | 22.91 | - | 77.89 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-14 | 01-Dec-97 | 89.38 | 7.27 | - | 82.11 |
| | 05-Aug-99 | | 7.96 | - | 81.42 |
| | 26-Apr-00 | | 6.46 | - | 82.92 |
| | 11-Aug-00 | | 10.80 | - | 78.58 |
| | 13-Dec-00 | | 10.80 | - | 78.58 |
| | 06-Feb-01 | | 8.72 | - | 80.66 |
| | 05-Jun-01 | | 7.32 | - | 82.06 |
| | 13-Sep-01 | | 9.31 | - | 80.07 |
| MW-15 | 01-Dec-97 | 87.33 | 5.10 | - | 82.23 |
| | 05-Aug-99 | | 6.28 | - | 81.05 |
| | 26-Apr-00 | | 4.75 | - | 82.58 |
| | 01-Aug-00 | | 9.11 | - | 78.22 |
| | 13-Dec-00 | | 8.57 | - | 78.76 |
| | 06-Feb-01 | | 6.36 | - | 80.97 |
| | 05-Jun-01 | | 5.68 | - | 81.65 |
| | 13-Sep-01 | | 7.61 | - | 79.72 |
| MW-16 | 01-Dec-97 | 93.74 | 9.69 | - | 84.05 |
| | 05-Aug-99 | | 11.22 | - | 82.52 |
| | 26-Apr-00 | | 9.50 | - | 84.24 |
| | 01-Aug-00 | | 14.35 | - | 79.39 |
| | 13-Dec-00 | | 13.45 | - | 80.29 |
| | 06-Feb-01 | | 10.89 | - | 82.85 |
| | 05-Jun-01 | | 10.34 | - | 83.40 |
| | 13-Sep-01 | | 12.58 | - | 81.16 |
| DMW-17 | 01-Dec-97 | 100.08 | 15.53 | - | 84.55 |
| | 05-Aug-99 | | 16.16 | - | 83.92 |
| | 26-Apr-00 | | 16.80 | - | 83.28 |
| | 01-Aug-00 | | 19.27 | - | 80.81 |
| | 13-Dec-00 | | 19.20 | - | 80.88 |
| | 06-Feb-01 | | 16.82 | - | 83.26 |
| | 05-Jun-01 | | 15.52 | - | 84.56 |
| | 13-Sep-01 | | 17.42 | - | 82.66 |

**Notes:**
TOC - Top-of-Casing elevation refrenced to common datum.
NM - Not measured.
All measurments in units of feet.
- = No Data

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| OMW-1 | 1-Dec-97 | 14.9 | 85.5 | 5.2 | 24.8 | 130 | 96 | BDL |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-2 | 1-Dec-97 | 9,900 | 42,300 | 2,040 | 12,100 | 66,340 | 242,000 | 71.2 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 4400 | 7570 | 2890 | 6790 | 21650 | 9490 | 592 |
| | 13-Sep-01 | 2280 | 9780 | 1630 | 7650 | 21340 | 1750 | 399 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-3 | 1-Dec-97 | 9,820 | 54,500 | 2,160 | 11,900 | 78,380 | 81,200 | 445 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-4 | 1-Dec-97 | 8,140 | 21,000 | 1,510 | 11,500 | 42,150 | 215,000 | 813 |
| | 5-Aug-99 | 14,200 | 34,600 | 2,750 | 15,900 | 67,450 | 109,000 | <5 |
| | 26-Apr-00 | 13,400 | 33,200 | 3,420 | 13,270 | 63,290 | 102,000 | 1,060 |
| | 1-Aug-00 | 10,100 | 23,300 | 1,740 | 11,410 | 46,550 | 109,000 | 559 |
| | 13-Dec-00 | 6,730 | 16,300 | 635 | 4,170 | 27,835 | 32,300 | 742 |
| | 6-Feb-01 | 5,860 | 13,500 | 1,080 | 7,230 | 27,670 | 26,100 | 210 |
| | 5-Jun-01 | 3,570 | 10,900 | 965 | 9,510 | 24,945 | 5,730 | 302 |
| | 13-Sep-01 | 5,910 | 14,900 | 1,050 | 7,100 | 28,960 | 5,980 | 384 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 5 |

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-5 | 1-Dec-97 | 5,930 | 47,600 | 2,100 | 12,600 | 68,230 | BDL | 125 |
| | 5-Aug-99 | 6,400 | 61,600 | 2,460 | 12,100 | 82,560 | 410 | 335 |
| | 26-Apr-00 | 6,680 | 48,300 | 2,390 | 9,610 | 66,980 | 681 | 609 |
| | 1-Aug-00 | 4,250 | 40,300 | 1,960 | 12,530 | 59,040 | 258 | 396 |
| | 13-Dec-00 | 4,530 | 38,100 | 2,520 | 14,640 | 59,790 | 381 | 4770 |
| | 6-Feb-01 | 5,070 | 30,800 | 2,200 | 12,500 | 50,570 | 225 | 678 |
| | 5-Jun-01 | 6,070 | 52,000 | 2,900 | 13,720 | 74,690 | 228 | 342 |
| | 13-Sep-01 | 4,990 | 7,210 | 3,340 | 17,900 | 33,440 | 60.7 | 2900 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-6 | 1-Dec-97 | 5.5 | 137 | 6.0 | 149 | 297.5 | BDL | BDL |
| | 5-Aug-99 | 4.1 | 1.1 | 3.7 | 16.7 | 25.6 | 5 | BDL |
| | 26-Apr-00 | 13.0 | 19.2 | 15 | 48 | 95.2 | 27.2 | 6.44 |
| | 1-Aug-00 | 117 | 1820 | 128 | 877 | 2942 | 10.7 | 32.2 |
| | 13-Dec-00 | 47.9 | 460 | 35.4 | 332 | 875 | 14.8 | 7.2 |
| | 6-Feb-01 | 47.4 | 143 | 47.6 | 219.2 | 457 | 17.8 | 22.6 |
| | 5-Jun-01 | 9.3 | 44.5 | 23.5 | 141.3 | 219 | 7.5 | BDL |
| | 13-Sep-01 | 18.1 | 36.6 | 24.7 | 119.0 | 198 | 8.35 | 1.06 |
| MW-7 | 1-Dec-97 | 1.1 | 1.7 | BDL | 1.1 | 3.9 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 41 | <1 |
| | 26-Apr-00 | 2.13 | 13.5 | BDL | 1.59 | 17.2 | 68.9 | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 53.8 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 52.9 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 18.7 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | 10.6 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-8 | 1-Dec-97 | BDL | 2.4 | 1.2 | 5.4 | 9.0 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 1.58 | 8.53 | BDL | BDL | 10.1 | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-9 | 1-Dec-97 | 77 | 14,000 | 2,390 | 20,700 | 37,167 | 114 | 384 |
| | 5-Aug-99 | 110 | 4,280 | 2,450 | 17,000 | 23,840 | 150 | <500 |
| | 26-Apr-00 | 163 | 2,640 | 3,520 | 14,760 | 21,083 | BDL | 2,090 |
| | 1-Aug-00 | 187 | 18,400 | 1,010 | 16,070 | 35,667 | BDL | 909 |
| | 13-Dec-00 | 9.14 | 657 | 108 | 1,340 | 2,114 | 26.0 | 47 |
| | 6-Feb-01 | 10.6 | 254 | 181 | 2,907 | 3,353 | 16.9 | 179 |
| | 5-Jun-01 | 27.7 | 402 | 139 | 1,798 | 2,367 | 17.2 | 66.6 |
| | 13-Sep-01 | 15.0 | 133 | 710 | 7,690 | 8,548 | 13.0 | 186 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-10 | 1-Dec-97 | 6,220 | 46,300 | 2,320 | 14,800 | 69,640 | 938 | 542 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 8020 | 32900 | 856 | 8280 | 50056 | 8780 | 327 |
| | 13-Sep-01 | 9870 | 47700 | 1190 | 20400 | 79160 | 12500 | 356 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-11 | 1-Dec-97 | 1.4 | 3.4 | BDL | 4.7 | 9.5 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 7 | <5 |
| | 26-Apr-00 | 1.18 | 3.96 | BDL | BDL | 5.1 | 4.69 | 9.98 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | 2.51 | 91.0 | 15.0 | 104.4 | 212.9 | 26.3 | 17.2 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 39.5 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | 4.88 | 9.52 | 14.4 | 266 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | - | 7 | <5 |
| MW-12 | 1-Dec-97 | 7,970 | 382 | 266 | 1,540 | 10,158 | 99,900 | 119 |
| | 5-Aug-99 | 5,000 | 260 | <200 | <200 | 5,260 | 41,200 | <1000 |
| | 26-Apr-00 | 135 | 4.51 | BDL | 11.0 | 151 | 6,800 | 18.2 |
| | 1-Aug-00 | 1670 | 17.1 | 4.33 | 114.9 | 1806 | 44,200 | BDL |
| | 13-Dec-00 | 119 | 9.1 | 2.11 | 26.7 | 157 | 4,230 | 31.7 |
| | 6-Feb-01 | 32.5 | 9.3 | 1.51 | 13.8 | 57 | 1,570 | 10.6 |
| | 5-Jun-01 | 61.0 | BDL | BDL | 2.1 | 63 | 1,960 | 17.2 |
| | 13-Sep-01 | 329 | 4.55 | 2.96 | 29.27 | 366 | 2,860 | 60.1 |
| SSTL | | 5 | 260 | <200 | <200 | - | 40 | 25 |

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-13 | 1-Dec-97 | BDL | 1.4 | BDL | 1.6 | 3 | 82.3 | BDL |
| | 5-Aug-99 | 3 | <1 | <1 | <1 | 3 | 604 | <5 |
| | 26-Apr-00 | 188 | 149 | BDL | BDL | 337 | 3,150 | BDL |
| | 1-Aug-00 | 207 | 5.74 | BDL | 32.8 | 245 | 3,641 | 24.3 |
| | 13-Dec-00 | 29.9 | 3.81 | 1.0 | 76.6 | 111 | 4,350 | 29.8 |
| | 6-Feb-01 | 377 | 12.10 | 2.8 | 105.2 | 497 | 5,200 | 54.9 |
| | 5-Jun-01 | 259 | 5.87 | 1.8 | 112.8 | 380 | 8,530 | 23.2 |
| | 13-Sep-01 | 374 | 7.44 | 4.52 | 127.5 | 513 | 7,150 | 24.7 |
| SSTL | | 3 | 1 | 1 | 1 | – | 40 | 5 |
| MW-14 | 1-Dec-97 | 1.1 | 1.4 | BDL | 2.7 | 5 | 76.5 | BDL |
| | 5-Aug-99 | 57 | 7 | 1 | 23 | 88 | 606 | 5 |
| | 26-Apr-00 | BDL | 1.38 | BDL | BDL | 1.38 | 1.11 | BDL |
| | 1-Aug-00 | 138 | 4.04 | BDL | 39.04 | 181.08 | 35.3 | 13.0 |
| | 13-Dec-00 | BDL | BDL | BDL | 2.13 | 2.13 | 129 | 2.33 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 11.1 | BDL |
| SSTL | | 5 | 7 | 1 | 23 | - | 40 | 5 |
| MW-15 | 1-Dec-97 | 1.0 | 1.6 | BDL | 2.5 | 5 | BDL | BDL |
| | 5-Aug-99 | 3 | 6 | 1 | 6 | 16 | 27 | <5 |
| | 26-Apr-00 | 1.01 | 1.32 | BDL | BDL | 2.33 | 2.82 | 5.66 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 2.77 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 3 | 6 | 1 | 6 | - | 27 | <5 |
| MW-16 | 1-Dec-97 | BDL | 1.2 | BDL | 1.3 | 2.5 | BDL | BDL |
| | 5-Aug-99 | 2.2 | 8.8 | 1.6 | 7.1 | 19.7 | 4 | BDL |
| | 26-Apr-00 | 2.17 | 1.27 | BDL | BDL | 3.4 | 10.1 | BDL |
| | 1-Aug-00 | 5.02 | 3.01 | BDL | 3.5 | 11.5 | 16.1 | 1.35 |
| | 13-Dec-00 | 10.7 | BDL | BDL | 2.66 | 13.4 | 30.6 | 1.96 |
| | 6-Feb-01 | 6.25 | BDL | BDL | BDL | 6.25 | 32.7 | BDL |
| | 5-Jun-01 | 22.3 | BDL | BDL | 1.30 | 23.6 | 78.8 | BDL |
| | 13-Sep-01 | 18.9 | BDL | BDL | BDL | BDL | 35.6 | BDL |

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| DMW-17 | 1-Dec-97 | 1.6 | 3.8 | 2.3 | 12.7 | 20.3 | BDL | BDL |
| | 5-Aug-99 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 26-Apr-00 | 1.06 | 1.24 | BDL | BDL | 2.3 | 8.97 | BDL |
| | 1-Aug-00 | BDL | 3.02 | BDL | BDL | 3.02 | 7.75 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 6.98 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 5.34 | BDL |
| | 5-Jun-01 | BDL | 2.0 | BDL | BDL | 2.0 | 23.8 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 3.42 | BDL |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |
| CP-WW | 1-Dec-97 | BDL | 1.2 | BDL | BDL | 1.2 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 2.96 | 1.09 | BDL | BDL | 4.1 | 315 | BDL |
| | 1-Aug-00 | 3.23 | 2.56 | BDL | 1.09 | 7 | 224 | BDL |
| | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |
| CLS-WW | 1-Dec-97 | 81.3 | 1.1 | BDL | 9.6 | 92 | 34.5 | BDL |
| | 5-Aug-99 | 81 | 1 | <1 | 10 | 92 | 35 | <5 |
| | 26-Apr-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | <1 | <1 | 10 | - | 35 | <5 |

Notes:

All results reported in parts per billion (ug/L) unless otherwise noted.

SSTL = Site specific target levels referenced in bid

FP = Free Product; NS = Not Sampled

BDL = Below detecatable Levels

Total BTEX = Summation of benzene, toluene, ethylbenzene and xylenes

MTBE = Methyl-tert-buytl-ether

# ATTACHMENT 3
# LABORATORY ANALYTICAL REPORT

# ACCESS ANALYTICAL, INC.

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 20, 2001
Report # 109000600
Order # 217497
South Carolina Cert ID# 96023

RECEIVED SEP 2 4 2001

Site Location/Project

Crawfords DHE #12335

Sample I.D.: MW 2
Collected: 09/13/01 00:00
Received: 09/15/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 100 | | | | |
| Methyl-Tert-Butyl-Ether | 1750 | ug/L | 5030/8260B | 100.000 | 09/16/2001 | 09/16/2001 | 07:29 | SS |
| Benzene | 2280 | ug/L | 5030/8260B | 100.000 | 09/16/2001 | 09/16/2001 | 07:29 | SS |
| Toluene | 9780 | ug/L | 5030/8260B | 100.000 | 09/16/2001 | 09/16/2001 | 07:29 | SS |
| Ethylbenzene | 1630 | ug/L | 5030/8260B | 100.000 | 09/16/2001 | 09/16/2001 | 07:29 | SS |
| m & p-Xylene | 5440 | ug/L | 5030/8260B | 100.000 | 09/16/2001 | 09/16/2001 | 07:29 | SS |
| o-Xylene | 2210 | ug/L | 5030/8260B | 100.000 | 09/16/2001 | 09/16/2001 | 07:29 | SS |
| Naphthalene | 399 | ug/L | 5030/8260B | 100.000 | 09/16/2001 | 09/16/2001 | 07:30 | SS |
| SURROGATE: Toluene-D8 | 98.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 103.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 90.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063

September 20, 2001
Report # 109000600
Order # 217498
South Carolina Cert ID# 96023

Site Location/Project
.
Crawfords DHE #12335

Sample I.D.: MW 4
Collected: 09/13/01 00:00
Received: 09/15/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 10 | | | | |
| Methyl-Tert-Butyl-Ether | 5980 | ug/L | 5030/8260B | 10.000 | 09/17/2001 | 09/17/2001 | 04:57 | SKL |
| Benzene | 5910 | ug/L | 5030/8260B | 10.000 | 09/17/2001 | 09/17/2001 | 04:57 | SKL |
| Toluene | 14900 | ug/L | 5030/8260B | 10.000 | 09/17/2001 | 09/17/2001 | 04:57 | SKL |
| Ethylbenzene | 1050 | ug/L | 5030/8260B | 10.000 | 09/17/2001 | 09/17/2001 | 04:57 | SKL |
| m & p-Xylene | 4750 | ug/L | 5030/8260B | 10.000 | 09/17/2001 | 09/17/2001 | 04:57 | SKL |
| o-Xylene | 2350 | ug/L | 5030/8260B | 10.000 | 09/17/2001 | 09/17/2001 | 04:57 | SKL |
| Naphthalene | 384 | ug/L | 5030/8260B | 10.000 | 09/17/2001 | 09/17/2001 | 04:57 | SKL |
| SURROGATE: Toluene-D8 | 98.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 96.50% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 93.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 20, 2001
Report # 109000600
Order # 217499
South Carolina Cert ID# 96023

Site Location/Project
.
Crawfords DHE #12335

Sample I.D.: MW 5
Collected: 09/13/01 00:00
Received: 09/15/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 60.7 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:10 | SKL |
| Benzene | 4990 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:10 | SKL |
| Toluene | 7210 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:10 | SKL |
| Ethylbenzene | 3340 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:10 | SKL |
| m & p-Xylene | 12100 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:10 | SKL |
| o-Xylene | 5800 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:10 | SKL |
| Naphthalene | 2900 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:10 | SKL |
| SURROGATE: Toluene-D8 | 99.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 116.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 96.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 20, 2001
Report # 109000600
Order # 217500
South Carolina Cert ID# 96023

Site Location/Project

Crawfords DHE #12335

Sample I.D.: MW 6
Collected: 09/13/01 00:00
Received: 09/15/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 8.35 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:31 | SS |
| Benzene | 18.1 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:31 | SS |
| Toluene | 36.6 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:32 | SS |
| Ethylbenzene | 24.7 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:32 | SS |
| m & p-Xylene | 84.3 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:32 | SS |
| o-Xylene | 34.7 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:32 | SS |
| Naphthalene | 1.06 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:32 | SS |
| SURROGATE: Toluene-D8 | 103.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 98.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 94.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 20, 2001
Report # 109000600
Order # 217501
South Carolina Cert ID# 96023

Site Location/Project

Crawfords DHE #12335

Sample I.D.: MW 7
Collected: 09/13/01 00:00
Received: 09/15/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 09/18/2001 | 09/18/2001 | 04:43 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 09/18/2001 | 09/18/2001 | 04:43 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 09/18/2001 | 09/18/2001 | 04:43 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 09/18/2001 | 09/18/2001 | 04:43 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/18/2001 | 09/18/2001 | 04:43 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/18/2001 | 09/18/2001 | 04:43 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 09/18/2001 | 09/18/2001 | 04:43 | SKL |
| SURROGATE: Toluene-D8 | 102.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 105.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 98.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
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Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 20, 2001
Report # 109000600
Order # 217502
South Carolina Cert ID# 96023

Site Location/Project

Crawfords DHE #12335

Sample I.D.: MW 8
Collected: 09/13/01 00:00
Received: 09/15/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 09/18/2001 | 09/18/2001 | 04:44 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 09/18/2001 | 09/18/2001 | 04:44 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 09/18/2001 | 09/18/2001 | 04:44 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 09/18/2001 | 09/18/2001 | 04:44 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/18/2001 | 09/18/2001 | 04:44 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/18/2001 | 09/18/2001 | 04:44 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 09/18/2001 | 09/18/2001 | 04:44 | SKL |
| SURROGATE: Toluene-D8 | 101.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 100.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 96.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 20, 2001
Report # 109000600
Order # 217503
South Carolina Cert ID# 96023

Site Location/Project

Crawfords DHE #12335

Sample I.D.: MW 9
Collected: 09/13/01 00:00
Received: 09/15/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 10 | | | | |
| Methyl-Tert-Butyl-Ether | 13.0 | ug/L | 5030/8260B | 10.000 | 09/16/2001 | 09/16/2001 | 05:01 | SKL |
| Benzene | 15.0 | ug/L | 5030/8260B | 10.000 | 09/16/2001 | 09/16/2001 | 05:01 | SKL |
| Toluene | 133 | ug/L | 5030/8260B | 10.000 | 09/16/2001 | 09/16/2001 | 05:01 | SKL |
| Ethylbenzene | 710 | ug/L | 5030/8260B | 10.000 | 09/16/2001 | 09/16/2001 | 05:01 | SKL |
| m & p-Xylene | 7690 | ug/L | 5030/8260B | 10.000 | 09/16/2001 | 09/16/2001 | 05:01 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 10.000 | 09/16/2001 | 09/16/2001 | 05:01 | SKL |
| Naphthalene | 186 | ug/L | 5030/8260B | 10.000 | 09/16/2001 | 09/16/2001 | 05:01 | SKL |
| SURROGATE: Toluene-D8 | 105.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 100.75% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 93.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 20, 2001
Report # 109000600
Order # 217504
South Carolina Cert ID# 96023

Site Location/Project
.
Crawfords DHE #12335

Sample I.D.: MW 10
Collected: 09/13/01 00:00
Received: 09/15/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 10 | | | | |
| Methyl-Tert-Butyl-Ether | 12500 | ug/L | 5030/8260B | 10.000 | 09/17/2001 | 09/17/2001 | 04:44 | SKL |
| Benzene | 9870 | ug/L | 5030/8260B | 10.000 | 09/17/2001 | 09/17/2001 | 04:44 | SKL |
| Toluene | 47700 | ug/L | 5030/8260B | 10.000 | 09/17/2001 | 09/17/2001 | 04:44 | SKL |
| Ethylbenzene | 1190 | ug/L | 5030/8260B | 10.000 | 09/17/2001 | 09/17/2001 | 04:44 | SKL |
| m & p-Xylene | 14200 | ug/L | 5030/8260B | 10.000 | 09/17/2001 | 09/17/2001 | 04:44 | SKL |
| o-Xylene | 6200 | ug/L | 5030/8260B | 10.000 | 09/17/2001 | 09/17/2001 | 04:44 | SKL |
| Naphthalene | 356 | ug/L | 5030/8260B | 10.000 | 09/17/2001 | 09/17/2001 | 04:44 | SKL |
| SURROGATE: Toluene-D8 | 100.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 100.50% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 92.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 20, 2001
Report # 109000600
Order # 217505
South Carolina Cert ID# 96023

Site Location/Project
.
Crawfords DHE #12335

Sample I.D.: MW 11
Collected: 09/13/01 00:00
Received: 09/15/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 266 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 12:43 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 12:43 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 12:43 | PMD |
| Ethylbenzene | 4.88 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 12:43 | PMD |
| m & p-Xylene | 6.95 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 12:43 | PMD |
| o-Xylene | 2.57 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 12:43 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 12:43 | PMD |
| SURROGATE: Toluene-D8 | 103.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 103.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 92.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 20, 2001
Report # 109000600
Order # 217506
South Carolina Cert ID# 96023

Site Location/Project
.
Crawfords DHE #12335

Sample I.D.: MW 12
Collected: 09/13/01 00:00
Received: 09/15/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 2860 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:06 | SKL |
| Benzene | 329 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:06 | SKL |
| Toluene | 4.55 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:06 | SKL |
| Ethylbenzene | 2.96 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:06 | SKL |
| m & p-Xylene | 24.3 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:06 | SKL |
| o-Xylene | 4.97 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:06 | SKL |
| Naphthalene | 60.1 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:06 | SKL |
| SURROGATE: Toluene-D8 | 97.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 108.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 99.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 20, 2001
Report # 109000600
Order # 217507
South Carolina Cert ID# 96023

Site Location/Project

Crawfords DHE #12335

Sample I.D.: MW 13
Collected: 09/13/01 00:00
Received: 09/15/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 7150 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:03 | SKL |
| Benzene | 374 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:03 | SKL |
| Toluene | 7.44 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:03 | SKL |
| Ethylbenzene | 4.52 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:03 | SKL |
| m & p-Xylene | 51.4 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:03 | SKL |
| o-Xylene | 76.1 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:03 | SKL |
| Naphthalene | 24.7 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:03 | SKL |
| SURROGATE: Toluene-D8 | 108.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 110.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 101.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063

September 20, 2001
Report # 109000600
Order # 217508
South Carolina Cert ID# 96023

Site Location/Project

Crawfords DHE #12335

Sample I.D.: MW 14
Collected: 09/13/01 00:00
Received: 09/15/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 11.1 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:02 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:02 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:02 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:02 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:02 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:02 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 05:02 | SKL |
| SURROGATE: Toluene-D8 | 95.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 90.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 101.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
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Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 20, 2001
Report # 109000600
Order # 217509
South Carolina Cert ID# 96023

Site Location/Project
.
Crawfords DHE #12335

Sample I.D.: MW 15
Collected: 09/13/01 00:00
Received: 09/15/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:15 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:15 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:15 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:15 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:15 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:15 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:15 | SKL |
| SURROGATE: Toluene-D8 | 103.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 101.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 95.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 20, 2001
Report # 109000600
Order # 217510
South Carolina Cert ID# 96023

Site Location/Project

Crawfords DHE #12335

Sample I.D.: MW 16
Collected: 09/13/01 00:00
Received: 09/15/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 35.6 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 08:07 | SKL |
| Benzene | 18.9 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 08:07 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 08:07 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 08:07 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 08:07 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 08:07 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 08:07 | SKL |
| SURROGATE: Toluene-D8 | 98.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 99.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 89.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 20, 2001
Report # 109000600
Order # 217511
South Carolina Cert ID# 96023

Site Location/Project
Crawfords DHE #12335

Sample I.D.: MW 17
Collected: 09/13/01 00:00
Received: 09/15/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 3.42 | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:43 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:43 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:43 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:43 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:43 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:43 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:43 | SKL |
| SURROGATE: Toluene-D8 | 97.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 95.50% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 98.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Scott Johnson
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 20, 2001
Report # 109000600
Order # 217512
South Carolina Cert ID# 96023

Site Location/Project

Crawfords DHE #12335

Sample I.D.: CLS-WW
Collected: 09/13/01 00:00
Received: 09/15/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:16 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:16 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:16 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:16 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:16 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:16 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 09/16/2001 | 09/16/2001 | 07:16 | SKL |
| SURROGATE: Toluene-D8 | 97.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 92.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 94.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

# Access Analytical- Chain of Custody Record

Laboratory ID: _____

Project Submission #: 01/09 – 600 ORD#: 217497 RUSH# (if applicable): 10 PO #: _____

Company Name: H2O Environmental, Inc.

Address: 121 Centrum Dr. Ste. 2

City: Irmo State: SC Zip: 29063

Project Name: Crawfords DHE # 12335

Report To: Scott Johnston

REQUESTED LAB ANALYSIS:

PARAMETER: BTEX, NAPH, MTBE

ACCESS ANALYTICAL, INC.

1248 Lake Murray Blvd.
Irmo, SC 29063

Phone: (803) 781-4243
Fax: 781-4303
Toll Free (888) 315-4243

| Sample Label | Date Collected | Time Collected | Matr | # of Cont | NOTES / COMMENTS |
|---|---|---|---|---|---|
| ~~MW1~~ | NS | | GW | | |
| MW2 | 9-13-01 | | | 2 | 217497 |
| ~~MW3~~ | NS | | | | |
| MW4 | 9-13-01 | | | | 217498 |
| MW5 | | | | | 217499 |
| MW6 | | | | | 217500 1 d. |
| MW7 | | | | | 217501 d. |
| MW8 | | | | | 217502 |
| MW9 | | | | | 217503 |
| MW10 | | | | | 217504 |

**Turnaround Time:**

✓ Std. (5-7 Bus. days)
___RUSH*
*Date Required:_____
(For rush work, results faxed by end of business day on date required)

Samples Recd. on Ice?
✓ Yes
___No
3 · 4 °C

Project Location:
___SC
___NC
___Other_____(specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| R Gillenger | 9-14-01 | 16:10 | Cheryl Bass |
| Cheryl Bass | 9/14/01 | 1700 | Fedex |
| Fedex | 9/15/01 | 1000 | S. Isaacs STL |

Original Copy - Returned w/Report
Yellow Copy - Access Analytical Copy
Pink Copy - Client Copy





See reverse for Terms and Conditions

# Access Analytical- Chain of Custody Record

Laboratory ID: _____

Project Submission #: 01/09-605 ORD# 217497 RUSH # (if applicable): _____ PO #: _____

Company Name: H2O Environmental, Inc.

Address: 121 Centrum Dr. Ste. 2

City: Irmo State: SC Zip: 29063

Project Name: Crawfords DHE # 12335

Report To: Scott Johnston

REQUESTED LAB ANALYSIS:

PARAMETER: BTEX, NAPH, MTBE

| Sample Label | Date Collected | Time Collected | Matr | # of Cont | NOTES / COMMENTS |
|---|---|---|---|---|---|
| MW11 | 9-13-01 | | GW | 2 | 217505 |
| MW12 | | | | | 217506 |
| MW13 | | | | | 217507 |
| MW14 | | | | | 217508 |
| MW15 | | | | | 217509 |
| MW16 | | | | | 217510 |
| MW17 | | | | | 217511 |
| CLS-WW | | | | | 217512 |
| CP-WW | | | | | No vials received for CP-WW 9/15/01 SR |

Turnaround Time:
- ✓ Std. (5-7 Bus. days)
- ___ RUSH*

*Date Required:_____
(For rush work, results faxed by end of business day on date required)

Samples Recd. on Ice?
- ✓ Yes
- ___ No

Project Location:
- ___ SC
- ___ NC
- ___ Other_____(specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| R. Dillingue | 9-14-01 | 16:10 | Cheryl Barr |
| Cheryl Barr | 9/14/01 | 1700 | Fedex |
| Fedex | 9/15/01 | 1000 | S. Usanis. |


Access Analytical, Inc.
1248 Lake Murray Blvd.
Irmo, SC 29063
Phone: (803) 781-4243
Fax: 781-4303
Toll Free (888) 315-4243


Original Copy - Returned w/Report
Yellow Copy - Access Analytical Copy
Pink Copy - Client Copy



Access Analytical, Inc.

See reverse for Terms and Conditions

RECF
FEB 0 6 2002

February 4, 2002
Mr. John Abernathy
Underground Storage Tank Program
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: 6th Quarterly Report
Crawford's Country Store
5870 Hwy 28 North
Antreville, South Carolina
SCDHEC Site ID # 12335

UST
DOCKETING
5 Heck

Dear Mr. Abernathy:

On February 4, 2000, the South Carolina Department of Health and Environmental Control (SCDHEC) provided notice to proceed to $H_2O$ Environmental, Inc. ($H_2O$) to perform Corrective Action at Crawford's Country Store located at 5870 Highway 28 North, Antreville, South Carolina. See Figure 1, Attachment 1 for a layout of the site and remediation system. The objective of the project is to reduce the Chemicals of Concern (COC) in monitoring wells OMW-1, MW-2 through MW-5, MW-7 through MW-15, DMW-17, CP-WW and CLS-WW to the site specific target levels (SSTLs). A chronological summary of site activities is provided below:

| | |
|---|---|
| 2/4/00 | SCDHEC awarded Bid Number SB-9570-12/02/99-TC |
| 3/02/00 | Corrective Action Plan/Engineering Report submitted to SCDHEC |
| 4/18/00 | CAP/ER approved |
| 4/26/00 | Initial groundwater sampling event |
| 5/17/00 | Initial groundwater results submitted |
| 5/22/00-5/31/00 | System installed |
| 5/31/00 | System was inspected and approved Todd Adams of SCDHEC |
| 5/31/00 | Invoice submitted for payment of 40% of the contract amount |
| 6/14/00 | System start-up |
| 8/01/00 | 1st quarter sampling event |
| 8/28/99 | 1st quarter report submitted |
| 9/13/00 | Free product recovery from OMW-1, MW-2 and MW-3 |
| 12/13/00 | 2nd quarter sampling event |
| 2/16/01 | 2nd quarter report submitted |
| 2/6/01 | 3rd quarter sampling event |
| 3/15/01 | 3rd quarter report submitted |

| | |
|---|---|
| 6/5/01 | 4th quarter sampling event |
| 7/31/01 | 4th quarter report submitted |
| 9/13/01 | 5th quarter sampling event |
| 10/18/01 | 5th quarter report submitted |
| 12/7/01 | 6th quarter sampling event |

An air injection/vapor extraction system was installed in May 2000 and put in operation in June 2000. The system consists of ten air injection/vapor extraction wells SV-1 through SV-10. In order to target the source area, $H_2O$ is rotating air sparging in injection/vapor extraction wells SV-1 through SV-10 and extracting vapor from injection/vapor extraction wells SV-1 through SV-8. Refer to Figure 1, Attachment 1 for a map illustrating the system layout. The following table summarizes the general operating characteristics of the system.

**Summary of System Operating Characteristics**

| Well ID | Activity | PSI | CFM | IWG |
|---|---|---|---|---|
| SV-1 - SV-8 | Vapor Extraction | – | – | 55 |
| SV-1 - SV-10 | Air Sparging | 10 | 6 | – |

An air sample was collected from the effluent of the vapor extraction system on August 1, 2000. Based on the review of the laboratory analysis, it is estimated that contaminant emissions will not exceed 1,000 pounds per month. An air sample was not collected this quarter because the OVA field screening results were below detection limits.

On December 7, 2001, $H_2O$ Environmental Inc. personnel gauged and collected groundwater samples from monitoring wells MW-4 through MW-17 and water well CLS-WW at the site. Water well CP-WW located at the Green residence was not operational at the time of the sampling event and a groundwater sample could not be collected. A new water well has apparently been installed and is currently being used by the Green residence. Monitoring wells OMW-1 and MW-2 contained free product and monitoring well MW-3 had a sheen; therefore, groundwater samples were not collected. The groundwater samples were analyzed for Benzene, Toluene, Ethylbenzene, total Xylenes (BTEX), Methyl-Tert-Butyl Ether (MTBE), and Naphthalene. A review of the groundwater elevation data indicated a groundwater flow direction to the south-southeast. Table 1, Attachment 2, summarizes field data collected during monitoring well purging. The groundwater elevations and free product thicknesses are summarized on Table 2, Attachment 2, and illustrated on Figure 2, Attachment 1. The groundwater quality for Chemicals of Concern is summarized on Table 3, Attachment 2, and illustrated on Figure 3, Attachment 1. A copy of the laboratory analytical report is provided in Attachment 3. Groundwater generated during well purging was either placed in on-site 55-gallon drums or discharged on site as warranted by the data. Product generated is placed on-site into a 55-gallon drum. Any disposal manifests will be forwarded to DHEC upon receipt.

Review of the analytical data indicates monitoring wells MW-7, MW-8, MW-12, MW-15, and DMW-17 and Water well CLS-WW are below the established SSTL's. Groundwater samples collected from MW-4, MW-5, MW-9, MW-10, MW-11, MW-13, MW-14, and MW-16 indicate concentrations above the established SSTLs. $H_2O$ will continue to operate the remediation system. If you have any questions or comments please do not hesitate to contact me at (803) 749-4080.

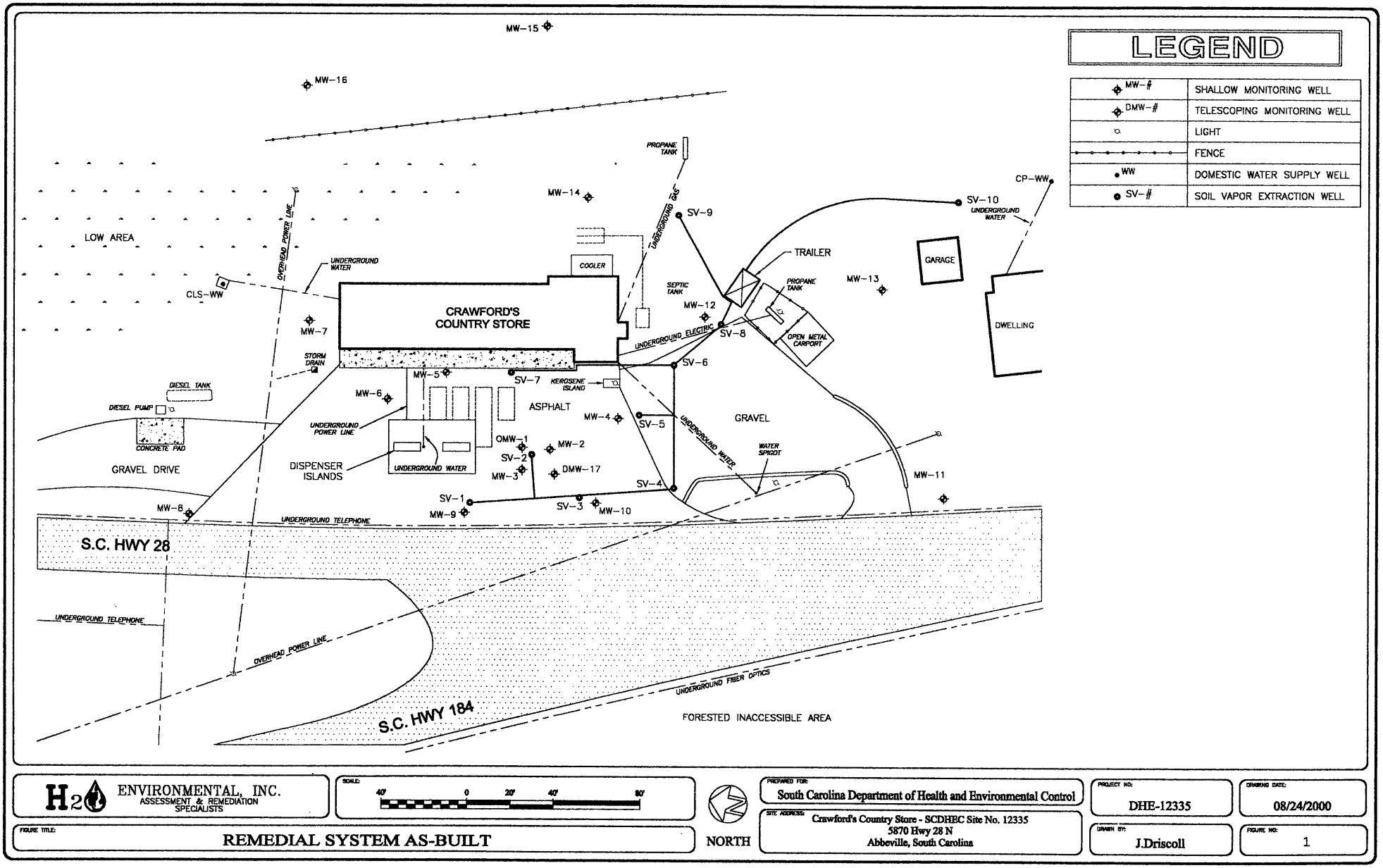
Sincerely,

**$H_2O$ Environmental, Inc.**
Class I Site Rehabilitation Contractor No. 32

Richard D. Gillespie

Richard D. Gillespie, P.G.
Senior Geologist 2-4-02
License Number 2199

# ATTACHMENT 1
# FIGURES




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

FIGURE TITLE: **REMEDIAL SYSTEM AS-BUILT**

PREPARED FOR: South Carolina Department of Health and Environmental Control

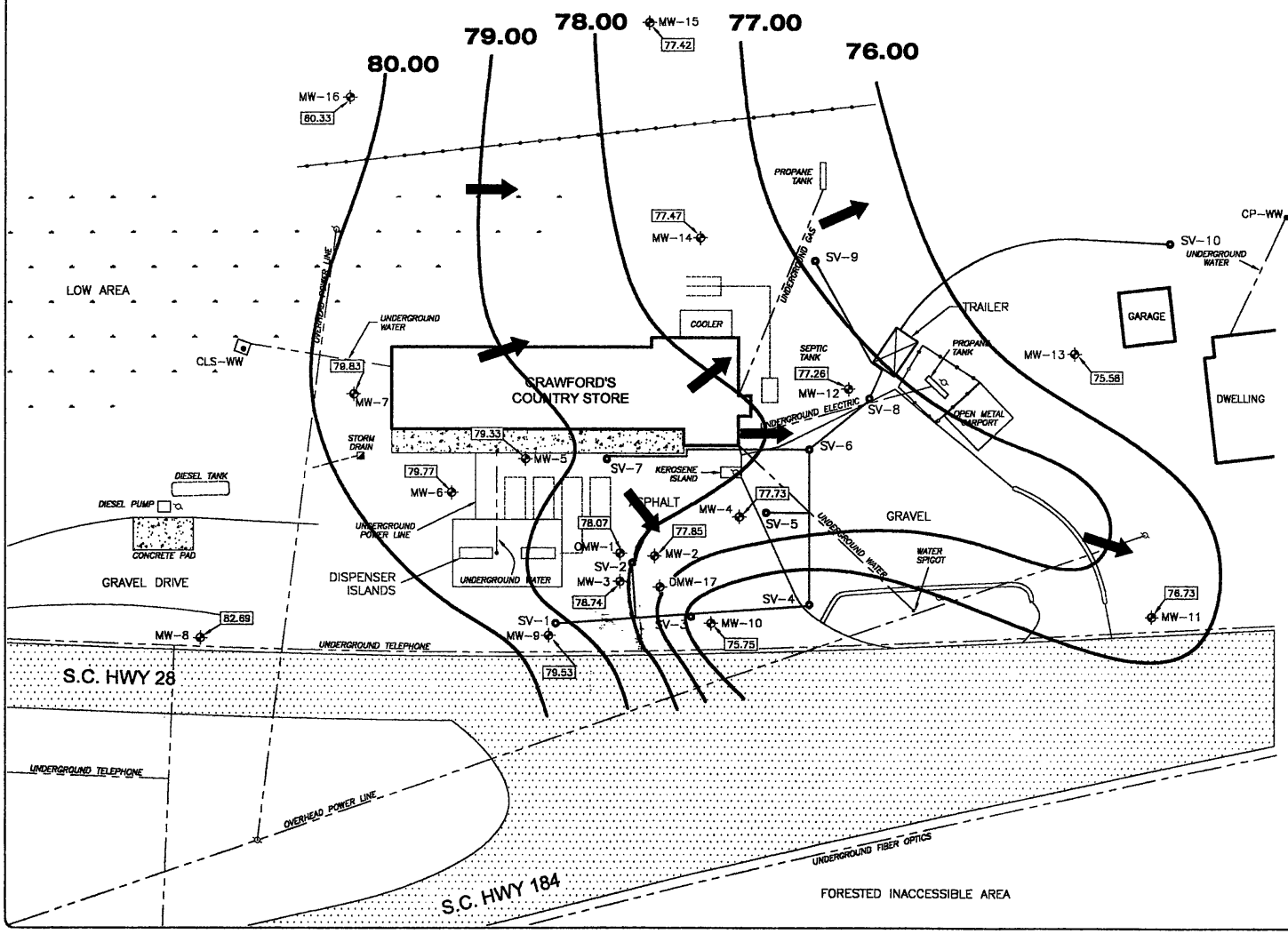
SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 08/24/2000

DRAWN BY: J.Driscoll

FIGURE NO: 1




## LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |
| 0.00 | WATER TABLE ELEVATION (FEET) |
| | GROUNDWATER FLOW DIRECTION |
| 0.00 | GROUNDWATER ELEVATION CONTOUR |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

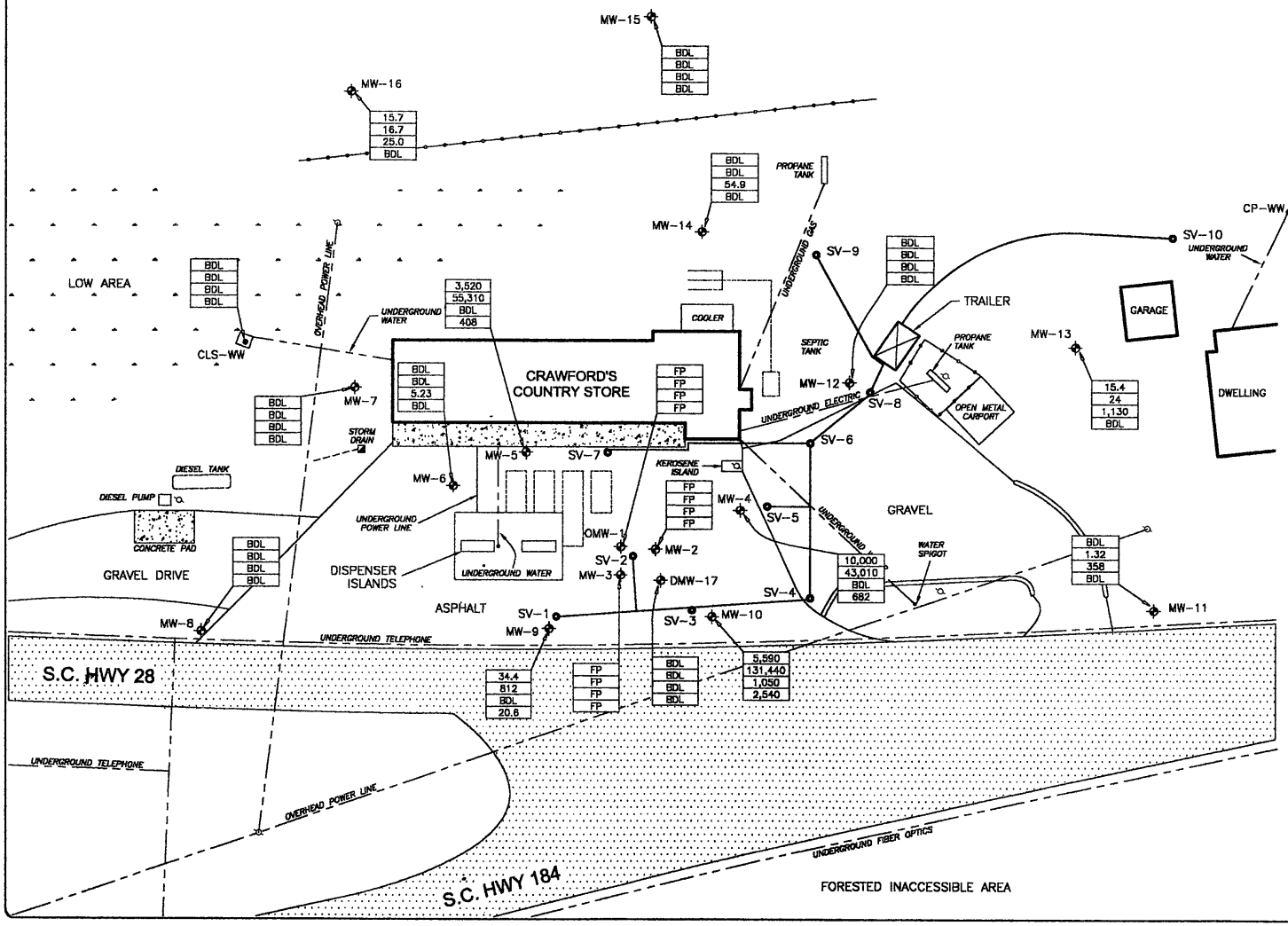
PROJECT NO: DHE-12335

DRAWING DATE: 1/20/2002

DRAWN BY: J.Driscoll

FIGURE NO: 2

FIGURE TITLE: GROUNDWATER FLOW MAP - 12/7/2001




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

| | |
|---|---|
| BDL | BENZENE |
| BDL | TOTAL BTEX |
| BDL | MTBE |
| BDL | NAPHTHALENE |

All results reported in parts per billion (ug/L).
FP = Free product.
BDL = Below detectable levels

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 1/20/2002

DRAWN BY: J.Driscoll

FIGURE NO: 3

FIGURE TITLE: GROUNDWATER QUALITY MAP - 12/7/2001

# ATTACHMENT 2
# TABLES

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Conductivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 8/5/99 | 17.95 | 22' | 2" | NM | NM | NM | NM | NM |
| | 4/26/00 | 15.68 | 22' | 2" | NM | NM | NM | NM | NM |
| | 8/1/00 | 21.50 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/13/00 | 21.46 | 22' | 2" | NM | NM | NM | NM | NM |
| | 2/6/01 | 19.89 | 22' | 2" | NM | NM | NM | NM | NM |
| | 6/5/01 | 17.18 | 22' | 2" | NM | NM | NM | NM | NM |
| | 9/13/01 | 18.74 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/7/01 | 21.75 | 22' | 2" | NM | NM | NM | NM | NM |
| MW-2 | 8/5/99 | 19.19 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/00 | 15.80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/00 | 22.30 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/00 | 21.36 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/01 | 18.89 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/01 | 17.42 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/01 | 19.03 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/7/01 | 21.98 | 25' | 2" | NM | NM | NM | NM | NM |
| MW-3 | 8/5/99 | 17.96 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/00 | 15.73 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/00 | 20.85 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/00 | 22.18 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/01 | 19.26 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/01 | 17.41 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/01 | 18.80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/7/01 | 21.24 | 25' | 2" | NM | NM | NM | NM | NM |
| MW-4 | 8/5/00 | 17.59 | 25' | 2" | 3.7 | 4.3 | 75.7 | 2.06 | 21.0 |
| | 4/26/00 | 16.51 | 25' | 2" | 4.2 | 6.0 | 0.78 | 1.82 | 20.2 |
| | 8/1/00 | 20.63 | 25' | 2" | 2.1 | 5.4 | 0.52 | 3.91 | 21.9 |
| | 12/13/00 | 20.81 | 25' | 2" | 2.0 | 5.5 | NM | 1.90 | 18.5 |
| | 2/6/01 | 19.09 | 25' | 2" | 2.9 | NM | NM | NM | NM |
| | 6/5/01 | 17.70 | 25' | 2" | 3.6 | 5.3 | NM | 1.80 | 21.8 |
| | 9/13/01 | 19.16 | 25' | 2" | 2.9 | NM | NM | 2.29 | 22.2 |
| | 12/7/01 | 21.86 | 25' | 2" | 1.5 | 7.1 | NM | 2.42 | 21.5 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-5 | 8/5/99 | 15.95 | 25' | 2" | 4.4 | 4.5 | 111.8 | 1.65 | 21.0 |
| | 4/26/00 | 14.35 | 25' | 2" | 5.2 | 6.2 | 0.92 | 2.73 | 19.4 |
| | 8/1/00 | 19.18 | 25' | 2" | 2.8 | 5.1 | 0.5 | 1.25 | 20.8 |
| | 12/13/00 | 19.68 | 25' | 2" | 2.6 | 5.3 | NM | 2.51 | 18.4 |
| | 2/6/01 | 16.50 | 25' | 2" | 4.2 | NM | NM | NM | NM |
| | 6/5/01 | 15.51 | 25' | 2" | 4.6 | 4.5 | NM | 1.88 | 21.5 |
| | 9/13/01 | 17.48 | 25' | 2" | 3.7 | NM | NM | 1.94 | 22.2 |
| | 12/7/01 | 20.09 | 25' | 2" | 2.4 | 6.9 | NM | 2.16 | 21.8 |
| MW-6 | 8/5/99 | 15.44 | 25' | 2" | 4.7 | 4.6 | 96 | 2.35 | 22.0 |
| | 4/26/00 | 13.65 | 25' | 2" | 5.6 | 6.1 | 0.92 | 1.72 | 18.6 |
| | 8/1/00 | 18.75 | 25' | 2" | 3.1 | 4.95 | 0.48 | 2.23 | 20.4 |
| | 12/13/00 | 18.23 | 25' | 2" | 3.3 | 5.14 | NM | 1.42 | 18.4 |
| | 2/6/01 | 15.34 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 6/5/01 | 14.84 | 25' | 2" | 5.0 | 5.57 | NM | 1.44 | 21.8 |
| | 9/13/01 | 16.96 | 25' | 2" | 3.9 | NM | NM | 1.80 | 20.9 |
| | 12/7/01 | 19.70 | 25' | 2" | 2.6 | 6.9 | NM | 2.05 | 20.4 |
| MW-7 | 8/5/99 | 15.41 | 25' | 2" | 4.7 | 4.6 | 92.8 | 2.74 | 19.0 |
| | 4/26/00 | 13.54 | 25' | 2" | 5.6 | 6.2 | 0.91 | 2.46 | 17.4 |
| | 8/1/00 | 18.72 | 25' | 2" | 3.1 | 5.2 | 0.45 | 2.31 | 18.7 |
| | 12/13/00 | 18.01 | 25' | 2" | 3.4 | 5.6 | NM | 1.96 | 16.5 |
| | 2/6/01 | 15.41 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 6/5/01 | 14.61 | 25' | 2" | 5.1 | 5.4 | NM | 2.25 | 19.9 |
| | 9/13/01 | 16.91 | 25' | 2" | 4.0 | NM | NM | 2.50 | 20.9 |
| | 12/7/01 | 19.64 | 25' | 2" | 2.6 | 7.1 | NM | 2.18 | 19.5 |
| MW-8 | 8/5/00 | 14.59 | 25' | 2" | 5.1 | 4.9 | 45.4 | 3.01 | 21.0 |
| | 4/26/00 | 11.56 | 25' | 2" | 6.6 | 6.3 | 0.72 | 2.06 | 18.4 |
| | 8/1/00 | 19.18 | 25' | 2" | 2.8 | 5.3 | 0.53 | 0.81 | 23.0 |
| | 12/13/00 | 17.96 | 25' | 2" | 3.4 | 5.4 | NM | 1.93 | 18.7 |
| | 2/6/01 | 13.34 | 25' | 2" | 5.7 | NM | NM | NM | NM |
| | 6/5/01 | 13.15 | 25' | 2" | 5.8 | 5.4 | NM | 2.02 | 21.5 |
| | 9/13/01 | 16.64 | 25' | 2" | 4.1 | NM | NM | 1.56 | 20.3 |
| | 12/7/01 | 19.73 | 25' | 2" | 2.6 | 6.9 | NM | 1.40 | 20.4 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-9 | 8/5/00 | 16.74 | 25' | 2" | 4.0 | 4.9 | 57.2 | 1.47 | 22.0 |
| | 4/26/00 | 15.09 | 25' | 2" | 4.8 | 5.9 | 0.72 | 1.45 | 20.4 |
| | 8/1/00 | 21.2 | 25' | 2" | 1.9 | 5.7 | 0.59 | 2.62 | 23.9 |
| | 12/13/00 | 19.73 | 25' | 2" | 2.6 | 5.4 | NM | 1.12 | 18.6 |
| | 2/6/01 | 17.54 | 25' | 2" | 3.6 | NM | NM | NM | NM |
| | 6/5/01 | 16.35 | 25' | 2" | 4.2 | NM | NM | NM | NM |
| | 9/13/01 | 18.40 | 25' | 2" | 3.2 | 4.4 | NM | 2.91 | 23.5 |
| | 12/7/01 | 21.00 | 25' | 2" | 2.0 | 6.9 | NM | 3.43 | 22.6 |
| MW-10 | 8/5/99 | 18.06 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/00 | 15.75 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/00 | 20.50 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/00 | 19.40 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/01 | 18.84 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/01 | 17.38 | 25' | 2" | 3.7 | 5.6 | NM | 1.4 | 22.9 |
| | 9/13/01 | 16.82 | 25' | 2" | 3.0 | 5.2 | NM | 3.20 | 23.2 |
| | 12/7/01 | 23.90 | 25' | 2" | 0.5 | NM | NM | NM | NM |
| MW-11 | 8/5/99 | 15.60 | 25' | 2" | 4.6 | 4.8 | 42.7 | 6.38 | 22.0 |
| | 4/26/00 | 13.65 | 25' | 2" | 5.6 | 6.2 | 0.6 | 4.48 | 20.8 |
| | 8/1/00 | 18.61 | 25' | 2" | 3.1 | 5.6 | 0.31 | 4.79 | 21.4 |
| | 12/13/00 | 19.01 | 25' | 2" | 2.9 | 5.7 | NM | 5.15 | 19.8 |
| | 2/6/01 | 17.43 | 25' | 2" | 3.7 | NM | NM | NM | NM |
| | 6/5/01 | 15.96 | 25' | 2" | 4.4 | 5.8 | NM | 6.01 | 21.4 |
| | 9/13/01 | 17.23 | 25' | 2" | 3.8 | 4.6 | NM | 5.82 | 22.4 |
| | 12/7/01 | 19.74 | 25' | 2" | 2.6 | 6.8 | NM | 4.76 | 21.7 |
| MW-12 | 8/5/99 | 17.33 | 25' | 2" | 3.8 | 4.6 | 129.2 | 2.09 | 19.0 |
| | 4/26/00 | 16.06 | 25' | 2" | 4.4 | 6.3 | 1.03 | 2.9 | 18.5 |
| | 8/1/00 | 20.15 | 25' | 2" | 2.4 | 4.5 | 0.67 | 5.01 | 19.6 |
| | 12/13/00 | 23.7 | 25' | 2" | 0.6 | 5.4 | NM | 2.9 | 17.1 |
| | 2/6/01 | 18.45 | 25' | 2" | 3.2 | NM | NM | NM | NM |
| | 6/5/01 | 17.26 | 25' | 2" | 3.8 | 10.2 | NM | 2.07 | 19.3 |
| | 9/13/01 | 18.63 | 25' | 2" | 3.1 | NM | NM | 2.71 | 20.5 |
| | 12/7/01 | 21.37 | 25' | 2" | 1.8 | 7.2 | NM | 8.00 | 19.9 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-13 | 8/5/99 | 21.26 | 25' | 2" | 1.8 | 4.2 | 51.7 | 2.32 | 18.0 |
| | 4/26/00 | 20.02 | 25' | 2" | 2.4 | 6.3 | 0.62 | 3.00 | 18.5 |
| | 8/1/00 | 24.05 | 25' | 2" | 0.5 | 5.2 | 0.42 | 2.14 | 19.7 |
| | 12/13/00 | 24.13 | 25' | 2" | 0.4 | 5.5 | NM | 1.04 | 15.9 |
| | 2/6/01 | 22.43 | 25' | 2" | 1.3 | NM | NM | NM | NM |
| | 6/5/01 | 21.34 | 25' | 2" | 1.8 | NM | 5.4 | 2.61 | 19.6 |
| | 9/13/01 | 22.91 | 25' | 2" | 1.0 | NM | NM | NM | 20.3 |
| | 12/7/01 | 25.22 | 25.22' | 2" | 0.0 | NM | NM | NM | NM |
| MW-14 | 8/5/99 | 7.96 | 25' | 2" | 8.3 | 5.0 | 312 | 0.80 | 19.0 |
| | 4/26/00 | 6.46 | 25' | 2" | 9.1 | 6.1 | 1.56 | 1.72 | 15.5 |
| | 8/1/00 | 10.8 | 25' | 2" | 6.9 | 5.4 | 0.93 | 1.43 | 18.8 |
| | 12/13/00 | 10.8 | 25' | 2" | 6.9 | 5.5 | NM | 1.72 | 14.7 |
| | 2/6/01 | 8.72 | 25' | 2" | 8.0 | NM | NM | NM | NM |
| | 6/5/01 | 7.32 | 25' | 2" | 8.6 | 5.8 | NM | 2.08 | 17.4 |
| | 9/13/01 | 9.31 | 25' | 2" | 7.7 | NM | NM | 1.77 | 21.0 |
| | 12/7/01 | 11.91 | 25' | 2" | 6.4 | 6.9 | NM | 1.84 | 20.5 |
| MW-15 | 8/5/99 | 6.28 | 25' | 2" | 9.2 | 4.8 | 86.5 | 0.87 | 18.0 |
| | 4/26/00 | 4.75 | 25' | 2" | 9.9 | 6.5 | 0.6 | 3.32 | 16.2 |
| | 8/1/00 | 9.11 | 25' | 2" | 7.8 | 5.5 | 0.41 | 3.17 | 19.5 |
| | 12/13/00 | 8.57 | 25' | 2" | 8.0 | 5.6 | NM | 1.93 | 15.1 |
| | 2/6/01 | 6.36 | 25' | 2" | 9.1 | NM | NM | NM | NM |
| | 6/5/01 | 5.68 | 25' | 2" | 9.4 | 6.1 | NM | 2.41 | 19.2 |
| | 9/13/01 | 7.61 | 25' | 2" | 8.5 | NM | NM | 2.90 | 21.2 |
| | 12/7/01 | 9.91 | 25' | 2" | 7.4 | 6.9 | NM | 3.66 | 20.3 |
| MW-16 | 8/5/99 | 11.22 | 25' | 2" | 6.7 | 4.9 | 49 | 0.79 | 18.0 |
| | 4/26/00 | 9.50 | 25' | 2" | 7.6 | 6.5 | 0.61 | 1.66 | 15.5 |
| | 8/1/00 | 14.35 | 25' | 2" | 5.2 | 6.0 | 0.95 | 1.64 | 19.3 |
| | 12/13/00 | 13.45 | 25' | 2" | 5.6 | 5.8 | NM | 2.27 | 15.6 |
| | 2/6/01 | 10.89 | 25' | 2" | 6.9 | NM | NM | NM | NM |
| | 6/5/01 | 10.34 | 25' | 2" | 7.2 | 6.5 | NM | 2.02 | 18.3 |
| | 9/13/01 | 12.58 | 25' | 2" | 6.1 | NM | NM | 1.87 | 21.5 |
| | 12/7/01 | 13.41 | 25' | 2" | 5.7 | 6.9 | NM | 4.75 | 19.1 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-17 | 8/5/99 | 16.16 | 75' | 2" | 28.8 | 5.6 | 90.8 | 2.76 | 20.5 |
| | 4/26/00 | 16.8 | 75' | 2" | 28.5 | 6.4 | 0.86 | 6.1 | 20.8 |
| | 8/1/00 | 19.27 | 75' | 2" | 27.3 | 6.2 | 0.59 | 3.12 | 22.5 |
| | 12/13/00 | 19.20 | 75' | 2" | 27.3 | NM | NM | NM | NM |
| | 2/6/01 | 16.82 | 75' | 2" | 28.5 | NM | NM | NM | NM |
| | 6/5/01 | 15.52 | 75' | 2" | 29.1 | 7.1 | NM | 2.67 | 21.8 |
| | 9/13/01 | 17.42 | 75' | 2" | 28.2 | NM | NM | 3.60 | 22.5 |
| | 12/7/01 | 19.54 | 75' | 2" | 27.1 | 7.1 | NM | 2.73 | 22.5 |

NOTES:
NS - Not sampled
Temperature in Degrees Celcius
Dissolved Oxygen in mg/L
Depth to Water and Depth to bottom in units of feet
Well volumes (Gallons)
Specific Conductivity (umhos/cm)

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| OMW-1 | 01-Dec-97 | 99.82 | 17.13 | - | 82.69 |
| | 05-Aug-99 | | 17.95 | 1.05 | 81.87 |
| | 26-Apr-00 | | 15.68 | 0.99 | 84.14 |
| | 01-Aug-00 | | 21.50 | 1.40 | 78.32 |
| | 13-Dec-00 | | 21.46 | 1.70 | 78.36 |
| | 06-Feb-01 | | 19.89 | 1.78 | 79.93 |
| | 05-Jun-01 | | 17.18 | 0.19 | 82.64 |
| | 16-Aug-01 | | 18.10 | 0.13 | 81.72 |
| | 13-Sep-01 | | 18.74 | 0.02 | 81.08 |
| | 26-Sep-01 | | 19.31 | 0.07 | 80.51 |
| | 27-Sep-01 | | 19.32 | 0.01 | 80.50 |
| | 19-Oct-01 | | 19.93 | 0.02 | 79.89 |
| | 09-Nov-01 | | 21.00 | 0.39 | 78.82 |
| | 21-Nov-01 | | 21.63 | 1.28 | 78.19 |
| | 05-Dec-01 | | 21.65 | 0.96 | 78.17 |
| | 07-Dec-01 | | 21.75 | 0.76 | 78.07 |
| | 10-Dec-01 | | 21.65 | 0.01 | 78.17 |
| | 11-Dec-01 | | 21.65 | sheen | 78.17 |
| MW-2 | 01-Dec-97 | 99.83 | 17.43 | - | 82.40 |
| | 05-Aug-99 | | 19.19 | 2.29 | 80.64 |
| | 26-Apr-00 | | 15.80 | 2.18 | 84.03 |
| | 01-Aug-00 | | 22.30 | 2.10 | 77.53 |
| | 13-Dec-00 | | 21.36 | 0.84 | 78.47 |
| | 06-Feb-01 | | 18.89 | sheen | 80.94 |
| | 05-Jun-01 | | 17.42 | sheen | 82.41 |
| | 16-Aug-01 | | 18.35 | - | 81.48 |
| | 13-Sep-01 | | 19.03 | - | 80.80 |
| | 26-Sep-01 | | 19.42 | sheen | 80.41 |
| | 27-Sep-01 | | 19.69 | 0.01 | 80.14 |
| | 19-Oct-01 | | 20.22 | - | 79.61 |
| | 09-Nov-01 | | 21.02 | 0.01 | 78.81 |
| | 21-Nov-01 | | 20.70 | sheen | 79.13 |
| | 05-Dec-01 | | 21.59 | 0.63 | 78.24 |
| | 07-Dec-01 | | 21.98 | 0.02 | 77.85 |
| | 10-Dec-01 | | 22.00 | 0.01 | 77.83 |
| | 11-Dec-01 | | 21.91 | sheen | 77.92 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-3 | 01-Dec-97 | 99.98 | 17.00 | - | 82.98 |
| | 05-Aug-99 | | 17.96 | 1.01 | 82.02 |
| | 26-Apr-00 | | 15.73 | 0.68 | 84.25 |
| | 01-Aug-00 | | 20.85 | 0.78 | 79.13 |
| | 13-Dec-00 | | 22.18 | 2.22 | 77.80 |
| | 06-Feb-01 | | 19.26 | 0.96 | 80.72 |
| | 05-Jun-01 | | 17.41 | 0.40 | 82.57 |
| | 16-Aug-01 | | 18.19 | 0.09 | 81.79 |
| | 13-Sep-01 | | 18.80 | 0.02 | 81.18 |
| | 26-Sep-01 | | 19.25 | sheen | 80.73 |
| | 27-Sep-01 | | 19.32 | 0.04 | 80.66 |
| | 19-Oct-01 | | 20.04 | 0.06 | 79.94 |
| | 09-Nov-01 | | 20.86 | sheen | 79.12 |
| | 21-Nov-01 | | 20.59 | sheen | 79.39 |
| | 05-Dec-01 | | 21.10 | sheen | 78.88 |
| | 07-Dec-01 | | 21.24 | sheen | 78.74 |
| | 10-Dec-01 | | 21.62 | 0.01 | 78.36 |
| | 11-Dec-01 | | 21.65 | sheen | 78.33 |
| MW-4 | 01-Dec-97 | 99.59 | 17.60 | - | 81.99 |
| | 05-Aug-99 | | 17.59 | - | 82.00 |
| | 26-Apr-00 | | 16.51 | - | 83.08 |
| | 01-Aug-00 | | 20.63 | - | 78.96 |
| | 13-Dec-00 | | 20.81 | - | 78.78 |
| | 06-Feb-01 | | 19.09 | - | 80.50 |
| | 05-Jun-01 | | 17.70 | - | 81.89 |
| | 13-Sep-01 | | 19.16 | - | 80.43 |
| | 07-Dec-01 | | 21.86 | - | 77.73 |
| MW-5 | 01-Dec-97 | 99.42 | 15.04 | - | 84.38 |
| | 05-Aug-99 | | 15.95 | - | 83.47 |
| | 26-Apr-00 | | 14.35 | - | 85.07 |
| | 01-Aug-00 | | 19.18 | - | 80.24 |
| | 13-Dec-00 | | 19.68 | - | 79.74 |
| | 06-Feb-01 | | 16.50 | - | 82.92 |
| | 05-Jun-01 | | 15.51 | - | 83.91 |
| | 13-Sep-01 | | 17.48 | - | 81.94 |
| | 07-Dec-01 | | 20.09 | - | 79.33 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-6 | 01-Dec-97 | 99.47 | 14.37 | - | 85.10 |
| | 05-Aug-99 | | 15.44 | - | 84.03 |
| | 26-Apr-00 | | 13.65 | - | 85.82 |
| | 01-Aug-00 | | 18.75 | - | 80.72 |
| | 13-Dec-00 | | 18.23 | - | 81.24 |
| | 06-Feb-01 | | 15.34 | - | 84.13 |
| | 05-Jun-01 | | 14.84 | - | 84.63 |
| | 13-Sep-01 | | 16.96 | - | 82.51 |
| | 07-Dec-01 | | 19.70 | - | 79.77 |
| MW-7 | 01-Dec-97 | 99.47 | 13.96 | - | 85.51 |
| | 05-Aug-99 | | 15.41 | - | 84.06 |
| | 26-Apr-00 | | 13.54 | - | 85.93 |
| | 01-Aug-00 | | 18.72 | - | 80.75 |
| | 13-Dec-00 | | 18.01 | - | 81.46 |
| | 06-Feb-01 | | 15.41 | - | 84.06 |
| | 05-Jun-01 | | 14.61 | - | 84.86 |
| | 13-Sep-01 | | 16.91 | - | 82.56 |
| | 07-Dec-01 | | 19.64 | - | 79.83 |
| MW-8 | 01-Dec-97 | 102.42 | 12.53 | - | 89.89 |
| | 05-Aug-99 | | 14.59 | - | 87.83 |
| | 26-Apr-00 | | 11.56 | - | 90.86 |
| | 01-Aug-00 | | 19.18 | - | 83.24 |
| | 13-Dec-00 | | 17.96 | - | 84.46 |
| | 06-Feb-01 | | 13.34 | - | 89.08 |
| | 05-Jun-01 | | 13.15 | - | 89.27 |
| | 13-Sep-01 | | 16.64 | - | 85.78 |
| | 07-Dec-01 | | 19.73 | - | 82.69 |
| MW-9 | 01-Dec-97 | 100.53 | 16.17 | - | 84.36 |
| | 05-Aug-99 | | 16.74 | - | 83.79 |
| | 26-Apr-00 | | 15.09 | - | 85.44 |
| | 01-Aug-00 | | 21.20 | - | 79.33 |
| | 13-Dec-00 | | 19.73 | - | 80.80 |
| | 06-Feb-01 | | 17.54 | - | 82.99 |
| | 05-Jun-01 | | 16.35 | - | 84.18 |
| | 13-Sep-01 | | 18.40 | - | 82.13 |
| | 07-Dec-01 | | 21.00 | - | 79.53 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-10 | 01-Dec-97 | 99.65 | 17.40 | - | 82.25 |
| | 05-Aug-99 | | 18.06 | 1.01 | 81.59 |
| | 26-Apr-00 | | 15.75 | 1.65 | 83.90 |
| | 01-Aug-00 | | 20.50 | 0.03 | 79.15 |
| | 13-Dec-00 | | 19.40 | 0.01 | 80.25 |
| | 06-Feb-01 | | 18.84 | sheen | 80.81 |
| | 05-Jun-01 | | 17.38 | - | 82.27 |
| | 16-Aug-01 | | 18.15 | - | 81.50 |
| | 13-Sep-01 | | 18.82 | - | 80.83 |
| | 07-Dec-01 | | 23.90 | - | 75.75 |
| | 11-Dec-01 | | 21.88 | - | 77.77 |
| MW-11 | 01-Dec-97 | 96.47 | 15.74 | - | 80.73 |
| | 05-Aug-99 | | 15.60 | - | 80.87 |
| | 26-Apr-00 | | 13.65 | - | 82.82 |
| | 01-Aug-00 | | 18.61 | - | 77.86 |
| | 13-Dec-00 | | 19.01 | - | 77.46 |
| | 06-Feb-01 | | 17.43 | - | 79.04 |
| | 05-Jun-01 | | 15.96 | - | 80.51 |
| | 13-Sep-01 | | 17.23 | - | 79.24 |
| | 07-Dec-01 | | 19.74 | - | 76.73 |
| MW-12 | 01-Dec-97 | 98.63 | 17.03 | - | 81.60 |
| | 05-Aug-99 | | 17.33 | - | 81.30 |
| | 26-Apr-00 | | 16.06 | - | 82.57 |
| | 01-Aug-00 | | 20.15 | - | 78.48 |
| | 13-Dec-00 | | 23.70 | - | 74.93 |
| | 06-Feb-01 | | 18.45 | - | 80.18 |
| | 05-Jun-01 | | 17.26 | - | 81.37 |
| | 13-Sep-01 | | 18.63 | - | 80.00 |
| | 07-Dec-01 | | 21.37 | - | 77.26 |
| MW-13 | 01-Dec-97 | 100.80 | 21.05 | - | 79.75 |
| | 05-Aug-99 | | 21.26 | - | 79.54 |
| | 26-Apr-00 | | 20.02 | - | 80.78 |
| | 01-Aug-00 | | 24.05 | - | 76.75 |
| | 13-Dec-00 | | 24.13 | - | 76.67 |
| | 06-Feb-01 | | 22.43 | - | 78.37 |
| | 05-Jun-01 | | 21.34 | - | 79.46 |
| | 13-Sep-01 | | 22.91 | - | 77.89 |
| | 07-Dec-01 | | 25.22 | - | 75.58 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-14 | 01-Dec-97 | 89.38 | 7.27 | - | 82.11 |
| | 05-Aug-99 | | 7.96 | - | 81.42 |
| | 26-Apr-00 | | 6.46 | - | 82.92 |
| | 11-Aug-00 | | 10.80 | - | 78.58 |
| | 13-Dec-00 | | 10.80 | - | 78.58 |
| | 06-Feb-01 | | 8.72 | - | 80.66 |
| | 05-Jun-01 | | 7.32 | - | 82.06 |
| | 13-Sep-01 | | 9.31 | - | 80.07 |
| | 07-Dec-01 | | 11.91 | - | 77.47 |
| MW-15 | 01-Dec-97 | 87.33 | 5.10 | - | 82.23 |
| | 05-Aug-99 | | 6.28 | - | 81.05 |
| | 26-Apr-00 | | 4.75 | - | 82.58 |
| | 01-Aug-00 | | 9.11 | - | 78.22 |
| | 13-Dec-00 | | 8.57 | - | 78.76 |
| | 06-Feb-01 | | 6.36 | - | 80.97 |
| | 05-Jun-01 | | 5.68 | - | 81.65 |
| | 13-Sep-01 | | 7.61 | - | 79.72 |
| | 07-Dec-01 | | 9.91 | - | 77.42 |
| MW-16 | 01-Dec-97 | 93.74 | 9.69 | - | 84.05 |
| | 05-Aug-99 | | 11.22 | - | 82.52 |
| | 26-Apr-00 | | 9.50 | - | 84.24 |
| | 01-Aug-00 | | 14.35 | - | 79.39 |
| | 13-Dec-00 | | 13.45 | - | 80.29 |
| | 06-Feb-01 | | 10.89 | - | 82.85 |
| | 05-Jun-01 | | 10.34 | - | 83.40 |
| | 13-Sep-01 | | 12.58 | - | 81.16 |
| | 07-Dec-01 | | 13.41 | - | 80.33 |
| DMW-17 | 01-Dec-97 | 100.08 | 15 53 | - | 84.55 |
| | 05-Aug-99 | | 16.16 | - | 83.92 |
| | 26-Apr-00 | | 16.80 | - | 83.28 |
| | 01-Aug-00 | | 19.27 | - | 80.81 |
| | 13-Dec-00 | | 19.20 | - | 80.88 |
| | 06-Feb-01 | | 16.82 | - | 83.26 |
| | 05-Jun-01 | | 15.52 | - | 84.56 |
| | 13-Sep-01 | | 17.42 | - | 82.66 |
| | 07-Dec-01 | | 19.54 | - | 80.54 |

**Notes:**
TOC - Top-of-Casing elevation refrenced to common datum.
NM - Not measured.
All measurments in units of feet.
- = No Data

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| OMW-1 | 1-Dec-97 | 14.9 | 85.5 | 5.2 | 24.8 | 130 | 96 | BDL |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-2 | 1-Dec-97 | 9,900 | 42,300 | 2,040 | 12,100 | 66,340 | 242,000 | 71.2 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 4,400 | 7,570 | 2,890 | 6,790 | 21,650 | 9,490 | 592 |
| | 13-Sep-01 | 2,280 | 9,780 | 1,630 | 7,650 | 21,340 | 1,750 | 399 |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-3 | 1-Dec-97 | 9,820 | 54,500 | 2,160 | 11,900 | 78,380 | 81,200 | 445 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-4 | 1-Dec-97 | 8,140 | 21,000 | 1,510 | 11,500 | 42,150 | 215,000 | 813 |
| | 5-Aug-99 | 14,200 | 34,600 | 2,750 | 15,900 | 67,450 | 109,000 | <5 |
| | 26-Apr-00 | 13,400 | 33,200 | 3,420 | 13,270 | 63,290 | 102,000 | 1,060 |
| | 1-Aug-00 | 10,100 | 23,300 | 1,740 | 11,410 | 46,550 | 109,000 | 559 |
| | 13-Dec-00 | 6,730 | 16,300 | 635 | 4,170 | 27,835 | 32,300 | 742 |
| | 6-Feb-01 | 5,860 | 13,500 | 1,080 | 7,230 | 27,670 | 26,100 | 210 |
| | 5-Jun-01 | 3,570 | 10,900 | 965 | 9,510 | 24,945 | 5,730 | 302 |
| | 13-Sep-01 | 5,910 | 14,900 | 1,050 | 7,100 | 28,960 | 5,980 | 384 |
| | 7-Dec-01 | 10,000 | 19,200 | 2,210 | 11,600 | 43,010 | BDL | 682 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 5 |

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-5 | 1-Dec-97 | 5,930 | 47,600 | 2,100 | 12,600 | 68,230 | BDL | 125 |
| | 5-Aug-99 | 6,400 | 61,600 | 2,460 | 12,100 | 82,560 | 410 | 335 |
| | 26-Apr-00 | 6,680 | 48,300 | 2,390 | 9,610 | 66,980 | 681 | 609 |
| | 1-Aug-00 | 4,250 | 40,300 | 1,960 | 12,530 | 59,040 | 258 | 396 |
| | 13-Dec-00 | 4,530 | 38,100 | 2,520 | 14,640 | 59,790 | 381 | 4,770 |
| | 6-Feb-01 | 5,070 | 30,800 | 2,200 | 12,500 | 50,570 | 225 | 678 |
| | 5-Jun-01 | 6,070 | 52,000 | 2,900 | 13,720 | 74,690 | 228 | 342 |
| | 13-Sep-01 | 4,990 | 7,210 | 3,340 | 17,900 | 33,440 | 60.7 | 2,900 |
| | 7-Dec-01 | 3,520 | 38,600 | 1,700 | 11,490 | 55,310 | BDL | 408 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-6 | 1-Dec-97 | 5.5 | 137 | 6.0 | 149 | 297.5 | BDL | BDL |
| | 5-Aug-99 | 4.1 | 1.1 | 3.7 | 16.7 | 25.6 | 5 | BDL |
| | 26-Apr-00 | 13.0 | 19.2 | 15 | 48 | 95.2 | 27.2 | 6.44 |
| | 1-Aug-00 | 117 | 1820 | 128 | 877 | 2942 | 10.7 | 32.2 |
| | 13-Dec-00 | 47.9 | 460 | 35.4 | 332 | 875 | 14.8 | 7.2 |
| | 6-Feb-01 | 47.4 | 143 | 47.6 | 219.2 | 457 | 17.8 | 22.6 |
| | 5-Jun-01 | 9.3 | 44.5 | 23.5 | 141.3 | 219 | 7.5 | BDL |
| | 13-Sep-01 | 18.1 | 36.6 | 24.7 | 119.0 | 198 | 8.35 | 1.06 |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | 5.23 | BDL |
| MW-7 | 1-Dec-97 | 1.1 | 1.7 | BDL | 1.1 | 3.9 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 41 | <1 |
| | 26-Apr-00 | 2.13 | 13.5 | BDL | 1.59 | 17.2 | 68.9 | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 53.8 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 52.9 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 18.7 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | 10.6 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-8 | 1-Dec-97 | BDL | 2.4 | 1.2 | 5.4 | 9.0 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 1.58 | 8.53 | BDL | BDL | 10.1 | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-9 | 1-Dec-97 | 77 | 14,000 | 2,390 | 20,700 | 37,167 | 114 | 384 |
| | 5-Aug-99 | 110 | 4,280 | 2,450 | 17,000 | 23,840 | 150 | <500 |
| | 26-Apr-00 | 163 | 2,640 | 3,520 | 14,760 | 21,083 | BDL | 2,090 |
| | 1-Aug-00 | 187 | 18,400 | 1,010 | 16,070 | 35,667 | BDL | 909 |
| | 13-Dec-00 | 9.14 | 657 | 108 | 1,340 | 2,114 | 26.0 | 47 |
| | 6-Feb-01 | 10.6 | 254 | 181 | 2,907 | 3,353 | 16.9 | 179 |
| | 5-Jun-01 | 27.7 | 402 | 139 | 1,798 | 2,367 | 17.2 | 66.6 |
| | 13-Sep-01 | 15.0 | 133 | 710 | 7,690 | 8,548 | 13.0 | 186 |
| | 7-Dec-01 | 34.4 | 35.5 | 28.9 | 713 | 812 | BDL | 20.6 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-10 | 1-Dec-97 | 6,220 | 46,300 | 2,320 | 14,800 | 69,640 | 938 | 542 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 8,020 | 32,900 | 856 | 8,280 | 50,056 | 8,780 | 327 |
| | 13-Sep-01 | 9,870 | 47,700 | 1,190 | 20,400 | 79,160 | 12,500 | 356 |
| | 7-Dec-01 | 5,590 | 56,000 | 8,150 | 61,700 | 131,440 | 1,050 | 2,540 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-11 | 1-Dec-97 | 1.4 | 3.4 | BDL | 4.7 | 9.5 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 7 | <5 |
| | 26-Apr-00 | 1.18 | 3.96 | BDL | BDL | 5.1 | 4.69 | 9.98 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | 2.51 | 91.0 | 15.0 | 104.4 | 212.9 | 26.3 | 17.2 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 39.5 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | 4.88 | 9.52 | 14.4 | 266 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | 1.32 | 1.32 | 358 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | - | 7 | <5 |
| MW-12 | 1-Dec-97 | 7,970 | 382 | 266 | 1,540 | 10,158 | 99,900 | 119 |
| | 5-Aug-99 | 5,000 | 260 | <200 | <200 | 5,260 | 41,200 | <1000 |
| | 26-Apr-00 | 135 | 4.51 | BDL | 11.0 | 151 | 6,800 | 18.2 |
| | 1-Aug-00 | 1670 | 17.1 | 4.33 | 114.9 | 1806 | 44,200 | BDL |
| | 13-Dec-00 | 119 | 9.1 | 2.11 | 26.7 | 157 | 4,230 | 31.7 |
| | 6-Feb-01 | 32.5 | 9.3 | 1.51 | 13.8 | 57 | 1,570 | 10.6 |
| | 5-Jun-01 | 61.0 | BDL | BDL | 2.1 | 63 | 1,960 | 17.2 |
| | 13-Sep-01 | 329 | 4.55 | 2.96 | 29.27 | 366 | 2,860 | 60.1 |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | 260 | <200 | <200 | - | 40 | 25 |

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-13 | 1-Dec-97 | BDL | 1.4 | BDL | 1.6 | 3 | 82.3 | BDL |
| | 5-Aug-99 | 3 | <1 | <1 | <1 | 3 | 604 | <5 |
| | 26-Apr-00 | 188 | 149 | BDL | BDL | 337 | 3,150 | BDL |
| | 1-Aug-00 | 207 | 5.74 | BDL | 32.8 | 245 | 3,641 | 24.3 |
| | 13-Dec-00 | 29.9 | 3.81 | 1.0 | 76.6 | 111 | 4,350 | 29.8 |
| | 6-Feb-01 | 377 | 12.10 | 2.8 | 105.2 | 497 | 5,200 | 54.9 |
| | 5-Jun-01 | 259 | 5.87 | 1.8 | 112.8 | 380 | 8,530 | 23.2 |
| | 13-Sep-01 | 374 | 7.44 | 4.52 | 127.5 | 513 | 7,150 | 24.7 |
| | 7-Dec-01 | 15.4 | BDL | BDL | 8.10 | 24 | 1,130 | BDL |
| SSTL | | 3 | 1 | 1 | 1 | -- | 40 | 5 |
| MW-14 | 1-Dec-97 | 1.1 | 1.4 | BDL | 2.7 | 5 | 76.5 | BDL |
| | 5-Aug-99 | 57 | 7 | 1 | 23 | 88 | 606 | 5 |
| | 26-Apr-00 | BDL | 1.38 | BDL | BDL | 1.38 | 1.11 | BDL |
| | 1-Aug-00 | 138 | 4.04 | BDL | 39.04 | 181.08 | 35.3 | 13.0 |
| | 13-Dec-00 | BDL | BDL | BDL | 2.13 | 2.13 | 129 | 2.33 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 11.1 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | 54.9 | BDL |
| SSTL | | 5 | 7 | 1 | 23 | - | 40 | 5 |
| MW-15 | 1-Dec-97 | 1.0 | 1.6 | BDL | 2.5 | 5 | BDL | BDL |
| | 5-Aug-99 | 3 | 6 | 1 | 6 | 16 | 27 | <5 |
| | 26-Apr-00 | 1.01 | 1.32 | BDL | BDL | 2.33 | 2.82 | 5.66 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 2.77 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 3 | 6 | 1 | 6 | - | 27 | <5 |
| MW-16 | 1-Dec-97 | BDL | 1.2 | BDL | 1.3 | 2.5 | BDL | BDL |
| | 5-Aug-99 | 2.2 | 8.8 | 1.6 | 7.1 | 19.7 | 4 | BDL |
| | 26-Apr-00 | 2.17 | 1.27 | BDL | BDL | 3.4 | 10.1 | BDL |
| | 1-Aug-00 | 5.02 | 3.01 | BDL | 3.5 | 11.5 | 16.1 | 1.35 |
| | 13-Dec-00 | 10.7 | BDL | BDL | 2.66 | 13.4 | 30.6 | 1.96 |
| | 6-Feb-01 | 6.25 | BDL | BDL | BDL | 6.25 | 32.7 | BDL |
| | 5-Jun-01 | 22.3 | BDL | BDL | 1.30 | 23.6 | 78.8 | BDL |
| | 13-Sep-01 | 18.9 | BDL | BDL | BDL | BDL | 35.6 | BDL |
| | 7-Dec-01 | 15.7 | BDL | BDL | 1.01 | 16.7 | 25.0 | BDL |

# TABLE 3

## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| DMW-17 | 1-Dec-97 | 1.6 | 3.8 | 2.3 | 12.7 | 20.3 | BDL | BDL |
| | 5-Aug-99 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 26-Apr-00 | 1.06 | 1.24 | BDL | BDL | 2.3 | 8.97 | BDL |
| | 1-Aug-00 | BDL | 3.02 | BDL | BDL | 3.02 | 7.75 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 6.98 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 5.34 | BDL |
| | 5-Jun-01 | BDL | 2.0 | BDL | BDL | 2.0 | 23.8 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 3.42 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |
| CP-WW | 1-Dec-97 | BDL | 1.2 | BDL | BDL | 1.2 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 2.96 | 1.09 | BDL | BDL | 4.1 | 315 | BDL |
| | 1-Aug-00 | 3.23 | 2.56 | BDL | 1.09 | 7 | 224 | BDL |
| | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |
| CLS-WW | 1-Dec-97 | 81.3 | 1.1 | BDL | 9.6 | 92 | 34.5 | BDL |
| | 5-Aug-99 | 81 | 1 | <1 | 10 | 92 | 35 | <5 |
| | 26-Apr-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | <1 | <1 | 10 | - | 35 | <5 |

Notes:

All results reported in parts per billion (ug/L) unless otherwise noted.

SSTL = Site specific target levels referenced in bid

FP = Free Product; NS = Not Sampled

BDL = Below detecatable Levels

Total BTEX = Summation of benzene, toluene, ethylbenzene and xylenes

MTBE = Methyl-tert-buytl-ether

# ATTACHMENT 3
# LABORATORY ANALYTICAL REPORT

# ACCESS ANALYTICAL, INC.

Proj. Mgr.
H2O Environmental Inc.
121 Centrum Dr. Suite 2

Irmo, SC 29063

Page 1
December 17, 2001
Report # 112000479
Order # 245892
South Carolina Cert ID# 96023

RECEIVED [illegible] 2001

Site Location/Project

Crawfords DHE 12335

Sample I.D.: MW-4
Collected: 12/07/01 00:00
Received: 12/11/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:06 | PMD |
| Benzene | 10000 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:06 | PMD |
| Toluene | 19200 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:06 | PMD |
| Ethylbenzene | 2210 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:06 | PMD |
| m & p-Xylene | 7750 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:06 | PMD |
| o-Xylene | 3850 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:06 | PMD |
| Naphthalene | 682 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:06 | PMD |
| SURROGATE: Toluene-D8 | 93.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 114.75% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 93.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Proj. Mgr.
H2O Environmental Inc.
121 Centrum Dr. Suite 2

Irmo, SC 29063

December 17, 2001
Report # 112000479
Order # 245893
South Carolina Cert ID# 96023

Site Location/Project
.
Crawfords DHE 12335

Sample I.D.: MW-5
Collected: 12/07/01 00:00
Received: 12/11/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/13/2001 | 12/13/2001 | 09:03 | PMD |
| Benzene | 3520 | ug/L | 5030/8260B | 1.000 | 12/13/2001 | 12/13/2001 | 09:03 | PMD |
| Toluene | 38600 | ug/L | 5030/8260B | 1.000 | 12/13/2001 | 12/13/2001 | 09:03 | PMD |
| Ethylbenzene | 1700 | ug/L | 5030/8260B | 1.000 | 12/13/2001 | 12/13/2001 | 09:03 | PMD |
| m & p-Xylene | 7500 | ug/L | 5030/8260B | 1.000 | 12/13/2001 | 12/13/2001 | 09:03 | PMD |
| o-Xylene | 3990 | ug/L | 5030/8260B | 1.000 | 12/13/2001 | 12/13/2001 | 09:03 | PMD |
| Naphthalene | 408 | ug/L | 5030/8260B | 1.000 | 12/13/2001 | 12/13/2001 | 09:03 | PMD |
| SURROGATE: Toluene-D8 | 100.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 118.75% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 93.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Proj. Mgr.
H2O Environmental Inc.
121 Centrum Dr. Suite 2

Irmo, SC 29063

December 17, 2001
Report # 112000479
Order # 245894
South Carolina Cert ID# 96023

Site Location/Project

Crawfords DHE 12335

Sample I.D.: MW-6
Collected: 12/07/01 00:00
Received: 12/11/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 5.23 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:57 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:57 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:57 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:57 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:57 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:57 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:57 | PMD |
| SURROGATE: Toluene-D8 | 97.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 103.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 98.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Proj. Mgr.
H2O Environmental Inc.
121 Centrum Dr. Suite 2

Irmo, SC 29063

December 17, 2001
Report # 112000479
Order # 245895
South Carolina Cert ID# 96023

Site Location/Project
.
Crawfords DHE 12335

Sample I.D.: MW-7
Collected: 12/07/01 00:00
Received: 12/11/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:59 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:59 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:59 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:59 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:59 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:59 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:59 | PMD |
| SURROGATE: Toluene-D8 | 98.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 110.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 96.50% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

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121 Centrum Dr. Suite 2

Irmo, SC 29063

December 17, 2001
Report # 112000479
Order # 245896
South Carolina Cert ID# 96023

Site Location/Project

Crawfords DHE 12335

Sample I.D.: MW-8
Collected: 12/07/01 00:00
Received: 12/11/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:42 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:42 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:42 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:42 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:42 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:42 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:42 | PMD |
| SURROGATE: Toluene-D8 | 103.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 114.75% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 96.50% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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H2O Environmental Inc.
121 Centrum Dr. Suite 2

Irmo, SC 29063


December 17, 2001
Report # 112000479
Order # 245897
South Carolina Cert ID# 96023

Site Location/Project

Crawfords DHE 12335

Sample I.D.: MW-9
Collected: 12/07/01 00:00
Received: 12/11/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:43 | PMD |
| Benzene | 34.4 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:43 | PMD |
| Toluene | 35.5 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:43 | PMD |
| Ethylbenzene | 28.9 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:43 | PMD |
| m & p-Xylene | 522 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:43 | PMD |
| o-Xylene | 191 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:43 | PMD |
| Naphthalene | 20.6 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 09:43 | PMD |
| SURROGATE: Toluene-D8 | 97.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 114.75% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 99.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

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H2O Environmental Inc.
121 Centrum Dr. Suite 2

Irmo, SC 29063

December 17, 2001
Report # 112000479
Order # 245898
South Carolina Cert ID# 96023

Site Location/Project

Crawfords DHE 12335

Sample I.D.: MW-10
Collected: 12/07/01 00:00
Received: 12/11/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 100 | | | | |
| Methyl-Tert-Butyl-Ether | 1050 | ug/L | 5030/8260B | 100.000 | 12/12/2001 | 12/12/2001 | 09:00 | PMD |
| Benzene | 5590 | ug/L | 5030/8260B | 100.000 | 12/12/2001 | 12/12/2001 | 09:00 | PMD |
| Toluene | 56000 | ug/L | 5030/8260B | 100.000 | 12/12/2001 | 12/12/2001 | 09:00 | PMD |
| Ethylbenzene | 8150 | ug/L | 5030/8260B | 100.000 | 12/12/2001 | 12/12/2001 | 09:00 | PMD |
| m & p-Xylene | 42500 | ug/L | 5030/8260B | 100.000 | 12/12/2001 | 12/12/2001 | 09:00 | PMD |
| o-Xylene | 19200 | ug/L | 5030/8260B | 100.000 | 12/12/2001 | 12/12/2001 | 09:00 | PMD |
| Naphthalene | 2540 | ug/L | 5030/8260B | 100.000 | 12/12/2001 | 12/12/2001 | 09:00 | PMD |
| SURROGATE: Toluene-D8 | 96.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 109.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 103.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
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Company Representative

Proj. Mgr.
H2O Environmental Inc.
121 Centrum Dr. Suite 2

Irmo, SC 29063

December 17, 2001
Report # 112000479
Order # 245899
South Carolina Cert ID# 96023

Site Location/Project

Crawfords DHE 12335

Sample I.D.: MW-11
Collected: 12/07/01 00:00
Received: 12/11/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 358 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:59 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:59 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:59 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:59 | PMD |
| m & p-Xylene | 1.32 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:59 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:59 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:59 | PMD |
| SURROGATE: Toluene-D8 | 106.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 120.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 97.50% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Proj. Mgr.
H2O Environmental Inc.
121 Centrum Dr. Suite 2

Irmo, SC 29063

December 17, 2001
Report # 112000479
Order # 245900
South Carolina Cert ID# 96023

Site Location/Project
.
Crawfords DHE 12335

Sample I.D.: MW-12
Collected: 12/07/01 00:00
Received: 12/11/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:48 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:48 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:48 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:48 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:48 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:48 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:48 | PMD |
| SURROGATE: Toluene-D8 | 94.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 107.50% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 98.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
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Company Representative

Proj. Mgr.
H2O Environmental Inc.
121 Centrum Dr. Suite 2

Irmo, SC 29063

December 17, 2001
Report # 112000479
Order # 245901
South Carolina Cert ID# 96023

Site Location/Project

Crawfords DHE 12335

Sample I.D.: MW-13
Collected: 12/07/01 00:00
Received: 12/11/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 1130 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:48 | SKL |
| Benzene | 15.4 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:48 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:48 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:48 | SKL |
| m & p-Xylene | 3.41 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:48 | SKL |
| o-Xylene | 4.69 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:48 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:48 | SKL |
| SURROGATE: Toluene-D8 | 100.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 111.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 95.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

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H2O Environmental Inc.
121 Centrum Dr. Suite 2

Irmo, SC 29063

December 17, 2001
Report # 112000479
Order # 245902
South Carolina Cert ID# 96023

Site Location/Project

Crawfords DHE 12335

Sample I.D.: MW-14
Collected: 12/07/01 00:00
Received: 12/11/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 54.9 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 10:39 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 10:39 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 10:39 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 10:39 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 10:39 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 10:39 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 10:39 | SKL |
| SURROGATE: Toluene-D8 | 95.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 114.50% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 91.50% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Proj. Mgr.
H2O Environmental Inc.
121 Centrum Dr. Suite 2

Irmo, SC 29063

December 17, 2001
Report # 112000479
Order # 245903
South Carolina Cert ID# 96023

Site Location/Project

Crawfords DHE 12335

Sample I.D.: MW-15
Collected: 12/07/01 00:00
Received: 12/11/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:55 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:55 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:55 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:55 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:55 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:55 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:55 | PMD |
| SURROGATE: Toluene-D8 | 95.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 121.50% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 86.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Proj. Mgr.
H2O Environmental Inc.
121 Centrum Dr. Suite 2

Irmo, SC 29063

December 17, 2001
Report # 112000479
Order # 245904
South Carolina Cert ID# 96023

Site Location/Project

Crawfords DHE 12335

Sample I.D.: MW-16
Collected: 12/07/01 00:00
Received: 12/11/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 25.0 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:55 | PMD |
| Benzene | 15.7 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:55 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:55 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:55 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:55 | PMD |
| o-Xylene | 1.01 | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:55 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:55 | PMD |
| SURROGATE: Toluene-D8 | 94.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 109.75% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 98.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Proj. Mgr.
H2O Environmental Inc.
121 Centrum Dr. Suite 2

Irmo, SC 29063


December 17, 2001
Report # 112000479
Order # 245905
South Carolina Cert ID# 96023

Site Location/Project

Crawfords DHE 12335

Sample I.D.: MW-17
Collected: 12/07/01 00:00
Received: 12/11/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:56 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:56 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:56 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:56 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:56 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:56 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:56 | PMD |
| SURROGATE: Toluene-D8 | 92.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 110.75% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 88.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Proj. Mgr.
H2O Environmental Inc.
121 Centrum Dr. Suite 2

Irmo, SC 29063

December 17, 2001
Report # 112000479
Order # 245906
South Carolina Cert ID# 96023

Site Location/Project
.
Crawfords DHE 12335

Sample I.D.: CLS-WW
Collected: 12/07/01 00:00
Received: 12/11/01 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:56 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:56 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:56 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:56 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:56 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:56 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/12/2001 | 12/12/2001 | 08:56 | PMD |
| SURROGATE: Toluene-D8 | 94.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 113.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 102.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

# Access Analytical- Chain of Custody Record

Project Submission #: 01/12-479 245892-245906. RUSH # (if applicable): (U2) Laboratory ID: _____ PO #: _____

| Company Name: $H_2O$ Environmental, Inc | REQUESTED LAB ANALYSIS: | ACCESS ANALYTICAL, INC. |
|---|---|---|
| Address: 121 Centrum Dr Ste 2 | PARAMETER: BTEX MTBE Naphth | 1248 Lake Murray Blvd. Irmo, SC 29063 |
| City: Irmo State: SC Zip: 29063 | | Phone: (803) 781-4243 Fax: 781-4303 Toll Free (888) 315-4243 |
| Project Name: Crawfords AHE 12335 | | |
| Report To: | | |

| Sample Label | Date Collected | Time Collected | Matr | # of Cont | BTEX MTBE Naphth | NOTES / COMMENTS |
|---|---|---|---|---|---|---|
| mw-4 | 12-07-01 | | GW | 2 | (X) | 245892 |
| mw-5 | ↓ | | ↓ | ↓ | X | 245893 |
| mw-6 | | | | | X | 245894 |
| mw 7 | | | | | X | 245895 |
| mw 8 | | | | | X | 245896 |
| mw 9 | | | | | X | 245897 |
| mw 10 | | | | | X | 245898 |
| mw 11 | | | | | X | 245899 |
| mw 12 | | | | | X | 245900 |
| mw 13 | ↓ | | ↓ | ↓ | X | 245901 |

**Turnaround Time:**
___Std. (5-7 Bus. days)
___RUSH*
*Date Required:_____
(For rush work, results faxed by end of business day on date required)

Samples Recd. on Ice? ✓Yes ___No

Project Location: ___SC ___NC ___Other_____(specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| Stephanie Cagle | 12/10/01 | 2:50pm | Cheryl Barr |
| Cheryl Barr | 12/10/01 | 1700 | Fedex |
| Fedex | | | VJ STL 12/11/01 1000 |

Original Copy - Returned w/Report
Yellow Copy - Access Analytical Copy
Pink Copy - Client Copy
*See reverse for Terms and Conditions*

# Access Analytical- Chain of Custody Record

Laboratory ID: ____

Project Submission #: 01/12-479 RUSH # *(if applicable)*: ____ PO #: ____

| Company Name: H2O Environmental Inc | REQUESTED LAB ANALYSIS: | ACCESS ANALYTICAL, INC. |
|---|---|---|
| Address: 121 Centrum Dr Ste 2 | PARAMETER: BTEX, MTBE, NAPTH | 1248 Lake Murray Blvd. Irmo, SC 29063 |
| City: Irmo State: SC Zip: 29063 | | Phone: (803) 781-4243 Fax: 781-4303 Toll Free (888) 315-4243 |
| Project Name: Crawfords DHE# 12335 | | |
| Report To: | | |

| Sample Label | Date Collected | Time Collected | Matr | # of Cont | BTEX, MTBE, NAPTH | | | | | | | NOTES / COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-14 | 12-07-01 | | GW | 2 | X | | | | | | | 245902 |
| MW-15 | ↓ | | | ↓ | X | | | | | | | 245903 |
| MW 16 | ↓ | | | ↓ | X | | | | | | | 245904 |
| MW 17 | ↓ | | | ↓ | X | | | | | | | 245905 |
| CLS-WW | ↓ | | | ↓ | X | | | | | | | 245906 |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

**Turnaround Time:**

____Std. (5-7 Bus. days)
____RUSH*
*Date Required:________
(For rush work, results faxed by end of business day on date required)

Samples Recd. on Ice?
✓ Yes
__No

Project Location:
✓ SC
__NC
__Other______(specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| Stephanie Cagle | 12/10/01 | 2:50pm | Cheryl Barr |
| Cheryl Barr | 12/10/01 | 1700 | FedEx |
| FedEx | | | VJ SR 12/11/01 1000 |
| | | | |

Original Copy - Returned w/Report
Yellow Copy - Access Analytical Copy
Pink Copy - Client Copy





*See reverse for Terms and Conditions*

RECEIVED
APR 2 9 2002
Underground Storage
Tank Program

April 26, 2002

Mr. John Abernathy
Underground Storage Tank Program
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: 7th Quarterly Report
Crawford's Country Store
5870 Hwy 28 North
Antreville, South Carolina
SCDHEC Site ID # 12335

Dear Mr. Abernathy:

On February 4, 2000, the South Carolina Department of Health and Environmental Control (SCDHEC) provided notice to proceed to $H_2O$ Environmental, Inc. ($H_2O$) to perform Corrective Action at Crawford's Country Store located at 5870 Highway 28 North, Antreville, South Carolina. See Figure 1, Attachment 1 for a layout of the site and remediation system. The objective of the project is to reduce the Chemicals of Concern (COC) in monitoring wells OMW-1, MW-2 through MW-5, MW-7 through MW-15, DMW-17, CP-WW and CLS-WW to the site specific target levels (SSTLs). A chronological summary of site activities is provided below:

| | |
|---|---|
| 2/4/00 | SCDHEC awarded Bid Number SB-9570-12/02/99-TC |
| 3/02/00 | Corrective Action Plan/Engineering Report submitted to SCDHEC |
| 4/18/00 | CAP/ER approved |
| 4/26/00 | Initial groundwater sampling event |
| 5/17/00 | Initial groundwater results submitted |
| 5/22/00-5/31/00 | System installed |
| 5/31/00 | System was inspected and approved Todd Adams of SCDHEC |
| 5/31/00 | Invoice submitted for payment of 40% of the contract amount |
| 6/14/00 | System start-up |
| 8/01/00 | 1st quarter sampling event |
| 8/28/99 | 1st quarter report submitted |
| 9/13/00 | Free product recovery from OMW-1, MW-2 and MW-3 |
| 12/13/00 | 2nd quarter sampling event |
| 2/16/01 | 2nd quarter report submitted |
| 2/6/01 | 3rd quarter sampling event |
| 3/15/01 | 3rd quarter report submitted |

UST
52 tech
DOCKETING

| | |
|---|---|
| 6/5/01 | 4th quarter sampling event |
| 7/31/01 | 4th quarter report submitted |
| 9/13/01 | 5th quarter sampling event |
| 10/18/01 | 5th quarter report submitted |
| 12/7/01 | 6th quarter sampling event |
| 2/4/02 | 6th quarter report submitted |
| 3/5/02 | 7th quarter sampling event |

An air injection/vapor extraction system was installed in May 2000 and put in operation in June 2000. The system consists of ten air injection/vapor extraction wells SV-1 through SV-10. In order to target the source area, $H_2O$ is rotating air sparging in injection/vapor extraction wells SV-1 through SV-10 and extracting vapor from injection/vapor extraction wells SV-1 through SV-8. Refer to Figure 1, Attachment 1 for a map illustrating the system layout. The following table summarizes the general operating characteristics of the system.

**Summary of System Operating Characteristics**

| Well ID | Activity | PSI | CFM | IWG |
|---|---|---|---|---|
| SV-1 - SV-8 | Vapor Extraction | -- | -- | 55 |
| SV-1 - SV-10 | Air Sparging | 10 | 6 | -- |

An air sample was collected from the effluent of the vapor extraction system on August 1, 2000. Based on the review of the laboratory analysis, it is estimated that contaminant emissions will not exceed 1,000 pounds per month. An air sample was not collected this quarter because the OVA field screening results were below detection limits.

On March 5, 2002, $H_2O$ Environmental Inc. personnel gauged and collected groundwater samples from monitoring wells MW-4 through MW-16 and water well CLS-WW at the site. Water well CP-WW located at the Green residence was not operational at the time of the sampling event and a groundwater sample could not be collected. A new water well has apparently been installed and is currently being used by the Green residence. Monitoring wells OMW-1 and MW-3 contained free product and monitoring well MW-2 had a sheen; therefore, groundwater samples were not collected. The groundwater samples were analyzed for Benzene, Toluene, Ethylbenzene, total Xylenes (BTEX), Methyl-Tert-Butyl Ether (MTBE), and Naphthalene. A review of the groundwater elevation data indicated a groundwater flow direction to the south-southeast. Table 1, Attachment 2, summarizes field data collected during monitoring well purging. The groundwater elevations and free product thicknesses are summarized on Table 2, Attachment 2, and illustrated on Figure 2, Attachment 1. The groundwater quality for Chemicals of Concern is summarized on Table 3, Attachment 2, and illustrated on Figure 3, Attachment 1. A copy of the laboratory analytical report is provided in Attachment 3. Groundwater generated during well purging was either placed in on-site 55-gallon drums or discharged on site as warranted by the data. Product generated is placed on-site into a 55-gallon drum. Any disposal manifests will be forwarded to DHEC upon receipt.

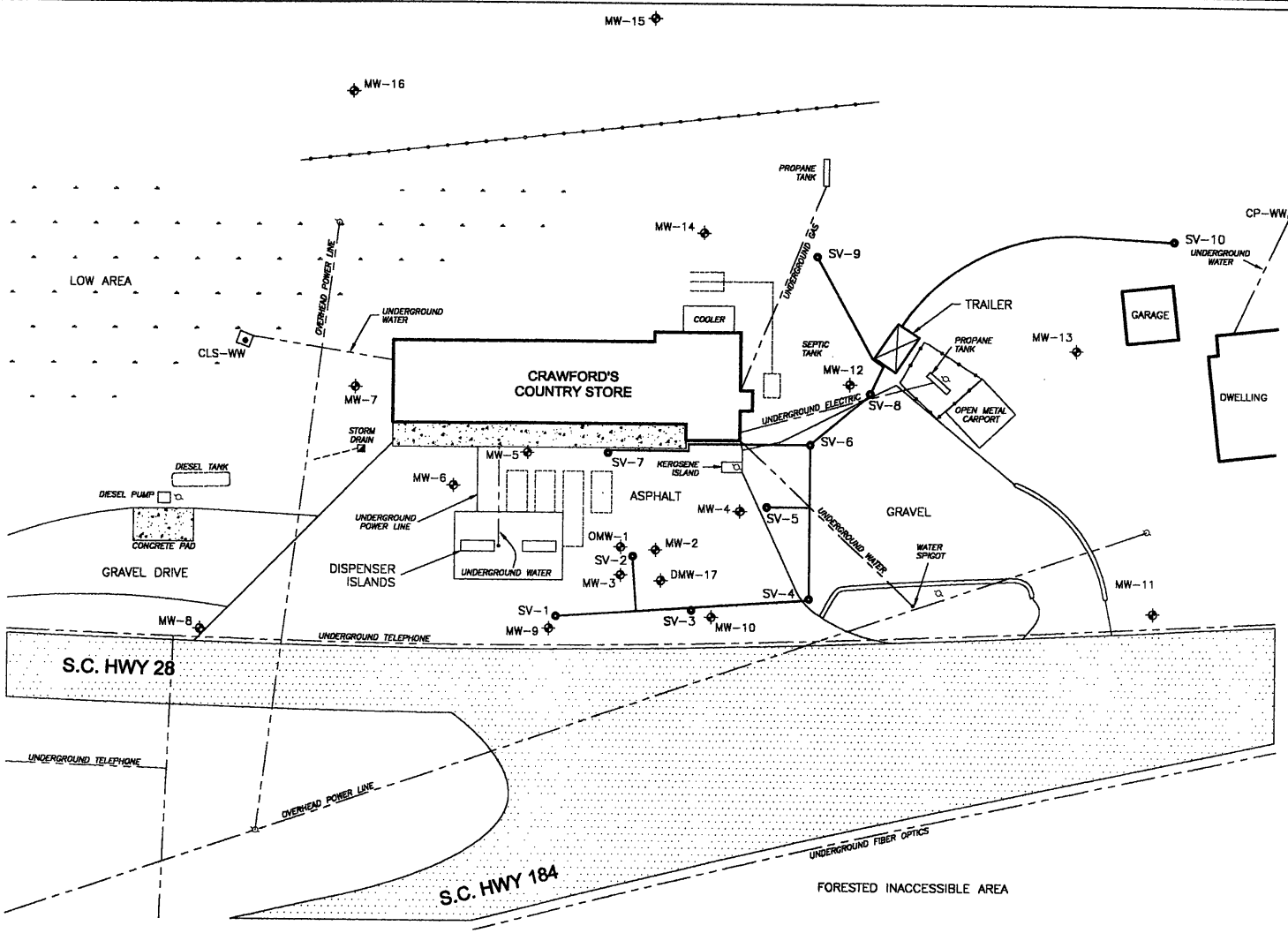
Based on the groundwater quality, adjustments were made to the air sparging system in order to maintain groundwater control. $H_2O$ will continue to operate the remediation system. If you have any questions or comments please do not hesitate to contact me at (803) 749-4080.

Sincerely,

**$H_2O$ Environmental, Inc.**
Class I Site Rehabilitation Contractor No. 32

Richard D. Gillespie, P.G.
Senior Geologist 4-26-02
License Number 2199

# ATTACHMENT 1
# FIGURES




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

FIGURE TITLE: REMEDIAL SYSTEM AS-BUILT

PREPARED FOR: South Carolina Department of Health and Environmental Control

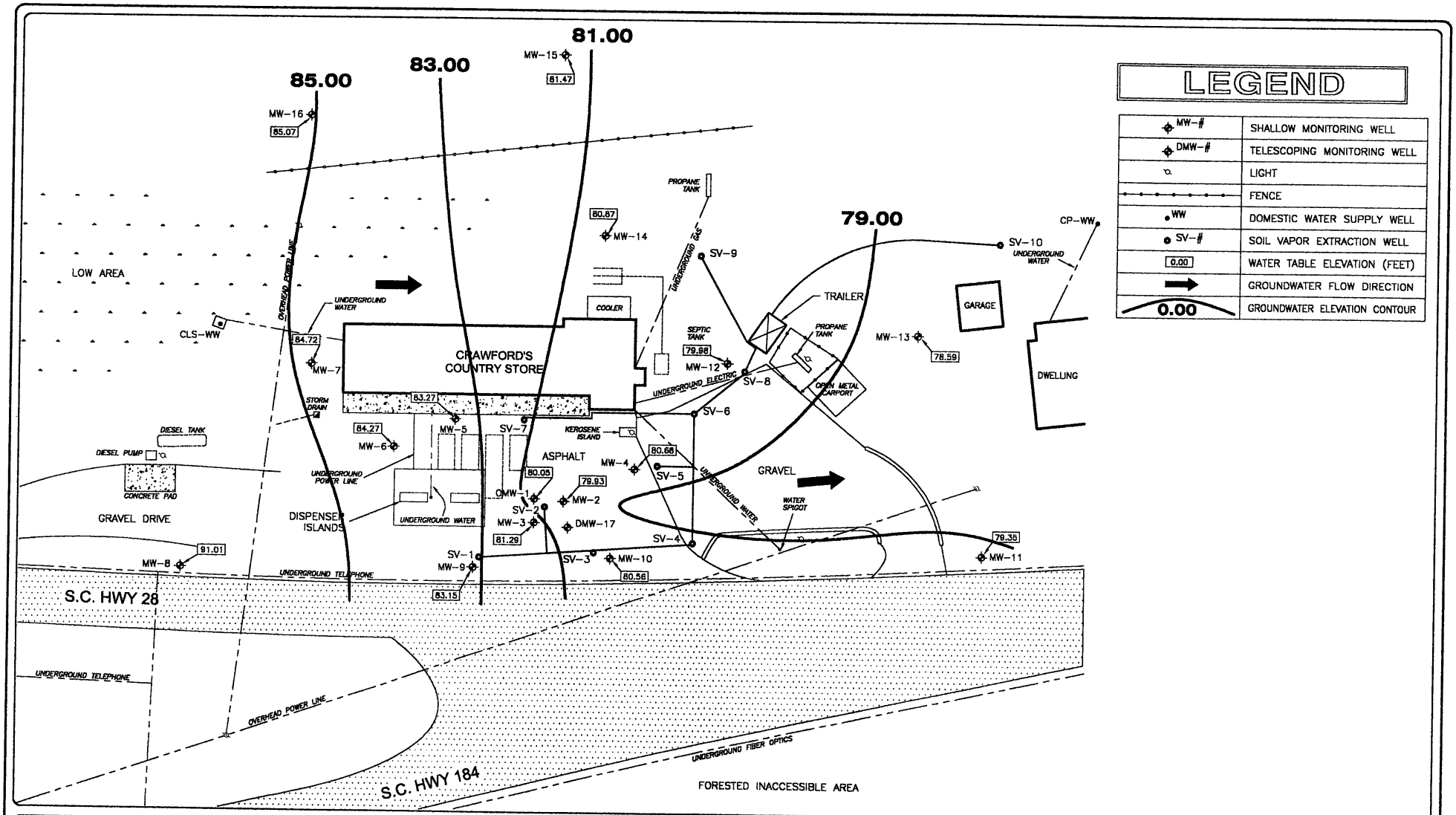
SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 08/24/2000

DRAWN BY: J.Driscoll

FIGURE NO: 1




H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

FIGURE TITLE: GROUNDWATER FLOW MAP - 3/5/2002

PREPARED FOR: South Carolina Department of Health and Environmental Control

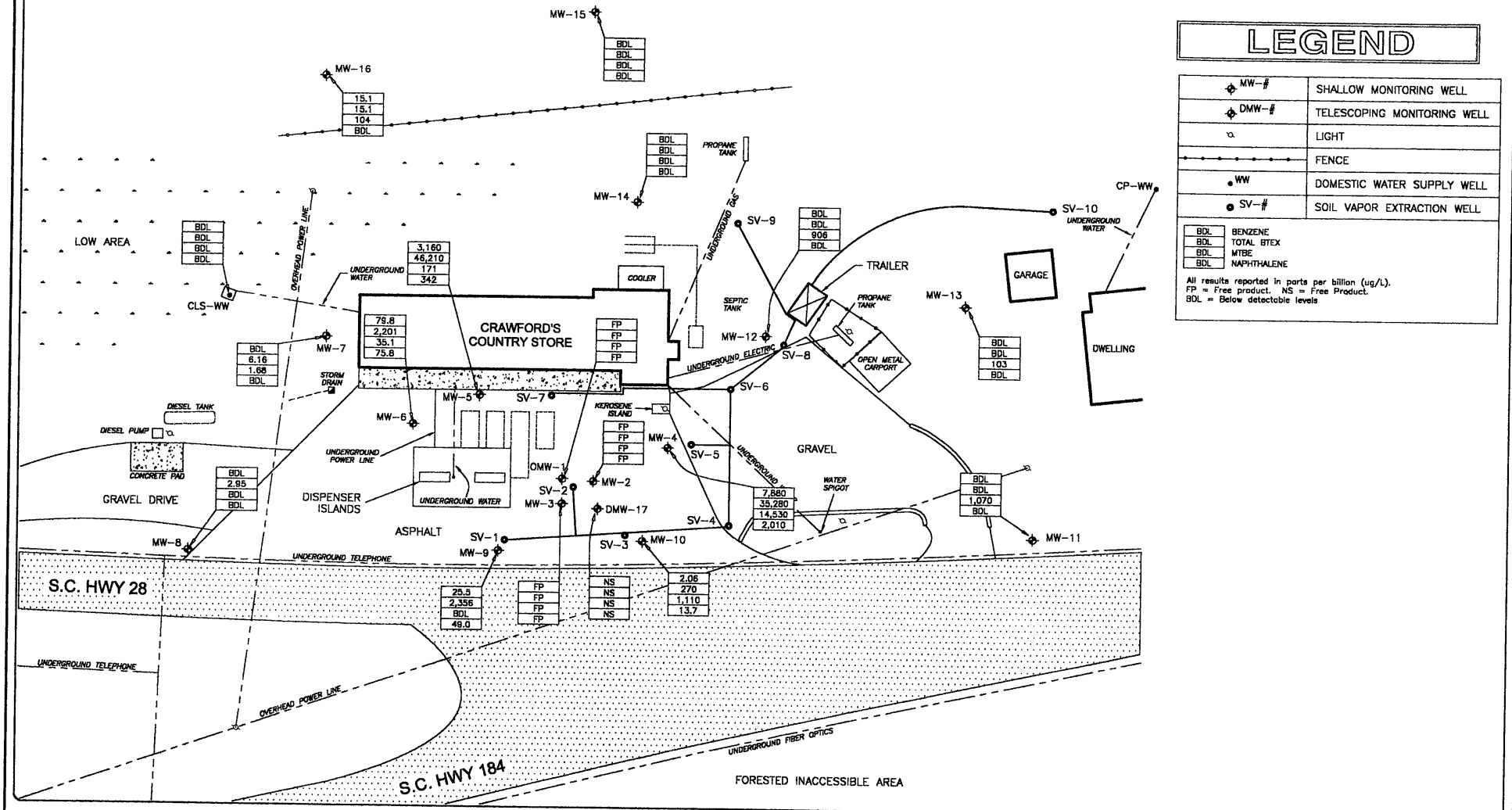
SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 4/8/2002

DRAWN BY: J.Driscoll

FIGURE NO: 2




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

| | |
|---|---|
| BDL | BENZENE |
| BDL | TOTAL BTEX |
| BDL | MTBE |
| BDL | NAPHTHALENE |

All results reported in parts per billion (ug/L).
FP = Free product. NS = Free Product.
BDL = Below detectable levels

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 4/8/2002

DRAWN BY: J.Driscoll

FIGURE NO: 3

FIGURE TITLE: GROUNDWATER QUALITY MAP - 3/5/2002

# ATTACHMENT 2
# TABLES

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 8/5/99 | 17.95 | 22' | 2" | NM | NM | NM | NM | NM |
| | 4/26/00 | 15.68 | 22' | 2" | NM | NM | NM | NM | NM |
| | 8/1/00 | 21.50 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/13/00 | 21.46 | 22' | 2" | NM | NM | NM | NM | NM |
| | 2/6/01 | 19.89 | 22' | 2" | NM | NM | NM | NM | NM |
| | 6/5/01 | 17.18 | 22' | 2" | NM | NM | NM | NM | NM |
| | 9/13/01 | 18.74 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/7/01 | 21.75 | 22' | 2" | NM | NM | NM | NM | NM |
| | 3/5/02 | 19.77 | 22' | 2" | NM | NM | NM | NM | NM |
| MW-2 | 8/5/99 | 19.19 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/00 | 15.80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/00 | 22.30 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/00 | 21.36 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/01 | 18.89 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/01 | 17.42 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/01 | 19.03 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/7/01 | 21.98 | 25' | 2" | NM | NM | NM | NM | NM |
| | 3/5/02 | 19.90 | 25' | 2" | NM | NM | NM | NM | NM |
| MW-3 | 8/5/99 | 17.96 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/00 | 15.73 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/00 | 20.85 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/00 | 22.18 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/01 | 19.26 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/01 | 17.41 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/01 | 18.80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/7/01 | 21.24 | 25' | 2" | NM | NM | NM | NM | NM |
| | 3/5/02 | 18.69 | 25' | 2" | NM | NM | NM | NM | NM |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-4 | 8/5/00 | 17.59 | 25' | 2" | 3.7 | 4.3 | 75.7 | 2.06 | 21.0 |
| | 4/26/00 | 16.51 | 25' | 2" | 4.2 | 6.0 | 0.78 | 1.82 | 20.2 |
| | 8/1/00 | 20.63 | 25' | 2" | 2.1 | 5.4 | 0.52 | 3.91 | 21.9 |
| | 12/13/00 | 20.81 | 25' | 2" | 2.0 | 5.5 | NM | 1.90 | 18.5 |
| | 2/6/01 | 19.09 | 25' | 2" | 2.9 | NM | NM | NM | NM |
| | 6/5/01 | 17.70 | 25' | 2" | 3.6 | 5.3 | NM | 1.80 | 21.8 |
| | 9/13/01 | 19.16 | 25' | 2" | 2.9 | NM | NM | 2.29 | 22.2 |
| | 12/7/01 | 21.86 | 25' | 2" | 1.5 | 7.1 | NM | 2.42 | 21.5 |
| | 3/5/02 | 18.91 | 25' | 2" | 3.0 | 6.9 | NM | 5.40 | 15.3 |
| MW-5 | 8/5/99 | 15.95 | 25' | 2" | 4.4 | 4.5 | 111.8 | 1.65 | 21.0 |
| | 4/26/00 | 14.35 | 25' | 2" | 5.2 | 6.2 | 0.92 | 2.73 | 19.4 |
| | 8/1/00 | 19.18 | 25' | 2" | 2.8 | 5.1 | 0.5 | 1.25 | 20.8 |
| | 12/13/00 | 19.68 | 25' | 2" | 2.6 | 5.3 | NM | 2.51 | 18.4 |
| | 2/6/01 | 16.50 | 25' | 2" | 4.2 | NM | NM | NM | NM |
| | 6/5/01 | 15.51 | 25' | 2" | 4.6 | 4.5 | NM | 1.88 | 21.5 |
| | 9/13/01 | 17.48 | 25' | 2" | 3.7 | NM | NM | 1.94 | 22.2 |
| | 12/7/01 | 20.09 | 25' | 2" | 2.4 | 6.9 | NM | 2.16 | 21.8 |
| | 3/5/02 | 16.15 | 25' | 2" | 4.3 | 6.8 | NM | 3.90 | 18.4 |
| MW-6 | 8/5/99 | 15.44 | 25' | 2" | 4.7 | 4.6 | 96 | 2.35 | 22.0 |
| | 4/26/00 | 13.65 | 25' | 2" | 5.6 | 6.1 | 0.92 | 1.72 | 18.6 |
| | 8/1/00 | 18.75 | 25' | 2" | 3.1 | 4.95 | 0.48 | 2.23 | 20.4 |
| | 12/13/00 | 18.23 | 25' | 2" | 3.3 | 5.14 | NM | 1.42 | 18.4 |
| | 2/6/01 | 15.34 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 6/5/01 | 14.84 | 25' | 2" | 5.0 | 5.57 | NM | 1.44 | 21.8 |
| | 9/13/01 | 16.96 | 25' | 2" | 3.9 | NM | NM | 1.80 | 20.9 |
| | 12/7/01 | 19.70 | 25' | 2" | 2.6 | 6.9 | NM | 2.05 | 20.4 |
| | 3/5/02 | 15.20 | 25' | 2" | 4.8 | 6.7 | NM | 3.64 | 16.1 |

# TABLE 1
## SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-7 | 8/5/99 | 15.41 | 25' | 2" | 4.7 | 4.6 | 92.8 | 2.74 | 19.0 |
| | 4/26/00 | 13.54 | 25' | 2" | 5.6 | 6.2 | 0.91 | 2.46 | 17.4 |
| | 8/1/00 | 18.72 | 25' | 2" | 3.1 | 5.2 | 0.45 | 2.31 | 18.7 |
| | 12/13/00 | 18.01 | 25' | 2" | 3.4 | 5.6 | NM | 1.96 | 16.5 |
| | 2/6/01 | 15.41 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 6/5/01 | 14.61 | 25' | 2" | 5.1 | 5.4 | NM | 2.25 | 19.9 |
| | 9/13/01 | 16.91 | 25' | 2" | 4.0 | NM | NM | 2.50 | 20.9 |
| | 12/7/01 | 19.64 | 25' | 2" | 2.6 | 7.1 | NM | 2.18 | 19.5 |
| | 3/5/02 | 14.75 | 25' | 2" | 5.0 | 6.8 | NM | 7.83 | 14.6 |
| MW-8 | 8/5/00 | 14.59 | 25' | 2" | 5.1 | 4.9 | 45.4 | 3.01 | 21.0 |
| | 4/26/00 | 11.56 | 25' | 2" | 6.6 | 6.3 | 0.72 | 2.06 | 18.4 |
| | 8/1/00 | 19.18 | 25' | 2" | 2.8 | 5.3 | 0.53 | 0.81 | 23.0 |
| | 12/13/00 | 17.96 | 25' | 2" | 3.4 | 5.4 | NM | 1.93 | 18.7 |
| | 2/6/01 | 13.34 | 25' | 2" | 5.7 | NM | NM | NM | NM |
| | 6/5/01 | 13.15 | 25' | 2" | 5.8 | 5.4 | NM | 2.02 | 21.5 |
| | 9/13/01 | 16.64 | 25' | 2" | 4.1 | NM | NM | 1.56 | 20.3 |
| | 12/7/01 | 19.73 | 25' | 2" | 2.6 | 6.9 | NM | 1.40 | 20.4 |
| | 3/5/02 | 11.41 | 25' | 2" | 6.6 | 6.7 | NM | 5.60 | 15.8 |
| MW-9 | 8/5/00 | 16.74 | 25' | 2" | 4.0 | 4.9 | 57.2 | 1.47 | 22.0 |
| | 4/26/00 | 15.09 | 25' | 2" | 4.8 | 5.9 | 0.72 | 1.45 | 20.4 |
| | 8/1/00 | 21.2 | 25' | 2" | 1.9 | 5.7 | 0.59 | 2.62 | 23.9 |
| | 12/13/00 | 19.73 | 25' | 2" | 2.6 | 5.4 | NM | 1.12 | 18.6 |
| | 2/6/01 | 17.54 | 25' | 2" | 3.6 | NM | NM | NM | NM |
| | 6/5/01 | 16.35 | 25' | 2" | 4.2 | NM | NM | NM | NM |
| | 9/13/01 | 18.40 | 25' | 2" | 3.2 | 4.4 | NM | 2.91 | 23.5 |
| | 12/7/01 | 21.00 | 25' | 2" | 2.0 | 6.9 | NM | 3.43 | 22.6 |
| | 3/5/02 | 17.38 | 25' | 2" | 3.7 | 6.8 | NM | 1.83 | 19.4 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-10 | 8/5/99 | 18.06 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/00 | 15.75 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/00 | 20.50 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/00 | 19.40 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/01 | 18.84 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/01 | 17.38 | 25' | 2" | 3.7 | 5.6 | NM | 1.4 | 22.9 |
| | 9/13/01 | 18.82 | 25' | 2" | 3.0 | 5.2 | NM | 3.20 | 23.2 |
| | 12/7/01 | 23.90 | 25' | 2" | 0.5 | NM | NM | NM | NM |
| | 3/5/02 | 19.09 | 25' | 2" | 2.9 | 6.9 | NM | 9.55 | 19.3 |
| MW-11 | 8/5/99 | 15.60 | 25' | 2" | 4.6 | 4.8 | 42.7 | 6.38 | 22.0 |
| | 4/26/00 | 13.65 | 25' | 2" | 5.6 | 6.2 | 0.6 | 4.48 | 20.8 |
| | 8/1/00 | 18.61 | 25' | 2" | 3.1 | 5.6 | 0.31 | 4.79 | 21.4 |
| | 12/13/00 | 19.01 | 25' | 2" | 2.9 | 5.7 | NM | 5.15 | 19.8 |
| | 2/6/01 | 17.43 | 25' | 2" | 3.7 | NM | NM | NM | NM |
| | 6/5/01 | 15.96 | 25' | 2" | 4.4 | 5.8 | NM | 6.01 | 21.4 |
| | 9/13/01 | 17.23 | 25' | 2" | 3.8 | 4.6 | NM | 5.82 | 22.4 |
| | 12/7/01 | 19.74 | 25' | 2" | 2.6 | 6.8 | NM | 4.76 | 21.7 |
| | 3/5/02 | 17.12 | 25' | 2" | 3.9 | 6.9 | NM | 7.56 | 15.2 |
| MW-12 | 8/5/99 | 17.33 | 25' | 2" | 3.8 | 4.6 | 129.2 | 2.09 | 19.0 |
| | 4/26/00 | 16.06 | 25' | 2" | 4.4 | 6.3 | 1.03 | 2.9 | 18.5 |
| | 8/1/00 | 20.15 | 25' | 2" | 2.4 | 4.5 | 0.67 | 5.01 | 19.6 |
| | 12/13/00 | 23.7 | 25' | 2" | 0.6 | 5.4 | NM | 2.9 | 17.1 |
| | 2/6/01 | 18.45 | 25' | 2" | 3.2 | NM | NM | NM | NM |
| | 6/5/01 | 17.26 | 25' | 2" | 3.8 | 10.2 | NM | 2.07 | 19.3 |
| | 9/13/01 | 18.63 | 25' | 2" | 3.1 | NM | NM | 2.71 | 20.5 |
| | 12/7/01 | 21.37 | 25' | 2" | 1.8 | 7.2 | NM | 8.00 | 19.9 |
| | 3/5/02 | 18.65 | 25' | 2" | 3.1 | 6.8 | NM | 8.53 | 15.7 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-13 | 8/5/99 | 21.26 | 25' | 2" | 1.8 | 4.2 | 51.7 | 2.32 | 18.0 |
| | 4/26/00 | 20.02 | 25' | 2" | 2.4 | 6.3 | 0.62 | 3.00 | 18.5 |
| | 8/1/00 | 24.05 | 25' | 2" | 0.5 | 5.2 | 0.42 | 2.14 | 19.7 |
| | 12/13/00 | 24.13 | 25' | 2" | 0.4 | 5.5 | NM | 1.04 | 15.9 |
| | 2/6/01 | 22.43 | 25' | 2" | 1.3 | NM | NM | NM | NM |
| | 6/5/01 | 21.34 | 25' | 2" | 1.8 | NM | 5.4 | 2.61 | 19.6 |
| | 9/13/01 | 22.91 | 25' | 2" | 1.0 | NM | NM | NM | 20.3 |
| | 12/7/01 | 25.22 | 25.22' | 2" | 0.0 | NM | NM | NM | NM |
| | 3/5/02 | 22.21 | 25.22' | 2" | 1.5 | 6.9 | NM | 7.99 | 16.4 |
| MW-14 | 8/5/99 | 7.96 | 25' | 2" | 8.3 | 5.0 | 312 | 0.80 | 19.0 |
| | 4/26/00 | 6.46 | 25' | 2" | 9.1 | 6.1 | 1.56 | 1.72 | 15.5 |
| | 8/1/00 | 10.8 | 25' | 2" | 6.9 | 5.4 | 0.93 | 1.43 | 18.8 |
| | 12/13/00 | 10.8 | 25' | 2" | 6.9 | 5.5 | NM | 1.72 | 14.7 |
| | 2/6/01 | 8.72 | 25' | 2" | 8.0 | NM | NM | NM | NM |
| | 6/5/01 | 7.32 | 25' | 2" | 8.6 | 5.8 | NM | 2.08 | 17.4 |
| | 9/13/01 | 9.31 | 25' | 2" | 7.7 | NM | NM | 1.77 | 21.0 |
| | 12/7/01 | 11.91 | 25' | 2" | 6.4 | 6.9 | NM | 1.84 | 20.5 |
| | 3/5/02 | 8.51 | 25' | 2" | 8.1 | 6.9 | NM | 5.90 | 12.2 |
| MW-15 | 8/5/99 | 6.28 | 25' | 2" | 9.2 | 4.8 | 86.5 | 0.87 | 18.0 |
| | 4/26/00 | 4.75 | 25' | 2" | 9.9 | 6.5 | 0.6 | 3.32 | 16.2 |
| | 8/1/00 | 9.11 | 25' | 2" | 7.8 | 5.5 | 0.41 | 3.17 | 19.5 |
| | 12/13/00 | 8.57 | 25' | 2" | 8.0 | 5.6 | NM | 1.93 | 15.1 |
| | 2/6/01 | 6.36 | 25' | 2" | 9.1 | NM | NM | NM | NM |
| | 6/5/01 | 5.68 | 25' | 2" | 9.4 | 6.1 | NM | 2.41 | 19.2 |
| | 9/13/01 | 7.61 | 25' | 2" | 8.5 | NM | NM | 2.90 | 21.2 |
| | 12/7/01 | 9.91 | 25' | 2" | 7.4 | 6.9 | NM | 3.66 | 20.3 |
| | 3/5/02 | 5.86 | 25' | 2" | 9.4 | 6.6 | NM | 6.50 | 12.6 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-16 | 8/5/99 | 11.22 | 25' | 2" | 6.7 | 4.9 | 49 | 0.79 | 18.0 |
| | 4/26/00 | 9.50 | 25' | 2" | 7.6 | 6.5 | 0.61 | 1.66 | 15.5 |
| | 8/1/00 | 14.35 | 25' | 2" | 5.2 | 6.0 | 0.95 | 1.64 | 19.3 |
| | 12/13/00 | 13.45 | 25' | 2" | 5.6 | 5.8 | NM | 2.27 | 15.6 |
| | 2/6/01 | 10.89 | 25' | 2" | 6.9 | NM | NM | NM | NM |
| | 6/5/01 | 10.34 | 25' | 2" | 7.2 | 6.5 | NM | 2.02 | 18.3 |
| | 9/13/01 | 12.58 | 25' | 2" | 6.1 | NM | NM | 1.87 | 21.5 |
| | 12/7/01 | 13.41 | 25' | 2" | 5.7 | 6.9 | NM | 4.75 | 19.1 |
| | 3/5/02 | 8.67 | 25' | 2" | 8.0 | 6.7 | NM | 5.20 | 12.4 |
| MW-17 | 8/5/99 | 16.16 | 75' | 2" | 28.8 | 5.6 | 90.8 | 2.76 | 20.5 |
| | 4/26/00 | 16.8 | 75' | 2" | 28.5 | 6.4 | 0.86 | 6.1 | 20.8 |
| | 8/1/00 | 19.27 | 75' | 2" | 27.3 | 6.2 | 0.59 | 3.12 | 22.5 |
| | 12/13/00 | 19.20 | 75' | 2" | 27.3 | NM | NM | NM | NM |
| | 2/6/01 | 16.82 | 75' | 2" | 28.5 | NM | NM | NM | NM |
| | 6/5/01 | 15.52 | 75' | 2" | 29.1 | 7.1 | NM | 2.67 | 21.8 |
| | 9/13/01 | 17.42 | 75' | 2" | 28.2 | NM | NM | 3.60 | 22.5 |
| | 12/7/01 | 19.54 | 75' | 2" | 27.1 | 7.1 | NM | 2.73 | 22.5 |
| | 3/5/02 | NM | 75' | 2" | NM | NM | NM | NM | NM |

NOTES:

NS - Not sampled

Temperature in Degrees Celcius

Dissolved Oxygen in mg/L

Depth to Water and Depth to bottom in units of feet

Well volumes (Gallons)

Specific Conductivity (umhos/cm)

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| OMW-1 | 01-Dec-97 | 99.82 | 17.13 | - | 82.69 |
| | 05-Aug-99 | | 17.95 | 1.05 | 81.87 |
| | 26-Apr-00 | | 15.68 | 0.99 | 84.14 |
| | 01-Aug-00 | | 21.50 | 1.40 | 78.32 |
| | 13-Dec-00 | | 21.46 | 1.70 | 78.36 |
| | 06-Feb-01 | | 19.89 | 1.78 | 79.93 |
| | 05-Jun-01 | | 17.18 | 0.19 | 82.64 |
| | 16-Aug-01 | | 18.10 | 0.13 | 81.72 |
| | 13-Sep-01 | | 18.74 | 0.02 | 81.08 |
| | 26-Sep-01 | | 19.31 | 0.07 | 80.51 |
| | 27-Sep-01 | | 19.32 | 0.01 | 80.50 |
| | 19-Oct-01 | | 19.93 | 0.02 | 79.89 |
| | 09-Nov-01 | | 21.00 | 0.39 | 78.82 |
| | 21-Nov-01 | | 21.63 | 1.28 | 78.19 |
| | 05-Dec-01 | | 21.65 | 0.96 | 78.17 |
| | 07-Dec-01 | | 21.75 | 0.76 | 78.07 |
| | 10-Dec-01 | | 21.65 | 0.01 | 78.17 |
| | 11-Dec-01 | | 21.65 | sheen | 78.17 |
| | | | 21.61 | 0.40 | 78.21 |
| | 07-Jan-02 | | 21.76 | 0.40 | 78.06 |
| | 04-Feb-02 | | 21.45 | 1.31 | 78.37 |
| | 05-Mar-02 | | 19.77 | 0.17 | 80.05 |
| MW-2 | 01-Dec-97 | 99.83 | 17.43 | - | 82.40 |
| | 05-Aug-99 | | 19.19 | 2.29 | 80.64 |
| | 26-Apr-00 | | 15.80 | 2.18 | 84.03 |
| | 01-Aug-00 | | 22.30 | 2.10 | 77.53 |
| | 13-Dec-00 | | 21.36 | 0.84 | 78.47 |
| | 06-Feb-01 | | 18.89 | sheen | 80.94 |
| | 05-Jun-01 | | 17.42 | sheen | 82.41 |
| | 16-Aug-01 | | 18.35 | - | 81.48 |
| | 13-Sep-01 | | 19.03 | - | 80.80 |
| | 26-Sep-01 | | 19.42 | sheen | 80.41 |
| | 27-Sep-01 | | 19.69 | 0.01 | 80.14 |
| | 19-Oct-01 | | 20.22 | - | 79.61 |
| | 09-Nov-01 | | 21.02 | 0.01 | 78.81 |
| | 21-Nov-01 | | 20.70 | sheen | 79.13 |
| | 05-Dec-01 | | 21.59 | 0.63 | 78.24 |
| | 07-Dec-01 | | 21.98 | 0.02 | 77.85 |
| | 10-Dec-01 | | 22.00 | 0.01 | 77.83 |
| | 11-Dec-01 | | 21.91 | sheen | 77.92 |
| | | | 21.73 | 0.02 | 78.10 |
| | 07-Jan-02 | | 22.34 | 0.22 | 77.49 |
| | 04-Feb-02 | | 20.50 | 0.15 | 79.33 |
| | 05-Mar-02 | | 19.90 | sheen | 79.93 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-3 | 01-Dec-97 | 99.98 | 17.00 | - | 82.98 |
| | 05-Aug-99 | | 17.96 | 1.01 | 82.02 |
| | 26-Apr-00 | | 15.73 | 0.68 | 84.25 |
| | 01-Aug-00 | | 20.85 | 0.78 | 79.13 |
| | 13-Dec-00 | | 22.18 | 2.22 | 77.80 |
| | 06-Feb-01 | | 19.26 | 0.96 | 80.72 |
| | 05-Jun-01 | | 17.41 | 0.40 | 82.57 |
| | 16-Aug-01 | | 18.19 | 0.09 | 81.79 |
| | 13-Sep-01 | | 18.80 | 0.02 | 81.18 |
| | 26-Sep-01 | | 19.25 | sheen | 80.73 |
| | 27-Sep-01 | | 19.32 | 0.04 | 80.66 |
| | 19-Oct-01 | | 20.04 | 0.06 | 79.94 |
| | 09-Nov-01 | | 20.86 | sheen | 79.12 |
| | 21-Nov-01 | | 20.59 | sheen | 79.39 |
| | 05-Dec-01 | | 21.10 | sheen | 78.88 |
| | 07-Dec-01 | | 21.24 | sheen | 78.74 |
| | 10-Dec-01 | | 21.62 | 0.01 | 78.36 |
| | 11-Dec-01 | | 21.65 | sheen | 78.33 |
| | | | 22.01 | 0.56 | 77.97 |
| | 07-Jan-02 | | 22.87 | 1.15 | 77.11 |
| | 04-Feb-02 | | 21.20 | 0.75 | 78.78 |
| | 05-Mar-02 | | 18.69 | 0.27 | 81.29 |
| MW-4 | 01-Dec-97 | 99.59 | 17.60 | - | 81.99 |
| | 05-Aug-99 | | 17.59 | - | 82.00 |
| | 26-Apr-00 | | 16.51 | - | 83.08 |
| | 01-Aug-00 | | 20.63 | - | 78.96 |
| | 13-Dec-00 | | 20.81 | - | 78.78 |
| | 06-Feb-01 | | 19.09 | - | 80.50 |
| | 05-Jun-01 | | 17.70 | - | 81.89 |
| | 13-Sep-01 | | 19.16 | - | 80.43 |
| | 07-Dec-01 | | 21.86 | - | 77.73 |
| | 05-Mar-02 | | 18.91 | - | 80.68 |
| MW-5 | 01-Dec-97 | 99.42 | 15.04 | - | 84.38 |
| | 05-Aug-99 | | 15.95 | - | 83.47 |
| | 26-Apr-00 | | 14.35 | - | 85.07 |
| | 01-Aug-00 | | 19.18 | - | 80.24 |
| | 13-Dec-00 | | 19.68 | - | 79.74 |
| | 06-Feb-01 | | 16.50 | - | 82.92 |
| | 05-Jun-01 | | 15.51 | - | 83.91 |
| | 13-Sep-01 | | 17.48 | - | 81.94 |
| | 07-Dec-01 | | 20.09 | - | 79.33 |
| | 05-Mar-02 | | 16.15 | - | 83.27 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-6 | 01-Dec-97 | 99.47 | 14.37 | - | 85.10 |
| | 05-Aug-99 | | 15.44 | - | 84.03 |
| | 26-Apr-00 | | 13.65 | - | 85.82 |
| | 01-Aug-00 | | 18.75 | - | 80.72 |
| | 13-Dec-00 | | 18.23 | - | 81.24 |
| | 06-Feb-01 | | 15.34 | - | 84.13 |
| | 05-Jun-01 | | 14.84 | - | 84.63 |
| | 13-Sep-01 | | 16.96 | - | 82.51 |
| | 07-Dec-01 | | 19.70 | - | 79.77 |
| | 05-Mar-02 | | 15.20 | - | 84.27 |
| MW-7 | 01-Dec-97 | 99.47 | 13.96 | - | 85.51 |
| | 05-Aug-99 | | 15.41 | - | 84.06 |
| | 26-Apr-00 | | 13.54 | - | 85.93 |
| | 01-Aug-00 | | 18.72 | - | 80.75 |
| | 13-Dec-00 | | 18.01 | - | 81.46 |
| | 06-Feb-01 | | 15.41 | - | 84.06 |
| | 05-Jun-01 | | 14.61 | - | 84.86 |
| | 13-Sep-01 | | 16.91 | - | 82.56 |
| | 07-Dec-01 | | 19.64 | - | 79.83 |
| | 05-Mar-02 | | 14.75 | - | 84.72 |
| MW-8 | 01-Dec-97 | 102.42 | 12.53 | - | 89.89 |
| | 05-Aug-99 | | 14.59 | - | 87.83 |
| | 26-Apr-00 | | 11.56 | - | 90.86 |
| | 01-Aug-00 | | 19.18 | - | 83.24 |
| | 13-Dec-00 | | 17.96 | - | 84.46 |
| | 06-Feb-01 | | 13.34 | - | 89.08 |
| | 05-Jun-01 | | 13.15 | - | 89.27 |
| | 13-Sep-01 | | 16.64 | - | 85.78 |
| | 07-Dec-01 | | 19.73 | - | 82.69 |
| | 05-Mar-02 | | 11.41 | - | 91.01 |
| MW-9 | 01-Dec-97 | 100.53 | 16.17 | - | 84.36 |
| | 05-Aug-99 | | 16.74 | - | 83.79 |
| | 26-Apr-00 | | 15.09 | - | 85.44 |
| | 01-Aug-00 | | 21.20 | - | 79.33 |
| | 13-Dec-00 | | 19.73 | - | 80.80 |
| | 06-Feb-01 | | 17.54 | - | 82.99 |
| | 05-Jun-01 | | 16.35 | - | 84.18 |
| | 13-Sep-01 | | 18.40 | - | 82.13 |
| | 07-Dec-01 | | 21.00 | - | 79.53 |
| | 05-Mar-02 | | 17.38 | - | 83.15 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-10 | 01-Dec-97 | 99.65 | 17.40 | - | 82.25 |
| | 05-Aug-99 | | 18.06 | 1.01 | 81.59 |
| | 26-Apr-00 | | 15.75 | 1.65 | 83.90 |
| | 01-Aug-00 | | 20.50 | 0.03 | 79.15 |
| | 13-Dec-00 | | 19.40 | 0.01 | 80.25 |
| | 06-Feb-01 | | 18.84 | sheen | 80.81 |
| | 05-Jun-01 | | 17.38 | - | 82.27 |
| | 16-Aug-01 | | 18.15 | - | 81.50 |
| | 13-Sep-01 | | 18.82 | - | 80.83 |
| | 07-Dec-01 | | 23.90 | - | 75.75 |
| | 11-Dec-01 | | 21.88 | - | 77.77 |
| | 04-Feb-02 | | 20.65 | - | 79.00 |
| | 05-Mar-02 | | 19.09 | - | 80.56 |
| MW-11 | 01-Dec-97 | 96.47 | 15.74 | - | 80.73 |
| | 05-Aug-99 | | 15.60 | - | 80.87 |
| | 26-Apr-00 | | 13.65 | - | 82.82 |
| | 01-Aug-00 | | 18.61 | - | 77.86 |
| | 13-Dec-00 | | 19.01 | - | 77.46 |
| | 06-Feb-01 | | 17.43 | - | 79.04 |
| | 05-Jun-01 | | 15.96 | - | 80.51 |
| | 13-Sep-01 | | 17.23 | - | 79.24 |
| | 07-Dec-01 | | 19.74 | - | 76.73 |
| | 05-Mar-02 | | 17.12 | - | 79.35 |
| MW-12 | 01-Dec-97 | 98.63 | 17.03 | - | 81.60 |
| | 05-Aug-99 | | 17.33 | - | 81.30 |
| | 26-Apr-00 | | 16.06 | - | 82.57 |
| | 01-Aug-00 | | 20.15 | - | 78.48 |
| | 13-Dec-00 | | 23.70 | - | 74.93 |
| | 06-Feb-01 | | 18.45 | - | 80.18 |
| | 05-Jun-01 | | 17.26 | - | 81.37 |
| | 13-Sep-01 | | 18.63 | - | 80.00 |
| | 07-Dec-01 | | 21.37 | - | 77.26 |
| | 05-Mar-02 | | 18.65 | - | 79.98 |
| MW-13 | 01-Dec-97 | 100.80 | 21.05 | - | 79.75 |
| | 05-Aug-99 | | 21.26 | - | 79.54 |
| | 26-Apr-00 | | 20.02 | - | 80.78 |
| | 01-Aug-00 | | 24.05 | - | 76.75 |
| | 13-Dec-00 | | 24.13 | - | 76.67 |
| | 06-Feb-01 | | 22.43 | - | 78.37 |
| | 05-Jun-01 | | 21.34 | - | 79.46 |
| | 13-Sep-01 | | 22.91 | - | 77.89 |
| | 07-Dec-01 | | 25.22 | - | 75.58 |
| | 05-Mar-02 | | 22.21 | - | 78.59 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-14 | 01-Dec-97 | 89.38 | 7.27 | - | 82.11 |
| | 05-Aug-99 | | 7.96 | - | 81.42 |
| | 26-Apr-00 | | 6.46 | - | 82.92 |
| | 11-Aug-00 | | 10.80 | - | 78.58 |
| | 13-Dec-00 | | 10.80 | - | 78.58 |
| | 06-Feb-01 | | 8.72 | - | 80.66 |
| | 05-Jun-01 | | 7.32 | - | 82.06 |
| | 13-Sep-01 | | 9.31 | - | 80.07 |
| | 07-Dec-01 | | 11.91 | - | 77.47 |
| | 05-Mar-02 | | 8.51 | - | 80.87 |
| MW-15 | 01-Dec-97 | 87.33 | 5.10 | - | 82.23 |
| | 05-Aug-99 | | 6.28 | - | 81.05 |
| | 26-Apr-00 | | 4.75 | - | 82.58 |
| | 01-Aug-00 | | 9.11 | - | 78.22 |
| | 13-Dec-00 | | 8.57 | - | 78.76 |
| | 06-Feb-01 | | 6.36 | - | 80.97 |
| | 05-Jun-01 | | 5.68 | - | 81.65 |
| | 13-Sep-01 | | 7.61 | - | 79.72 |
| | 07-Dec-01 | | 9.91 | - | 77.42 |
| | 05-Mar-02 | | 5.86 | - | 81.47 |
| MW-16 | 01-Dec-97 | 93.74 | 9.69 | - | 84.05 |
| | 05-Aug-99 | | 11.22 | - | 82.52 |
| | 26-Apr-00 | | 9.50 | - | 84.24 |
| | 01-Aug-00 | | 14.35 | - | 79.39 |
| | 13-Dec-00 | | 13.45 | - | 80.29 |
| | 06-Feb-01 | | 10.89 | - | 82.85 |
| | 05-Jun-01 | | 10.34 | - | 83.40 |
| | 13-Sep-01 | | 12.58 | - | 81.16 |
| | 07-Dec-01 | | 13.41 | - | 80.33 |
| | 05-Mar-02 | | 8.67 | - | 85.07 |
| DMW-17 | 01-Dec-97 | 100.08 | 15.53 | - | 84.55 |
| | 05-Aug-99 | | 16.16 | - | 83.92 |
| | 26-Apr-00 | | 16.80 | - | 83.28 |
| | 01-Aug-00 | | 19.27 | - | 80.81 |
| | 13-Dec-00 | | 19.20 | - | 80.88 |
| | 06-Feb-01 | | 16.82 | - | 83.26 |
| | 05-Jun-01 | | 15.52 | - | 84.56 |
| | 13-Sep-01 | | 17.42 | - | 82.66 |
| | 07-Dec-01 | | 19.54 | - | 80.54 |
| | 05-Mar-02 | | NM | - | NM |

**Notes:**
TOC - Top-of-Casing elevation refrenced to common datum.
NM - Not measured.
All measurments in units of feet.
- = No Data

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| OMW-1 | 1-Dec-97 | 14.9 | 85.5 | 5.2 | 24.8 | 130 | 96 | BDL |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-2 | 1-Dec-97 | 9,900 | 42,300 | 2,040 | 12,100 | 66,340 | 242,000 | 71.2 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 4,400 | 7,570 | 2,890 | 6,790 | 21,650 | 9,490 | 592 |
| | 13-Sep-01 | 2,280 | 9,780 | 1,630 | 7,650 | 21,340 | 1,750 | 399 |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-3 | 1-Dec-97 | 9,820 | 54,500 | 2,160 | 11,900 | 78,380 | 81,200 | 445 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-4 | 1-Dec-97 | 8,140 | 21,000 | 1,510 | 11,500 | 42,150 | 215,000 | 813 |
| | 5-Aug-99 | 14,200 | 34,600 | 2,750 | 15,900 | 67,450 | 109,000 | <5 |
| | 26-Apr-00 | 13,400 | 33,200 | 3,420 | 13,270 | 63,290 | 102,000 | 1,060 |
| | 1-Aug-00 | 10,100 | 23,300 | 1,740 | 11,410 | 46,550 | 109,000 | 559 |
| | 13-Dec-00 | 6,730 | 16,300 | 635 | 4,170 | 27,835 | 32,300 | 742 |
| | 6-Feb-01 | 5,860 | 13,500 | 1,080 | 7,230 | 27,670 | 26,100 | 210 |
| | 5-Jun-01 | 3,570 | 10,900 | 965 | 9,510 | 24,945 | 5,730 | 302 |
| | 13-Sep-01 | 5,910 | 14,900 | 1,050 | 7,100 | 28,960 | 5,980 | 384 |
| | 7-Dec-01 | 10,000 | 19,200 | 2,210 | 11,600 | 43,010 | BDL | 682 |
| | 5-Mar-02 | 7,880 | 12,890 | 1,860 | 12,650 | 35,280 | 14,530 | 2,010 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 5 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-5 | 1-Dec-97 | 5,930 | 47,600 | 2,100 | 12,600 | 68,230 | BDL | 125 |
| | 5-Aug-99 | 6,400 | 61,600 | 2,460 | 12,100 | 82,560 | 410 | 335 |
| | 26-Apr-00 | 6,680 | 48,300 | 2,390 | 9,610 | 66,980 | 681 | 609 |
| | 1-Aug-00 | 4,250 | 40,300 | 1,960 | 12,530 | 59,040 | 258 | 396 |
| | 13-Dec-00 | 4,530 | 38,100 | 2,520 | 14,640 | 59,790 | 381 | 4,770 |
| | 6-Feb-01 | 5,070 | 30,800 | 2,200 | 12,500 | 50,570 | 225 | 678 |
| | 5-Jun-01 | 6,070 | 52,000 | 2,900 | 13,720 | 74,690 | 228 | 342 |
| | 13-Sep-01 | 4,990 | 7,210 | 3,340 | 17,900 | 33,440 | 60.7 | 2,900 |
| | 7-Dec-01 | 3,520 | 38,600 | 1,700 | 11,490 | 55,310 | BDL | 408 |
| | 5-Mar-02 | 3,160 | 21,300 | 3,260 | 18,490 | 46,210 | 171 | 342 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-6 | 1-Dec-97 | 5.5 | 137 | 6.0 | 149 | 297.5 | BDL | BDL |
| | 5-Aug-99 | 4.1 | 1.1 | 3.7 | 16.7 | 25.6 | 5 | BDL |
| | 26-Apr-00 | 13.0 | 19.2 | 15 | 48 | 95.2 | 27.2 | 6.44 |
| | 1-Aug-00 | 117 | 1820 | 128 | 877 | 2942 | 10.7 | 32.2 |
| | 13-Dec-00 | 47.9 | 460 | 35.4 | 332 | 875 | 14.8 | 7.2 |
| | 6-Feb-01 | 47.4 | 143 | 47.6 | 219.2 | 457 | 17.8 | 22.6 |
| | 5-Jun-01 | 9.3 | 44.5 | 23.5 | 141.3 | 219 | 7.5 | BDL |
| | 13-Sep-01 | 18.1 | 36.6 | 24.7 | 119.0 | 198 | 8.35 | 1.06 |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | 5.23 | BDL |
| | 5-Mar-02 | 79.8 | 765 | 114 | 1242 | 2201 | 35.1 | 75.8 |
| MW-7 | 1-Dec-97 | 1.1 | 1.7 | BDL | 1.1 | 3.9 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 41 | <1 |
| | 26-Apr-00 | 2.13 | 13.5 | BDL | 1.59 | 17.2 | 68.9 | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 53.8 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 52.9 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 18.7 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | 10.6 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | 6.16 | BDL | BDL | 6.16 | 1.68 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-8 | 1-Dec-97 | BDL | 2.4 | 1.2 | 5.4 | 9.0 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 1.58 | 8.53 | BDL | BDL | 10.1 | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | 2.95 | BDL | BDL | 2.95 | BDL | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-9 | 1-Dec-97 | 77 | 14,000 | 2,390 | 20,700 | 37,167 | 114 | 384 |
| | 5-Aug-99 | 110 | 4,280 | 2,450 | 17,000 | 23,840 | 150 | <500 |
| | 26-Apr-00 | 163 | 2,640 | 3,520 | 14,760 | 21,083 | BDL | 2,090 |
| | 1-Aug-00 | 187 | 18,400 | 1,010 | 16,070 | 35,667 | BDL | 909 |
| | 13-Dec-00 | 9.14 | 657 | 108 | 1,340 | 2,114 | 26.0 | 47 |
| | 6-Feb-01 | 10.6 | 254 | 181 | 2,907 | 3,353 | 16.9 | 179 |
| | 5-Jun-01 | 27.7 | 402 | 139 | 1,798 | 2,367 | 17.2 | 66.6 |
| | 13-Sep-01 | 15.0 | 133 | 710 | 7,690 | 8,548 | 13.0 | 186 |
| | 7-Dec-01 | 34.4 | 35.5 | 28.9 | 713 | 812 | BDL | 20.6 |
| | 5-Mar-02 | 25.5 | 29.8 | 157 | 2,144 | 2,356 | BDL | 49.0 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-10 | 1-Dec-97 | 6,220 | 46,300 | 2,320 | 14,800 | 69,640 | 938 | 542 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 8,020 | 32,900 | 856 | 8,280 | 50,056 | 8,780 | 327 |
| | 13-Sep-01 | 9,870 | 47,700 | 1,190 | 20,400 | 79,160 | 12,500 | 356 |
| | 7-Dec-01 | 5,590 | 56,000 | 8,150 | 61,700 | 131,440 | 1,050 | 2,540 |
| | 5-Mar-02 | 2.06 | 72.2 | 5.80 | 190.1 | 270 | 1,110 | 13.7 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-11 | 1-Dec-97 | 1.4 | 3.4 | BDL | 4.7 | 9.5 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 7 | <5 |
| | 26-Apr-00 | 1.18 | 3.96 | BDL | BDL | 5.1 | 4.69 | 9.98 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | 2.51 | 91.0 | 15.0 | 104.4 | 212.9 | 26.3 | 17.2 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 39.5 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | 4.88 | 9.52 | 14.4 | 266 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | 1.32 | 1.32 | 358 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 1070 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | - | 7 | <5 |
| MW-12 | 1-Dec-97 | 7,970 | 382 | 266 | 1,540 | 10,158 | 99,900 | 119 |
| | 5-Aug-99 | 5,000 | 260 | <200 | <200 | 5,260 | 41,200 | <1000 |
| | 26-Apr-00 | 135 | 4.51 | BDL | 11.0 | 151 | 6,800 | 18.2 |
| | 1-Aug-00 | 1670 | 17.1 | 4.33 | 114.9 | 1806 | 44,200 | BDL |
| | 13-Dec-00 | 119 | 9.1 | 2.11 | 26.7 | 157 | 4,230 | 31.7 |
| | 6-Feb-01 | 32.5 | 9.3 | 1.51 | 13.8 | 57 | 1,570 | 10.6 |
| | 5-Jun-01 | 61.0 | BDL | BDL | 2.1 | 63 | 1,960 | 17.2 |
| | 13-Sep-01 | 329 | 4.55 | 2.96 | 29.27 | 366 | 2,860 | 60.1 |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 906 | BDL |
| SSTL | | 5 | 260 | <200 | <200 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-13 | 1-Dec-97 | BDL | 1.4 | BDL | 1.6 | 3 | 82.3 | BDL |
| | 5-Aug-99 | 3 | <1 | <1 | <1 | 3 | 604 | <5 |
| | 26-Apr-00 | 188 | 149 | BDL | BDL | 337 | 3,150 | BDL |
| | 1-Aug-00 | 207 | 5.74 | BDL | 32.8 | 245 | 3,641 | 24.3 |
| | 13-Dec-00 | 29.9 | 3.81 | 1.0 | 76.6 | 111 | 4,350 | 29.8 |
| | 6-Feb-01 | 377 | 12.10 | 2.8 | 105.2 | 497 | 5,200 | 54.9 |
| | 5-Jun-01 | 259 | 5.87 | 1.8 | 112.8 | 380 | 8,530 | 23.2 |
| | 13-Sep-01 | 374 | 7.44 | 4.52 | 127.5 | 513 | 7,150 | 24.7 |
| | 7-Dec-01 | 15.4 | BDL | BDL | 8.10 | 24 | 1,130 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 103 | BDL |
| SSTL | | 3 | 1 | 1 | 1 | -- | 40 | 5 |
| MW-14 | 1-Dec-97 | 1.1 | 1.4 | BDL | 2.7 | 5 | 76.5 | BDL |
| | 5-Aug-99 | 57 | 7 | 1 | 23 | 88 | 606 | 5 |
| | 26-Apr-00 | BDL | 1.38 | BDL | BDL | 1.38 | 1.11 | BDL |
| | 1-Aug-00 | 138 | 4.04 | BDL | 39.04 | 181.08 | 35.3 | 13.0 |
| | 13-Dec-00 | BDL | BDL | BDL | 2.13 | 2.13 | 129 | 2.33 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 11.1 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | 54.9 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | 7 | 1 | 23 | - | 40 | 5 |
| MW-15 | 1-Dec-97 | 1.0 | 1.6 | BDL | 2.5 | 5 | BDL | BDL |
| | 5-Aug-99 | 3 | 6 | 1 | 6 | 16 | 27 | <5 |
| | 26-Apr-00 | 1.01 | 1.32 | BDL | BDL | 2.33 | 2.82 | 5.66 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 2.77 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 3 | 6 | 1 | 6 | - | 27 | <5 |
| MW-16 | 1-Dec-97 | BDL | 1.2 | BDL | 1.3 | 2.5 | BDL | BDL |
| | 5-Aug-99 | 2.2 | 8.8 | 1.6 | 7.1 | 19.7 | 4 | BDL |
| | 26-Apr-00 | 2.17 | 1.27 | BDL | BDL | 3.4 | 10.1 | BDL |
| | 1-Aug-00 | 5.02 | 3.01 | BDL | 3.5 | 11.5 | 16.1 | 1.35 |
| | 13-Dec-00 | 10.7 | BDL | BDL | 2.66 | 13.4 | 30.6 | 1.96 |
| | 6-Feb-01 | 6.25 | BDL | BDL | BDL | 6.25 | 32.7 | BDL |
| | 5-Jun-01 | 22.3 | BDL | BDL | 1.30 | 23.6 | 78.8 | BDL |
| | 13-Sep-01 | 18.9 | BDL | BDL | BDL | BDL | 35.6 | BDL |
| | 7-Dec-01 | 15.7 | BDL | BDL | 1.01 | 16.7 | 25.0 | BDL |
| | 5-Mar-02 | 15.1 | BDL | BDL | BDL | 15.1 | 104 | BDL |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| DMW-17 | 1-Dec-97 | 1.6 | 3.8 | 2.3 | 12.7 | 20.3 | BDL | BDL |
| | 5-Aug-99 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 26-Apr-00 | 1.06 | 1.24 | BDL | BDL | 2.3 | 8.97 | BDL |
| | 1-Aug-00 | BDL | 3.02 | BDL | BDL | 3.02 | 7.75 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 6.98 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 5.34 | BDL |
| | 5-Jun-01 | BDL | 2.0 | BDL | BDL | 2.0 | 23.8 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 3.42 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |
| CP-WW | 1-Dec-97 | BDL | 1.2 | BDL | BDL | 1.2 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 2.96 | 1.09 | BDL | BDL | 4.1 | 315 | BDL |
| | 1-Aug-00 | 3.23 | 2.56 | BDL | 1.09 | 7 | 224 | BDL |
| | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |
| CLS-WW | 1-Dec-97 | 81.3 | 1.1 | BDL | 9.6 | 92 | 34.5 | BDL |
| | 5-Aug-99 | 81 | 1 | <1 | 10 | 92 | 35 | <5 |
| | 26-Apr-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | <1 | <1 | 10 | - | 35 | <5 |

Notes:

All results reported in parts per billion (ug/L) unless otherwise noted.

SSTL = Site specific target levels referenced in bid

FP = Free Product; NS = Not Sampled

BDL = Below detecatable Levels

Total BTEX = Summation of benzene, toluene, ethylbenzene and xylenes

MTBE = Methyl-tert-buytl-ether

# ATTACHMENT 3
# LABORATORY ANALYTICAL REPORT

# ACCESS ANALYTICAL, INC.

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


March 15, 2002
Report # 203000329
Order # 19538
South Carolina Cert ID# 96023

Site Location/Project
SC
DHE 12335

RECEIVED MAR 2 0 2002

Sample I.D.: MW-4
Collected: 03/05/02 00:00
Received: 03/07/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 14530 | ug/L | 5030/8260B | 1.000 | 03/12/2002 | 03/12/2002 | 10:02 | ME |
| Benzene | 7880 | ug/L | 5030/8260B | 1.000 | 03/12/2002 | 03/12/2002 | 10:02 | ME |
| Toluene | 12890 | ug/L | 5030/8260B | 1.000 | 03/12/2002 | 03/12/2002 | 10:02 | ME |
| Ethylbenzene | 1860 | ug/L | 5030/8260B | 1.000 | 03/12/2002 | 03/12/2002 | 10:02 | ME |
| m & p-Xylene | 7920 | ug/L | 5030/8260B | 1.000 | 03/12/2002 | 03/12/2002 | 10:02 | ME |
| o-Xylene | 4730 | ug/L | 5030/8260B | 1.000 | 03/12/2002 | 03/12/2002 | 10:02 | ME |
| Naphthalene | 2010 | ug/L | 5030/8260B | 1.000 | 03/12/2002 | 03/12/2002 | 10:02 | ME |
| SURROGATE: Toluene-D8 | 101.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 120.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 94.50% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063

March 15, 2002
Report # 203000329
Order # 19539
South Carolina Cert ID# 96023

Site Location/Project
SC
DHE 12335

Sample I.D.: MW-5
Collected: 03/05/02 00:00
Received: 03/07/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 10 | | | | |
| Methyl-Tert-Butyl-Ether | 171 | ug/L | 5030/8260B | 10.000 | 03/13/2002 | 03/13/2002 | 09:08 | ME |
| Benzene | 3160 | ug/L | 5030/8260B | 10.000 | 03/13/2002 | 03/13/2002 | 09:08 | ME |
| Toluene | 21300 | ug/L | 5030/8260B | 10.000 | 03/13/2002 | 03/13/2002 | 09:08 | ME |
| Ethylbenzene | 3260 | ug/L | 5030/8260B | 10.000 | 03/13/2002 | 03/13/2002 | 09:08 | ME |
| m & p-Xylene | 11700 | ug/L | 5030/8260B | 10.000 | 03/13/2002 | 03/13/2002 | 09:08 | ME |
| o-Xylene | 6790 | ug/L | 5030/8260B | 10.000 | 03/13/2002 | 03/13/2002 | 09:08 | ME |
| Naphthalene | 342 | ug/L | 5030/8260B | 10.000 | 03/13/2002 | 03/13/2002 | 09:08 | ME |
| SURROGATE: Toluene-D8 | 107.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 118.75% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 101.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


March 15, 2002
Report # 203000329
Order # 19540
South Carolina Cert ID# 96023

Site Location/Project
SC
DHE 12335

Sample I.D.: MW-6
Collected: 03/05/02 00:00
Received: 03/07/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 35.1 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:32 | ME |
| Benzene | 79.8 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:32 | ME |
| Toluene | 765 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:32 | ME |
| Ethylbenzene | 114 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:32 | ME |
| m & p-Xylene | 878 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:32 | ME |
| o-Xylene | 364 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:32 | ME |
| Naphthalene | 75.8 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:32 | ME |
| SURROGATE: Toluene-D8 | 102.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 123.50% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 93.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535 ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


March 15, 2002
Report # 203000329
Order # 19541
South Carolina Cert ID# 96023

Site Location/Project
SC
DHE 12335

Sample I.D.: MW-7
Collected: 03/05/02 00:00
Received: 03/07/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 1.68 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:03 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:03 | SKL |
| Toluene | 6.16 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:03 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:03 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:03 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:03 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:03 | SKL |
| SURROGATE: Toluene-D8 | 101.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 122.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 97.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
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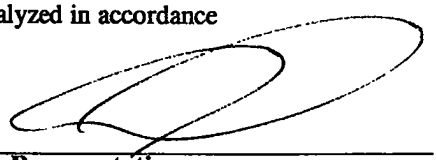

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


March 15, 2002
Report # 203000329
Order # 19542
South Carolina Cert ID# 96023

Site Location/Project
SC
DHE 12335

Sample I.D.: MW-8
Collected: 03/05/02 00:00
Received: 03/07/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:12 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:12 | SKL |
| Toluene | 2.95 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:12 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:12 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:12 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:12 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:12 | SKL |
| SURROGATE: Toluene-D8 | 101.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 117.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 94.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


March 15, 2002
Report # 203000329
Order # 19543
South Carolina Cert ID# 96023

Site Location/Project
SC
DHE 12335

Sample I.D.: MW-9
Collected: 03/05/02 00:00
Received: 03/07/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:56 | ME |
| Benzene | 25.5 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:56 | ME |
| Toluene | 29.8 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:56 | ME |
| Ethylbenzene | 157 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:56 | ME |
| m & p-Xylene | 1650 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:56 | ME |
| o-Xylene | 494 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:56 | ME |
| Naphthalene | 49.0 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:56 | ME |
| SURROGATE: Toluene-D8 | 99.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 116.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 95.50% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


March 15, 2002
Report # 203000329
Order # 19544
South Carolina Cert ID# 96023

Site Location/Project
SC
DHE 12335

Sample I.D.: MW-10
Collected: 03/05/02 00:00
Received: 03/07/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 1110 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:58 | ME |
| Benzene | 2.06 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:58 | ME |
| Toluene | 72.2 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:58 | ME |
| Ethylbenzene | 5.80 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:58 | ME |
| m & p-Xylene | 90.1 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:58 | ME |
| o-Xylene | 100 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:58 | ME |
| Naphthalene | 13.7 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 09:58 | ME |
| SURROGATE: Toluene-D8 | 100.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 120.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 94.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


March 15, 2002
Report # 203000329
Order # 19545
South Carolina Cert ID# 96023

Site Location/Project
SC
DHE 12335

Sample I.D.: MW-11
Collected: 03/05/02 00:00
Received: 03/07/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 1070 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:00 | ME |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:00 | ME |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:00 | ME |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:00 | ME |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:00 | ME |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:00 | ME |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:00 | ME |
| SURROGATE: Toluene-D8 | 98.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 121.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 100.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


March 15, 2002
Report # 203000329
Order # 19546
South Carolina Cert ID# 96023

Site Location/Project
SC
DHE 12335

Sample I.D.: MW-12
Collected: 03/05/02 00:00
Received: 03/07/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 906 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:01 | ME |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:01 | ME |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:01 | ME |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:01 | ME |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:01 | ME |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:01 | ME |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 10:01 | ME |
| SURROGATE: Toluene-D8 | 99.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 119.75% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 99.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


March 15, 2002
Report # 203000329
Order # 19547
South Carolina Cert ID# 96023

Site Location/Project
SC
DHE 12335

Sample I.D.: MW-13
Collected: 03/05/02 00:00
Received: 03/07/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 103 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 11:58 | ME |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 11:58 | ME |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 11:58 | ME |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 11:58 | ME |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 11:58 | ME |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 11:58 | ME |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 11:58 | ME |
| SURROGATE: Toluene-D8 | 99.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 129.75% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 100.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


March 15, 2002
Report # 203000329
Order # 19548
South Carolina Cert ID# 96023

Site Location/Project
SC
DHE 12335

Sample I.D.: MW-14
Collected: 03/05/02 00:00
Received: 03/07/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:12 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:12 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:12 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:12 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:12 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:12 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:12 | SKL |
| SURROGATE: Toluene-D8 | 101.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 119.75% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 98.50% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


March 15, 2002
Report # 203000329
Order # 19549
South Carolina Cert ID# 96023

Site Location/Project
SC
DHE 12335

Sample I.D.: MW-15
Collected: 03/05/02 00:00
Received: 03/07/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:13 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:13 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:13 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:13 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:13 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:13 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:13 | SKL |
| SURROGATE: Toluene-D8 | 102.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 118.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 94.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


March 15, 2002
Report # 203000329
Order # 19550
South Carolina Cert ID# 96023

Site Location/Project
SC
DHE 12335

Sample I.D.: MW-16
Collected: 03/05/02 00:00
Received: 03/07/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 104 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:14 | SKL |
| Benzene | 15.1 | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:14 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:14 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:14 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:14 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:14 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:14 | SKL |
| SURROGATE: Toluene-D8 | 99.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 117.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 96.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


March 15, 2002
Report # 203000329
Order # 19551
South Carolina Cert ID# 96023

Site Location/Project
SC
DHE 12335

Sample I.D.: CLS
Collected: 03/05/02 00:00
Received: 03/07/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC-MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:14 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:14 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:14 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:14 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:14 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:14 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 03/13/2002 | 03/13/2002 | 13:14 | SKL |
| SURROGATE: Toluene-D8 | 100.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 119.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 98.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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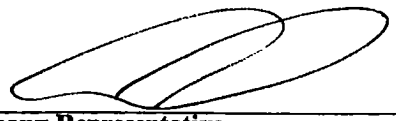
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.



Company Representative

# Access Analytical Chain of Custody Record

Project Submission #: 02/03 - 329 19538/1955 RUSH # (if applicable): M

Laboratory ID: STR-M

PO #:

Company Name: $H_2O$ Environmental Inc

Address: 121 Centrum Dr Ste 2

City: Irmo State: SC Zip: 29063

Project Name: DHC 12335

Report To: Richard Gillespie

REQUESTED LAB ANALYSIS:

PARAMETER: MTBE BTEX NAPTHA

| Sample Label | Date Collected | Time Collected | Matr | # of Cont | MTBE BTEX NAPTHA | NOTES / COMMENTS |
|---|---|---|---|---|---|---|
| mw-4 | 3-5-02 | | GW | 2 | X | 19538 |
| mw 5 | | | | | X | 19539 |
| mw 6 | | | | | X | 19540 |
| mw 7 | | | | | X | 19541 |
| mw 8 | | | | | X | 19542 |
| mw 9 | | | | | X | 19543 |
| mw 10 | | | | | X | 19544 |
| mw 11 | | | | | X | 19545 |
| mw 12 | | | | | X | 19546 |
| mw 13 | | | | | X | 19547 |

Access Analytical, Inc.
1248 Lake Murray Blvd.
Irmo, SC 29063
Phone: (803) 781-4243
Fax: 781-4303
Toll Free (888) 315-4243

Turnaround Time:
___Std. (5-7 Bus. days)
___RUSH*
*Date Required:_____
(For rush work, results faxed by end of business day on date required)

Samples Recd. on Ice?
✓ Yes
___No

Project Location:
✓ SC
___NC
___Other_____(specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| [signature] | 3-6-02 | 1600 | [signature] |
| [signature] | 3/6/02 | 1620 | FEDEX |
| FEDEX | 3/7/02 | 1000 | [signature] STR |

Original Copy - Returned w/Report
Yellow Copy - Access Analytical Copy
Pink Copy - Client Copy

See reverse for Terms and Conditions

# Access Analytical- Chain of Custody Record

Project Submission #: 02/03 – 329 MJ  RUSH # (if applicable): _____  Laboratory ID: SL-M

PO #: _____

Company Name: $H_2O$ Environmental

Address: 121 Centrum Dr Ste 2

City: Irmo  State: SC  Zip: 29063

Project Name: DHEC - 12335

Report To: Rick Gillespie

REQUESTED LAB ANALYSIS:

PARAMETER: BTEX MTBE NAPTHA

| Sample Label | Date Collected | Time Collected | Matr | # of Cont | | BTEX MTBE NAPTHA | | | | | | NOTES / COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mw-14 | 3-5-02 | | GW | 2 | | X | | | | | | 19548 |
| mw 15 | ↓ | | | 2 | | X | | | | | | 19549 |
| mw 16 | | | | 2 | | X | | | | | | 19550 |
| CLS | | | | | | X | | | | | | 19551 |

Turnaround Time:

___Std. (5-7 Bus. days)

___RUSH*

*Date Required:_____

(For rush work, results faxed by end of business day on date required)

Samples Recd. on Ice?

✓ Yes

___No

Project Location:

✓ SC

___NC

___Other_____(specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| D Burnett | 3-6-02 | 1600 | |
| | 3/6/02 | 1620 | FedEx |
| FedEx | 3/7/02 | 1090 | Huffaker/SL |

Access Analytical, Inc.

1248 Lake Murray Blvd.

Irmo, SC 29063

Phone: (803) 781-4243

Fax: 781-4303

Toll Free (888) 315-4243

Original Copy - Returned w/Report

Yellow Copy - Access Analytical Copy

Pink Copy - Client Copy

See reverse for Terms and Conditions

RECEIVED
JUL 12 2002
Underground Storage
Tank Program

July 10, 2002

Mr. John Abernathy
Underground Storage Tank Program
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

UST
53tech
DOCKETING

RE: 8th Quarterly Report
Crawford's Country Store
5870 Hwy 28 North
Antreville, South Carolina
SCDHEC Site ID # 12335

Dear Mr. Abernathy:

On February 4, 2000, the South Carolina Department of Health and Environmental Control (SCDHEC) provided notice to proceed to $H_2O$ Environmental, Inc. ($H_2O$) to perform Corrective Action at Crawford's Country Store located at 5870 Highway 28 North, Antreville, South Carolina. See Figure 1, Attachment 1 for a layout of the site and remediation system. The objective of the project is to reduce the Chemicals of Concern (COC) in monitoring wells OMW-1, MW-2 through MW-5, MW-7 through MW-15, DMW-17, CP-WW and CLS-WW to the site specific target levels (SSTLs). A chronological summary of site activities is provided below:

| | |
|---|---|
| 2/4/00 | SCDHEC awarded Bid Number SB-9570-12/02/99-TC |
| 3/02/00 | Corrective Action Plan/Engineering Report submitted to SCDHEC |
| 4/18/00 | CAP/ER approved |
| 4/26/00 | Initial groundwater sampling event |
| 5/17/00 | Initial groundwater results submitted |
| 5/22/00-5/31/00 | System installed |
| 5/31/00 | System was inspected and approved Todd Adams of SCDHEC |
| 5/31/00 | Invoice submitted for payment of 40% of the contract amount |
| 6/14/00 | System start-up |
| 8/01/00 | 1st quarter sampling event |
| 8/28/99 | 1st quarter report submitted |
| 9/13/00 | Free product recovery from OMW-1, MW-2 and MW-3 |
| 12/13/00 | 2nd quarter sampling event |
| 2/16/01 | 2nd quarter report submitted |
| 2/6/01 | 3rd quarter sampling event |
| 3/15/01 | 3rd quarter report submitted |
| 6/5/01 | 4th quarter sampling event |

| | |
|---|---|
| 7/31/01 | 4th quarter report submitted |
| 9/13/01 | 5th quarter sampling event |
| 10/18/01 | 5th quarter report submitted |
| 12/7/01 | 6th quarter sampling event |
| 2/4/02 | 6th quarter report submitted |
| 3/5/02 | 7th quarter sampling event |
| 4/26/02 | 7th quarter report submitted |
| 6/6/02 | 8th quarter sampling event |

An air injection/vapor extraction system was installed in May 2000 and put in operation in June 2000. The system consists of ten air injection/vapor extraction wells SV-1 through SV-10. In order to target the source area, $H_2O$ is rotating air sparging in injection/vapor extraction wells SV-1 through SV-10 and extracting vapor from injection/vapor extraction wells SV-1 through SV-8. Refer to Figure 1, Attachment 1 for a map illustrating the system layout. The following table summarizes the general operating characteristics of the system.

| **Summary of System Operating Characteristics** | | | | |
|---|---|---|---|---|
| Well ID | Activity | PSI | CFM | IWG |
| SV-1 - SV-8 | Vapor Extraction | -- | -- | 55 |
| SV-1 - SV-10 | Air Sparging | 10 | 6 | -- |

An air sample was collected from the effluent of the vapor extraction system on August 1, 2000. Based on the review of the laboratory analysis, it is estimated that contaminant emissions will not exceed 1,000 pounds per month. An air sample was not collected this quarter because the OVA field screening results were below detection limits.

On June 6, 2002, $H_2O$ Environmental Inc. personnel gauged and collected groundwater samples from monitoring wells MW-1 through MW-14, MW-17, and water well CLS-WW at the site. Monitoring wells MW-15 and MW-16 were destroyed by field cultivation and groundwater samples could not be collected. Water well CP-WW located at the Green residence was not operational at the time of the sampling event and a groundwater sample could not be collected. A new water well has apparently been installed and is currently being used by the Green residence. The groundwater samples were analyzed for Benzene, Toluene, Ethylbenzene, total Xylenes (BTEX), Methyl-Tert-Butyl Ether (MTBE), and Naphthalene. A review of the groundwater elevation data indicated a groundwater flow direction to the south-southeast. Table 1, Attachment 2, summarizes field data collected during monitoring well purging. The groundwater elevations are summarized on Table 2, Attachment 2, and illustrated on Figure 2, Attachment 1. The groundwater quality for Chemicals of Concern is summarized on Table 3, Attachment 2, and illustrated on Figure 3, Attachment 1. A copy of the laboratory analytical report is provided in Attachment 3. Groundwater generated during well purging was either placed in on-site 55-gallon drums or discharged on site as warranted by the data. Any disposal manifests will be forwarded to DHEC upon receipt.

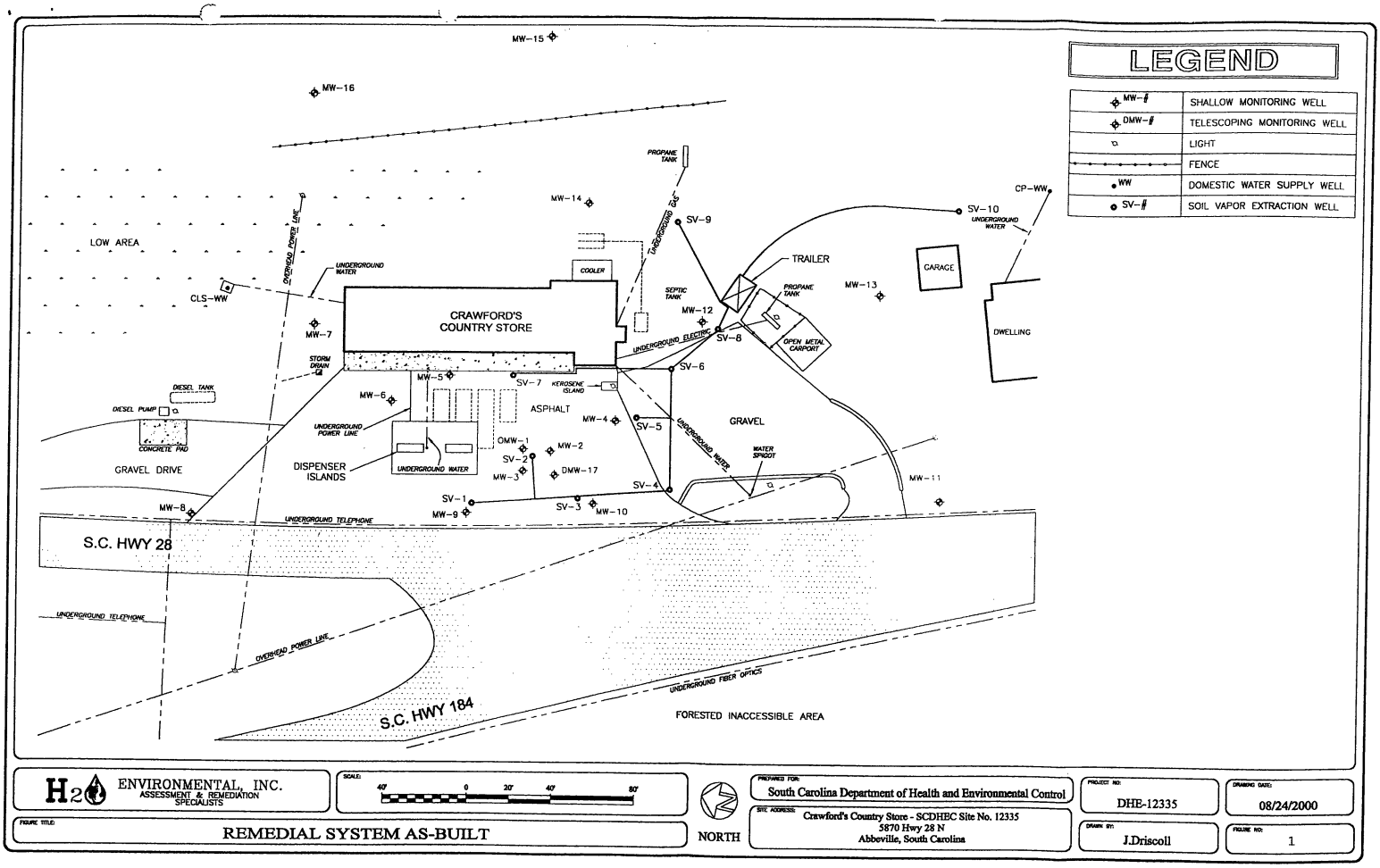
Based on the groundwater quality, $H_2O$ will continue to operate the remediation system. $H_2O$ Environmental, Inc. would like to request permission to utilize Enzyme Technologies, Inc's bioremediation technology at the site. The bioremediation bacteria mixture has been reviewed by the State Toxicologist and has been reviewed and approved for use by Art Shrader (see Attachment 4). The mixture would be injected into the ground via the existing air sparge wells per the manufacturer recommendations. Please reference the original Underground Injection Control Permit # 505 dated May 31, 2000 for additional air sparging specifications. If you have any questions or comments please do not hesitate to contact me at (803) 749-4080.

Sincerely,

**$H_2O$ Environmental, Inc.**
Class I Site Rehabilitation Contractor No. 32

Richard D. Gillespie, P.G.
Senior Geologist 7-10-02
License Number 2199

# ATTACHMENT 1
# FIGURES




## LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

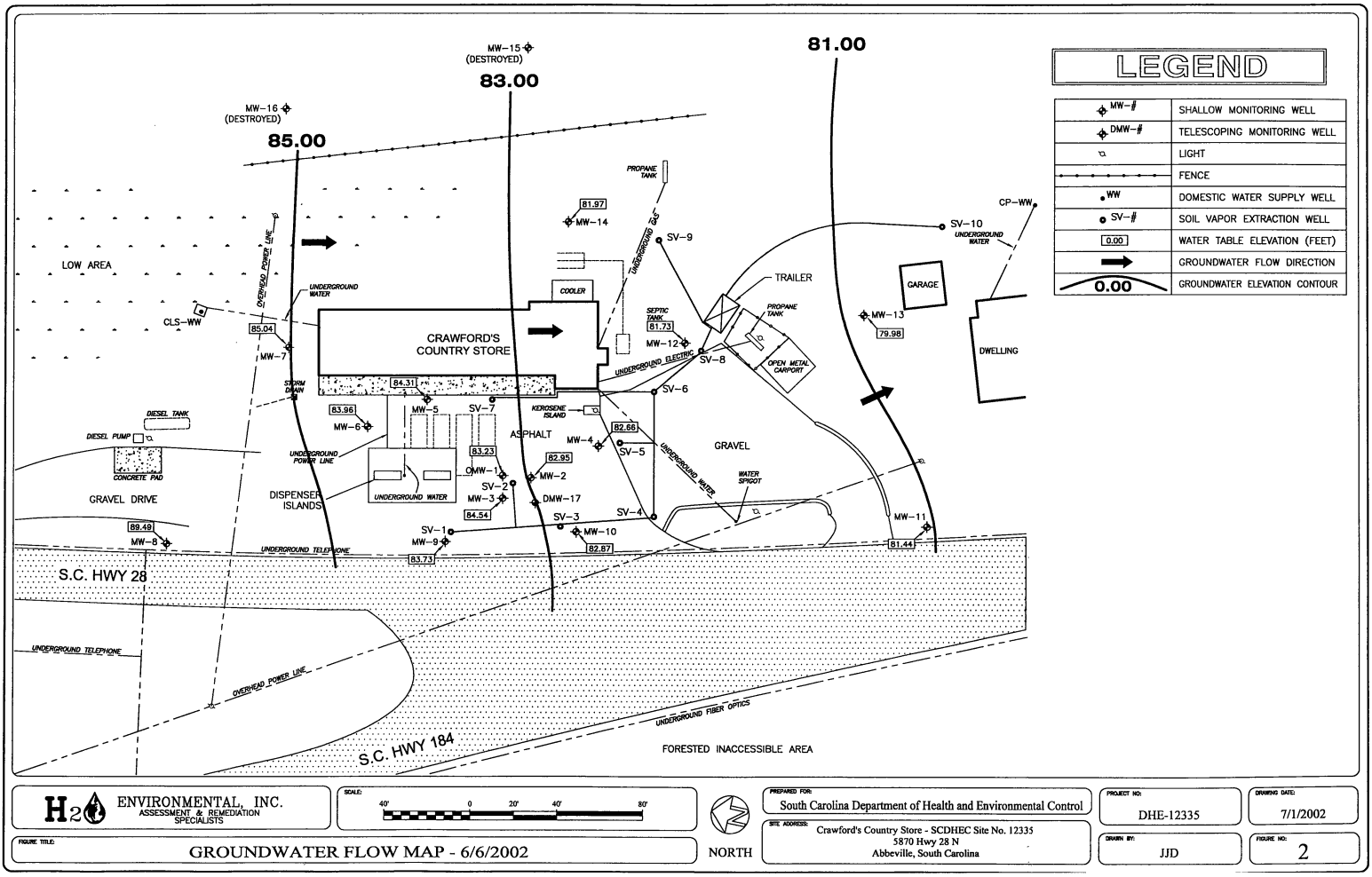
PROJECT NO: DHE-12335

DRAWING DATE: 08/24/2000

DRAWN BY: J.Driscoll

FIGURE NO: 1

FIGURE TITLE: REMEDIAL SYSTEM AS-BUILT




H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

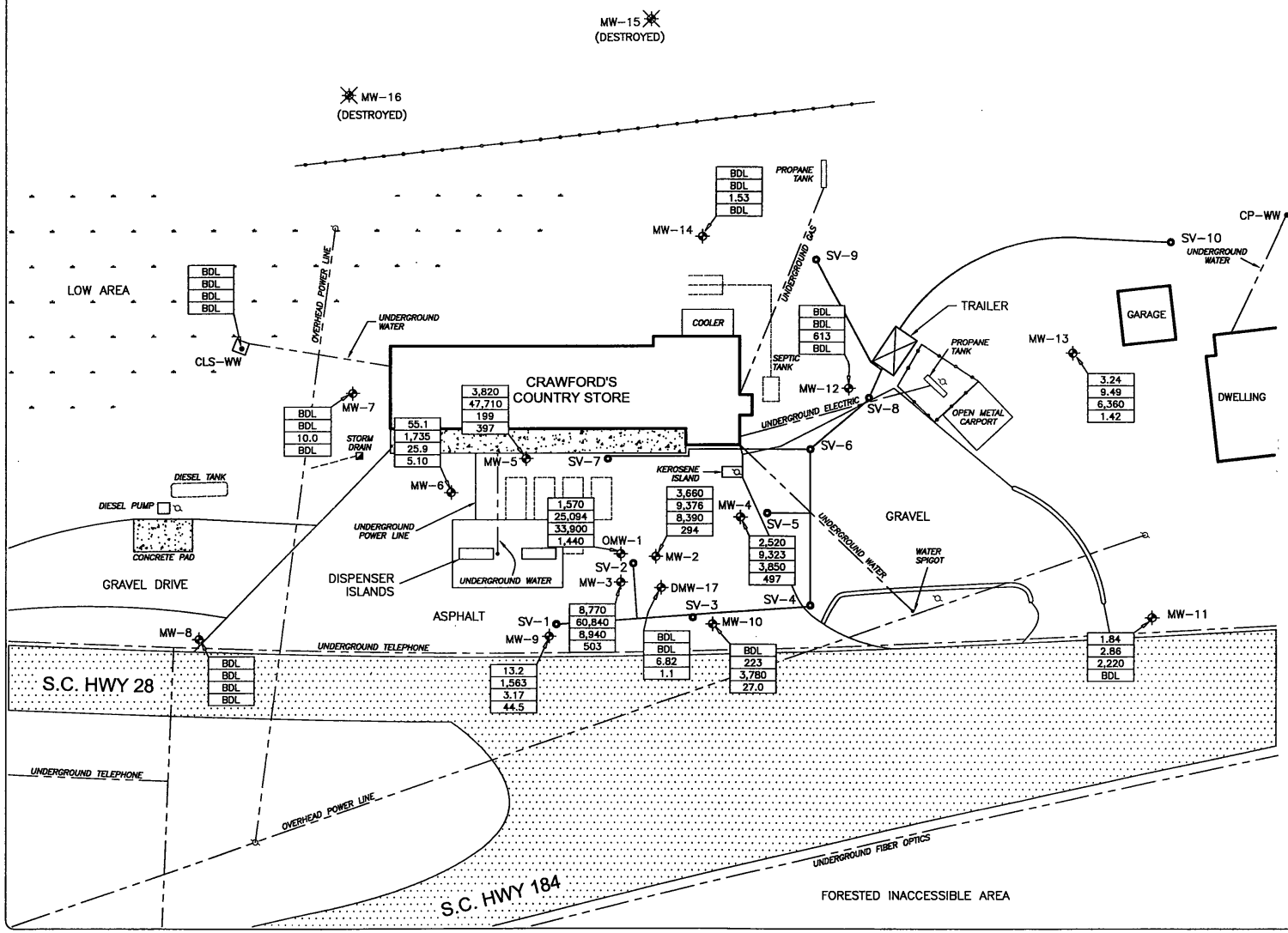
PROJECT NO: DHE-12335

DRAWING DATE: 7/1/2002

DRAWN BY: JJD

FIGURE NO: 2

FIGURE TITLE: GROUNDWATER FLOW MAP - 6/6/2002




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

| | |
|---|---|
| BDL | BENZENE |
| BDL | TOTAL BTEX |
| BDL | MTBE |
| BDL | NAPHTHALENE |

All results reported in parts per billion (ug/L).
FP = Free product. NS = Free Product.
BDL = Below detectable levels

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 6/26/2002

DRAWN BY: JJD

FIGURE NO: 3

FIGURE TITLE: GROUNDWATER QUALITY MAP - 6/6/2002

# ATTACHMENT 2
# TABLES

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 8/5/1999 | 17.95 | 22' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.68 | 22' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 21.50 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 21.46 | 22' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 19.89 | 22' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.18 | 22' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 18.74 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21.75 | 22' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 19.77 | 22' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 16.59 | 22' | 2" | NM | NM | NM | NM | NM |
| MW-2 | 8/5/1999 | 19.19 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 22.30 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 21.36 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 18.89 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.42 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 19.03 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21.98 | 25' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 19.90 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 16.88 | 25' | 2" | NM | NM | NM | NM | NM |
| MW-3 | 8/5/1999 | 17.96 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.73 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 20.85 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 22.18 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 19.26 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.41 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 18.80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21.24 | 25' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 18.69 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 15.44 | 25' | 2" | NM | NM | NM | NM | NM |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-4 | 8/5/2000 | 17.59 | 25' | 2" | 3.7 | 4.3 | 75.7 | 2.06 | 21.0 |
| | 4/26/2000 | 16.51 | 25' | 2" | 4.2 | 6.0 | 0.78 | 1.82 | 20.2 |
| | 8/1/2000 | 20.63 | 25' | 2" | 2.1 | 5.4 | 0.52 | 3.91 | 21.9 |
| | 12/13/2000 | 20.81 | 25' | 2" | 2.0 | 5.5 | NM | 1.90 | 18.5 |
| | 2/6/2001 | 19.09 | 25' | 2" | 2.9 | NM | NM | NM | NM |
| | 6/5/2001 | 17.70 | 25' | 2" | 3.6 | 5.3 | NM | 1.80 | 21.8 |
| | 9/13/2001 | 19.16 | 25' | 2" | 2.9 | NM | NM | 2.29 | 22.2 |
| | 12/7/2001 | 21.86 | 25' | 2" | 1.5 | 7.1 | NM | 2.42 | 21.5 |
| | 3/5/2002 | 18.91 | 25' | 2" | 3.0 | 6.9 | NM | 5.40 | 15.3 |
| | 6/6/2002 | 16.93 | 25' | 2" | NM | NM | NM | NM | NM |
| MW-5 | 8/5/1999 | 15.95 | 25' | 2" | 4.4 | 4.5 | 111.8 | 1.65 | 21.0 |
| | 4/26/2000 | 14.35 | 25' | 2" | 5.2 | 6.2 | 0.92 | 2.73 | 19.4 |
| | 8/1/2000 | 19.18 | 25' | 2" | 2.8 | 5.1 | 0.5 | 1.25 | 20.8 |
| | 12/13/2000 | 19.68 | 25' | 2" | 2.6 | 5.3 | NM | 2.51 | 18.4 |
| | 2/6/2001 | 16.50 | 25' | 2" | 4.2 | NM | NM | NM | NM |
| | 6/5/2001 | 15.51 | 25' | 2" | 4.6 | 4.5 | NM | 1.88 | 21.5 |
| | 9/13/2001 | 17.48 | 25' | 2" | 3.7 | NM | NM | 1.94 | 22.2 |
| | 12/7/2001 | 20.09 | 25' | 2" | 2.4 | 6.9 | NM | 2.16 | 21.8 |
| | 3/5/2002 | 16.15 | 25' | 2" | 4.3 | 6.8 | NM | 3.90 | 18.4 |
| | 6/6/2002 | 15.11 | 25' | 2" | NM | NM | NM | NM | NM |
| MW-6 | 8/5/1999 | 15.44 | 25' | 2" | 4.7 | 4.6 | 96 | 2.35 | 22.0 |
| | 4/26/2000 | 13.65 | 25' | 2" | 5.6 | 6.1 | 0.92 | 1.72 | 18.6 |
| | 8/1/2000 | 18.75 | 25' | 2" | 3.1 | 4.95 | 0.48 | 2.23 | 20.4 |
| | 12/13/2000 | 18.23 | 25' | 2" | 3.3 | 5.14 | NM | 1.42 | 18.4 |
| | 2/6/2001 | 15.34 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 6/5/2001 | 14.84 | 25' | 2" | 5.0 | 5.57 | NM | 1.44 | 21.8 |
| | 9/13/2001 | 16.96 | 25' | 2" | 3.9 | NM | NM | 1.80 | 20.9 |
| | 12/7/2001 | 19.70 | 25' | 2" | 2.6 | 6.9 | NM | 2.05 | 20.4 |
| | 3/5/2002 | 15.20 | 25' | 2" | 4.8 | 6.7 | NM | 3.64 | 16.1 |
| | 6/6/2002 | 15.51 | 25' | 2" | NM | NM | NM | NM | NM |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-7 | 8/5/1999 | 15.41 | 25' | 2" | 4.7 | 4.6 | 92.8 | 2.74 | 19.0 |
| | 4/26/2000 | 13.54 | 25' | 2" | 5.6 | 6.2 | 0.91 | 2.46 | 17.4 |
| | 8/1/2000 | 18.72 | 25' | 2" | 3.1 | 5.2 | 0.45 | 2.31 | 18.7 |
| | 12/13/2000 | 18.01 | 25' | 2" | 3.4 | 5.6 | NM | 1.96 | 16.5 |
| | 2/6/2001 | 15.41 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 6/5/2001 | 14.61 | 25' | 2" | 5.1 | 5.4 | NM | 2.25 | 19.9 |
| | 9/13/2001 | 16.91 | 25' | 2" | 4.0 | NM | NM | 2.50 | 20.9 |
| | 12/7/2001 | 19.64 | 25' | 2" | 2.6 | 7.1 | NM | 2.18 | 19.5 |
| | 3/5/2002 | 14.75 | 25' | 2" | 5.0 | 6.8 | NM | 7.83 | 14.6 |
| | 6/6/2002 | 14.43 | 25' | 2" | NM | NM | NM | NM | NM |
| MW-8 | 8/5/2000 | 14.59 | 25' | 2" | 5.1 | 4.9 | 45.4 | 3.01 | 21.0 |
| | 4/26/2000 | 11.56 | 25' | 2" | 6.6 | 6.3 | 0.72 | 2.06 | 18.4 |
| | 8/1/2000 | 19.18 | 25' | 2" | 2.8 | 5.3 | 0.53 | 0.81 | 23.0 |
| | 12/13/2000 | 17.96 | 25' | 2" | 3.4 | 5.4 | NM | 1.93 | 18.7 |
| | 2/6/2001 | 13.34 | 25' | 2" | 5.7 | NM | NM | NM | NM |
| | 6/5/2001 | 13.15 | 25' | 2" | 5.8 | 5.4 | NM | 2.02 | 21.5 |
| | 9/13/2001 | 16.64 | 25' | 2" | 4.1 | NM | NM | 1.56 | 20.3 |
| | 12/7/2001 | 19.73 | 25' | 2" | 2.6 | 6.9 | NM | 1.40 | 20.4 |
| | 3/5/2002 | 11.41 | 25' | 2" | 6.6 | 6.7 | NM | 5.60 | 15.8 |
| | 6/6/2002 | 12.93 | 25' | 2" | NM | NM | NM | NM | NM |
| MW-9 | 8/5/2000 | 16.74 | 25' | 2" | 4.0 | 4.9 | 57.2 | 1.47 | 22.0 |
| | 4/26/2000 | 15.09 | 25' | 2" | 4.8 | 5.9 | 0.72 | 1.45 | 20.4 |
| | 8/1/2000 | 21.2 | 25' | 2" | 1.9 | 5.7 | 0.59 | 2.62 | 23.9 |
| | 12/13/2000 | 19.73 | 25' | 2" | 2.6 | 5.4 | NM | 1.12 | 18.6 |
| | 2/6/2001 | 17.54 | 25' | 2" | 3.6 | NM | NM | NM | NM |
| | 6/5/2001 | 16.35 | 25' | 2" | 4.2 | NM | NM | NM | NM |
| | 9/13/2001 | 18.40 | 25' | 2" | 3.2 | 4.4 | NM | 2.91 | 23.5 |
| | 12/7/2001 | 21.00 | 25' | 2" | 2.0 | 6.9 | NM | 3.43 | 22.6 |
| | 3/5/2002 | 17.38 | 25' | 2" | 3.7 | 6.8 | NM | 1.83 | 19.4 |
| | 6/6/2002 | 16.80 | 25' | 2" | NM | NM | NM | NM | NM |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-10 | 8/5/1999 | 18.06 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.75 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 20.50 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 19.40 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 18.84 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.38 | 25' | 2" | 3.7 | 5.6 | NM | 1.4 | 22.9 |
| | 9/13/2001 | 18.82 | 25' | 2" | 3.0 | 5.2 | NM | 3.20 | 23.2 |
| | 12/7/2001 | 23.90 | 25' | 2" | 0.5 | NM | NM | NM | NM |
| | 3/5/2002 | 19.09 | 25' | 2" | 2.9 | 6.9 | NM | 9.55 | 19.3 |
| | 6/6/2002 | 16.78 | 25' | 2" | NM | NM | NM | NM | NM |
| MW-11 | 8/5/1999 | 15.60 | 25' | 2" | 4.6 | 4.8 | 42.7 | 6.38 | 22.0 |
| | 4/26/2000 | 13.65 | 25' | 2" | 5.6 | 6.2 | 0.6 | 4.48 | 20.8 |
| | 8/1/2000 | 18.61 | 25' | 2" | 3.1 | 5.6 | 0.31 | 4.79 | 21.4 |
| | 12/13/2000 | 19.01 | 25' | 2" | 2.9 | 5.7 | NM | 5.15 | 19.8 |
| | 2/6/2001 | 17.43 | 25' | 2" | 3.7 | NM | NM | NM | NM |
| | 6/5/2001 | 15.96 | 25' | 2" | 4.4 | 5.8 | NM | 6.01 | 21.4 |
| | 9/13/2001 | 17.23 | 25' | 2" | 3.8 | 4.6 | NM | 5.82 | 22.4 |
| | 12/7/2001 | 19.74 | 25' | 2" | 2.6 | 6.8 | NM | 4.76 | 21.7 |
| | 3/5/2002 | 17.12 | 25' | 2" | 3.9 | 6.9 | NM | 7.56 | 15.2 |
| | 6/6/2002 | 15.03 | 25' | 2" | NM | NM | NM | NM | NM |
| MW-12 | 8/5/1999 | 17.33 | 25' | 2" | 3.8 | 4.6 | 129.2 | 2.09 | 19.0 |
| | 4/26/2000 | 16.06 | 25' | 2" | 4.4 | 6.3 | 1.03 | 2.9 | 18.5 |
| | 8/1/2000 | 20.15 | 25' | 2" | 2.4 | 4.5 | 0.67 | 5.01 | 19.6 |
| | 12/13/2000 | 23.7 | 25' | 2" | 0.6 | 5.4 | NM | 2.9 | 17.1 |
| | 2/6/2001 | 18.45 | 25' | 2" | 3.2 | NM | NM | NM | NM |
| | 6/5/2001 | 17.26 | 25' | 2" | 3.8 | 10.2 | NM | 2.07 | 19.3 |
| | 9/13/2001 | 18.63 | 25' | 2" | 3.1 | NM | NM | 2.71 | 20.5 |
| | 12/7/2001 | 21.37 | 25' | 2" | 1.8 | 7.2 | NM | 8.00 | 19.9 |
| | 3/5/2002 | 18.65 | 25' | 2" | 3.1 | 6.8 | NM | 8.53 | 15.7 |
| | 6/6/2002 | 16.90 | 25' | 2" | NM | NM | NM | NM | NM |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-13 | 8/5/1999 | 21.26 | 25' | 2" | 1.8 | 4.2 | 51.7 | 2.32 | 18.0 |
| | 4/26/2000 | 20.02 | 25' | 2" | 2.4 | 6.3 | 0.62 | 3.00 | 18.5 |
| | 8/1/2000 | 24.05 | 25' | 2" | 0.5 | 5.2 | 0.42 | 2.14 | 19.7 |
| | 12/13/2000 | 24.13 | 25' | 2" | 0.4 | 5.5 | NM | 1.04 | 15.9 |
| | 2/6/2001 | 22.43 | 25' | 2" | 1.3 | NM | NM | NM | NM |
| | 6/5/2001 | 21.34 | 25' | 2" | 1.8 | NM | 5.4 | 2.61 | 19.6 |
| | 9/13/2001 | 22.91 | 25' | 2" | 1.0 | NM | NM | NM | 20.3 |
| | 12/7/2001 | 25.22 | 25.22' | 2" | 0.0 | NM | NM | NM | NM |
| | 3/5/2002 | 22.21 | 25.22' | 2" | 1.5 | 6.9 | NM | 7.99 | 16.4 |
| | 6/6/2002 | 20.82 | 25.22' | 2" | NM | NM | NM | NM | NM |
| MW-14 | 8/5/1999 | 7.96 | 25' | 2" | 8.3 | 5.0 | 312 | 0.80 | 19.0 |
| | 4/26/2000 | 6.46 | 25' | 2" | 9.1 | 6.1 | 1.56 | 1.72 | 15.5 |
| | 8/1/2000 | 10.8 | 25' | 2" | 6.9 | 5.4 | 0.93 | 1.43 | 18.8 |
| | 12/13/2000 | 10.8 | 25' | 2" | 6.9 | 5.5 | NM | 1.72 | 14.7 |
| | 2/6/2001 | 8.72 | 25' | 2" | 8.0 | NM | NM | NM | NM |
| | 6/5/2001 | 7.32 | 25' | 2" | 8.6 | 5.8 | NM | 2.08 | 17.4 |
| | 9/13/2001 | 9.31 | 25' | 2" | 7.7 | NM | NM | 1.77 | 21.0 |
| | 12/7/2001 | 11.91 | 25' | 2" | 6.4 | 6.9 | NM | 1.84 | 20.5 |
| | 3/5/2002 | 8.51 | 25' | 2" | 8.1 | 6.9 | NM | 5.90 | 12.2 |
| | 6/6/2002 | 7.41 | 25' | 2" | NM | NM | NM | NM | NM |
| MW-15 | 8/5/1999 | 6.28 | 25' | 2" | 9.2 | 4.8 | 86.5 | 0.87 | 18.0 |
| | 4/26/2000 | 4.75 | 25' | 2" | 9.9 | 6.5 | 0.6 | 3.32 | 16.2 |
| | 8/1/2000 | 9.11 | 25' | 2" | 7.8 | 5.5 | 0.41 | 3.17 | 19.5 |
| | 12/13/2000 | 8.57 | 25' | 2" | 8.0 | 5.6 | NM | 1.93 | 15.1 |
| | 2/6/2001 | 6.36 | 25' | 2" | 9.1 | NM | NM | NM | NM |
| | 6/5/2001 | 5.68 | 25' | 2" | 9.4 | 6.1 | NM | 2.41 | 19.2 |
| | 9/13/2001 | 7.61 | 25' | 2" | 8.5 | NM | NM | 2.90 | 21.2 |
| | 12/7/2001 | 9.91 | 25' | 2" | 7.4 | 6.9 | NM | 3.66 | 20.3 |
| | 3/5/2002 | 5.86 | 25' | 2" | 9.4 | 6.6 | NM | 6.50 | 12.6 |
| | 6/6/2002 | NM | 25' | 2" | NM | NM | NM | NM | NM |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-16 | 8/5/1999 | 11.22 | 25' | 2" | 6.7 | 4.9 | 49 | 0.79 | 18.0 |
| | 4/26/2000 | 9.50 | 25' | 2" | 7.6 | 6.5 | 0.61 | 1.66 | 15.5 |
| | 8/1/2000 | 14.35 | 25' | 2" | 5.2 | 6.0 | 0.95 | 1.64 | 19.3 |
| | 12/13/2000 | 13.45 | 25' | 2" | 5.6 | 5.8 | NM | 2.27 | 15.6 |
| | 2/6/2001 | 10.89 | 25' | 2" | 6.9 | NM | NM | NM | NM |
| | 6/5/2001 | 10.34 | 25' | 2" | 7.2 | 6.5 | NM | 2.02 | 18.3 |
| | 9/13/2001 | 12.58 | 25' | 2" | 6.1 | NM | NM | 1.87 | 21.5 |
| | 12/7/2001 | 13.41 | 25' | 2" | 5.7 | 6.9 | NM | 4.75 | 19.1 |
| | 3/5/2002 | 8.67 | 25' | 2" | 8.0 | 6.7 | NM | 5.20 | 12.4 |
| | 6/6/2002 | NM | 25' | 2" | NM | NM | NM | NM | NM |
| MW-17 | 8/5/1999 | 16.16 | 75' | 2" | 28.8 | 5.6 | 90.8 | 2.76 | 20.5 |
| | 4/26/2000 | 16.8 | 75' | 2" | 28.5 | 6.4 | 0.86 | 6.1 | 20.8 |
| | 8/1/2000 | 19.27 | 75' | 2" | 27.3 | 6.2 | 0.59 | 3.12 | 22.5 |
| | 12/13/2000 | 19.20 | 75' | 2" | 27.3 | NM | NM | NM | NM |
| | 2/6/2001 | 16.82 | 75' | 2" | 28.5 | NM | NM | NM | NM |
| | 6/5/2001 | 15.52 | 75' | 2" | 29.1 | 7.1 | NM | 2.67 | 21.8 |
| | 9/13/2001 | 17.42 | 75' | 2" | 28.2 | NM | NM | 3.60 | 22.5 |
| | 12/7/2001 | 19.54 | 75' | 2" | 27.1 | 7.1 | NM | 2.73 | 22.5 |
| | 3/5/2002 | NM | 75' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | NM | 75' | 2" | NM | NM | NM | NM | NM |

NOTES:
NS - Not sampled
Temperature in Degrees Celcius
Dissolved Oxygen in mg/L
Depth to Water and Depth to bottom in units of feet
Well volumes (Gallons)
Specific Conductivity (umhos/cm)

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| OMW-1 | 01-Dec-97 | 99.82 | 17.13 | - | 82.69 |
| | 05-Aug-99 | | 17.95 | 1.05 | 81.87 |
| | 26-Apr-00 | | 15.68 | 0.99 | 84.14 |
| | 01-Aug-00 | | 21.50 | 1.40 | 78.32 |
| | 13-Dec-00 | | 21.46 | 1.70 | 78.36 |
| | 06-Feb-01 | | 19.89 | 1.78 | 79.93 |
| | 05-Jun-01 | | 17.18 | 0.19 | 82.64 |
| | 16-Aug-01 | | 18.10 | 0.13 | 81.72 |
| | 13-Sep-01 | | 18.74 | 0.02 | 81.08 |
| | 26-Sep-01 | | 19.31 | 0.07 | 80.51 |
| | 27-Sep-01 | | 19.32 | 0.01 | 80.50 |
| | 19-Oct-01 | | 19.93 | 0.02 | 79.89 |
| | 09-Nov-01 | | 21.00 | 0.39 | 78.82 |
| | 21-Nov-01 | | 21.63 | 1.28 | 78.19 |
| | 05-Dec-01 | | 21.65 | 0.96 | 78.17 |
| | 07-Dec-01 | | 21.75 | 0.76 | 78.07 |
| | 10-Dec-01 | | 21.65 | 0.01 | 78.17 |
| | 11-Dec-01 | | 21.65 | sheen | 78.17 |
| | | | 21.61 | 0.40 | 78.21 |
| | 07-Jan-02 | | 21.76 | 0.40 | 78.06 |
| | 04-Feb-02 | | 21.45 | 1.31 | 78.37 |
| | 05-Mar-02 | | 19.77 | 0.17 | 80.05 |
| | 19-Apr-02 | | 16.65 | 0.01 | 83.17 |
| | 17-May-02 | | 15.76 | 0.01 | 84.06 |
| | 24-May-02 | | 15.86 | sheen | 83.96 |
| | 28-May-02 | | 16.09 | sheen | 83.73 |
| | 30-May-02 | | 19.11 | sheen | 80.71 |
| | 06-Jun-02 | | 16.59 | - | 83.23 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-2 | 01-Dec-97 | 99.83 | 17.43 | - | 82.40 |
| | 05-Aug-99 | | 19.19 | 2.29 | 80.64 |
| | 26-Apr-00 | | 15.80 | 2.18 | 84.03 |
| | 01-Aug-00 | | 22.30 | 2.10 | 77.53 |
| | 13-Dec-00 | | 21.36 | 0.84 | 78.47 |
| | 06-Feb-01 | | 18.89 | sheen | 80.94 |
| | 05-Jun-01 | | 17.42 | sheen | 82.41 |
| | 16-Aug-01 | | 18.35 | - | 81.48 |
| | 13-Sep-01 | | 19.03 | - | 80.80 |
| | 26-Sep-01 | | 19.42 | sheen | 80.41 |
| | 27-Sep-01 | | 19.69 | 0.01 | 80.14 |
| | 19-Oct-01 | | 20.22 | - | 79.61 |
| | 09-Nov-01 | | 21.02 | 0.01 | 78.81 |
| | 21-Nov-01 | | 20.70 | sheen | 79.13 |
| | 05-Dec-01 | | 21.59 | 0.63 | 78.24 |
| | 07-Dec-01 | | 21.98 | 0.02 | 77.85 |
| | 10-Dec-01 | | 22.00 | 0.01 | 77.83 |
| | 11-Dec-01 | | 21.91 | sheen | 77.92 |
| | | | 21.73 | 0.02 | 78.10 |
| | 07-Jan-02 | | 22.34 | 0.22 | 77.49 |
| | 04-Feb-02 | | 20.50 | 0.15 | 79.33 |
| | 05-Mar-02 | | 19.90 | sheen | 79.93 |
| | 19-Apr-02 | | 17.03 | 0.01 | 82.80 |
| | 17-May-02 | | 16.25 | 0.01 | 83.58 |
| | 24-May-02 | | 16.28 | 0.01 | 83.55 |
| | 28-May-02 | | 16.49 | sheen | 83.34 |
| | 30-May-02 | | 19.50 | - | 80.33 |
| | 06-Jun-02 | | 16.88 | - | 82.95 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-3 | 01-Dec-97 | 99.98 | 17.00 | - | 82.98 |
| | 05-Aug-99 | | 17.96 | 1.01 | 82.02 |
| | 26-Apr-00 | | 15.73 | 0.68 | 84.25 |
| | 01-Aug-00 | | 20.85 | 0.78 | 79.13 |
| | 13-Dec-00 | | 22.18 | 2.22 | 77.80 |
| | 06-Feb-01 | | 19.26 | 0.96 | 80.72 |
| | 05-Jun-01 | | 17.41 | 0.40 | 82.57 |
| | 16-Aug-01 | | 18.19 | 0.09 | 81.79 |
| | 13-Sep-01 | | 18.80 | 0.02 | 81.18 |
| | 26-Sep-01 | | 19.25 | sheen | 80.73 |
| | 27-Sep-01 | | 19.32 | 0.04 | 80.66 |
| | 19-Oct-01 | | 20.04 | 0.06 | 79.94 |
| | 09-Nov-01 | | 20.86 | sheen | 79.12 |
| | 21-Nov-01 | | 20.59 | sheen | 79.39 |
| | 05-Dec-01 | | 21.10 | sheen | 78.88 |
| | 07-Dec-01 | | 21.24 | sheen | 78.74 |
| | 10-Dec-01 | | 21.62 | 0.01 | 78.36 |
| | 11-Dec-01 | | 21.65 | sheen | 78.33 |
| | | | 22.01 | 0.56 | 77.97 |
| | 07-Jan-02 | | 22.87 | 1.15 | 77.11 |
| | 04-Feb-02 | | 21.20 | 0.75 | 78.78 |
| | 05-Mar-02 | | 18.69 | 0.27 | 81.29 |
| | 19-Apr-02 | | 16.60 | sheen | 83.38 |
| | 17-May-02 | | 15.78 | 0.01 | 84.20 |
| | 24-May-02 | | 15.88 | sheen | 84.10 |
| | 28-May-02 | | 16.12 | sheen | 83.86 |
| | 30-May-02 | | 12.14 | - | 87.84 |
| | 06-Jun-02 | | 15.44 | - | 84.54 |
| MW-4 | 01-Dec-97 | 99.59 | 17.60 | - | 81.99 |
| | 05-Aug-99 | | 17.59 | - | 82.00 |
| | 26-Apr-00 | | 16.51 | - | 83.08 |
| | 01-Aug-00 | | 20.63 | - | 78.96 |
| | 13-Dec-00 | | 20.81 | - | 78.78 |
| | 06-Feb-01 | | 19.09 | - | 80.50 |
| | 05-Jun-01 | | 17.70 | - | 81.89 |
| | 13-Sep-01 | | 19.16 | - | 80.43 |
| | 07-Dec-01 | | 21.86 | - | 77.73 |
| | 05-Mar-02 | | 18.91 | - | 80.68 |
| | 06-Jun-02 | | 16.93 | - | 82.66 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-5 | 01-Dec-97 | 99.42 | 15.04 | - | 84.38 |
| | 05-Aug-99 | | 15.95 | - | 83.47 |
| | 26-Apr-00 | | 14.35 | - | 85.07 |
| | 01-Aug-00 | | 19.18 | - | 80.24 |
| | 13-Dec-00 | | 19.68 | - | 79.74 |
| | 06-Feb-01 | | 16.50 | - | 82.92 |
| | 05-Jun-01 | | 15.51 | - | 83.91 |
| | 13-Sep-01 | | 17.48 | - | 81.94 |
| | 07-Dec-01 | | 20.09 | - | 79.33 |
| | 05-Mar-02 | | 16.15 | - | 83.27 |
| | 06-Jun-02 | | 15.11 | - | 84.31 |
| MW-6 | 01-Dec-97 | 99.47 | 14.37 | - | 85.10 |
| | 05-Aug-99 | | 15.44 | - | 84.03 |
| | 26-Apr-00 | | 13.65 | - | 85.82 |
| | 01-Aug-00 | | 18.75 | - | 80.72 |
| | 13-Dec-00 | | 18.23 | - | 81.24 |
| | 06-Feb-01 | | 15.34 | - | 84.13 |
| | 05-Jun-01 | | 14.84 | - | 84.63 |
| | 13-Sep-01 | | 16.96 | - | 82.51 |
| | 07-Dec-01 | | 19.70 | - | 79.77 |
| | 05-Mar-02 | | 15.20 | - | 84.27 |
| | 06-Jun-02 | | 15.51 | - | 83.96 |
| MW-7 | 01-Dec-97 | 99.47 | 13.96 | - | 85.51 |
| | 05-Aug-99 | | 15.41 | - | 84.06 |
| | 26-Apr-00 | | 13.54 | - | 85.93 |
| | 01-Aug-00 | | 18.72 | - | 80.75 |
| | 13-Dec-00 | | 18.01 | - | 81.46 |
| | 06-Feb-01 | | 15.41 | - | 84.06 |
| | 05-Jun-01 | | 14.61 | - | 84.86 |
| | 13-Sep-01 | | 16.91 | - | 82.56 |
| | 07-Dec-01 | | 19.64 | - | 79.83 |
| | 05-Mar-02 | | 14.75 | - | 84.72 |
| | 06-Jun-02 | | 14.43 | - | 85.04 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-8 | 01-Dec-97 | 102.42 | 12.53 | - | 89.89 |
| | 05-Aug-99 | | 14.59 | - | 87.83 |
| | 26-Apr-00 | | 11.56 | - | 90.86 |
| | 01-Aug-00 | | 19.18 | - | 83.24 |
| | 13-Dec-00 | | 17.96 | - | 84.46 |
| | 06-Feb-01 | | 13.34 | - | 89.08 |
| | 05-Jun-01 | | 13.15 | - | 89.27 |
| | 13-Sep-01 | | 16.64 | - | 85.78 |
| | 07-Dec-01 | | 19.73 | - | 82.69 |
| | 05-Mar-02 | | 11.41 | - | 91.01 |
| | 06-Jun-02 | | 12.93 | - | 89.49 |
| MW-9 | 01-Dec-97 | 100.53 | 16.17 | - | 84.36 |
| | 05-Aug-99 | | 16.74 | - | 83.79 |
| | 26-Apr-00 | | 15.09 | - | 85.44 |
| | 01-Aug-00 | | 21.20 | - | 79.33 |
| | 13-Dec-00 | | 19.73 | - | 80.80 |
| | 06-Feb-01 | | 17.54 | - | 82.99 |
| | 05-Jun-01 | | 16.35 | - | 84.18 |
| | 13-Sep-01 | | 18.40 | - | 82.13 |
| | 07-Dec-01 | | 21.00 | - | 79.53 |
| | 05-Mar-02 | | 17.38 | - | 83.15 |
| | 06-Jun-02 | | 16.80 | - | 83.73 |
| MW-10 | 01-Dec-97 | 99.65 | 17.40 | - | 82.25 |
| | 05-Aug-99 | | 18.06 | 1.01 | 81.59 |
| | 26-Apr-00 | | 15.75 | 1.65 | 83.90 |
| | 01-Aug-00 | | 20.50 | 0.03 | 79.15 |
| | 13-Dec-00 | | 19.40 | 0.01 | 80.25 |
| | 06-Feb-01 | | 18.84 | sheen | 80.81 |
| | 05-Jun-01 | | 17.38 | - | 82.27 |
| | 16-Aug-01 | | 18.15 | - | 81.50 |
| | 13-Sep-01 | | 18.82 | - | 80.83 |
| | 07-Dec-01 | | 23.90 | - | 75.75 |
| | 11-Dec-01 | | 21.88 | - | 77.77 |
| | 04-Feb-02 | | 20.65 | - | 79.00 |
| | 05-Mar-02 | | 19.09 | - | 80.56 |
| | 06-Jun-02 | | 16.78 | - | 82.87 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-11 | 01-Dec-97 | 96.47 | 15.74 | - | 80.73 |
| | 05-Aug-99 | | 15.60 | - | 80.87 |
| | 26-Apr-00 | | 13.65 | - | 82.82 |
| | 01-Aug-00 | | 18.61 | - | 77.86 |
| | 13-Dec-00 | | 19.01 | - | 77.46 |
| | 06-Feb-01 | | 17.43 | - | 79.04 |
| | 05-Jun-01 | | 15.96 | - | 80.51 |
| | 13-Sep-01 | | 17.23 | - | 79.24 |
| | 07-Dec-01 | | 19.74 | - | 76.73 |
| | 05-Mar-02 | | 17.12 | - | 79.35 |
| | 06-Jun-02 | | 15.03 | - | 81.44 |
| MW-12 | 01-Dec-97 | 98.63 | 17.03 | - | 81.60 |
| | 05-Aug-99 | | 17.33 | - | 81.30 |
| | 26-Apr-00 | | 16.06 | - | 82.57 |
| | 01-Aug-00 | | 20.15 | - | 78.48 |
| | 13-Dec-00 | | 23.70 | - | 74.93 |
| | 06-Feb-01 | | 18.45 | - | 80.18 |
| | 05-Jun-01 | | 17.26 | - | 81.37 |
| | 13-Sep-01 | | 18.63 | - | 80.00 |
| | 07-Dec-01 | | 21.37 | - | 77.26 |
| | 05-Mar-02 | | 18.65 | - | 79.98 |
| | 06-Jun-02 | | 16.90 | - | 81.73 |
| MW-13 | 01-Dec-97 | 100.80 | 21.05 | - | 79.75 |
| | 05-Aug-99 | | 21.26 | - | 79.54 |
| | 26-Apr-00 | | 20.02 | - | 80.78 |
| | 01-Aug-00 | | 24.05 | - | 76.75 |
| | 13-Dec-00 | | 24.13 | - | 76.67 |
| | 06-Feb-01 | | 22.43 | - | 78.37 |
| | 05-Jun-01 | | 21.34 | - | 79.46 |
| | 13-Sep-01 | | 22.91 | - | 77.89 |
| | 07-Dec-01 | | 25.22 | - | 75.58 |
| | 05-Mar-02 | | 22.21 | - | 78.59 |
| | 06-Jun-02 | | 20.82 | - | 79.98 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-14 | 01-Dec-97 | 89.38 | 7.27 | - | 82.11 |
| | 05-Aug-99 | | 7.96 | - | 81.42 |
| | 26-Apr-00 | | 6.46 | - | 82.92 |
| | 11-Aug-00 | | 10.80 | - | 78.58 |
| | 13-Dec-00 | | 10.80 | - | 78.58 |
| | 06-Feb-01 | | 8.72 | - | 80.66 |
| | 05-Jun-01 | | 7.32 | - | 82.06 |
| | 13-Sep-01 | | 9.31 | - | 80.07 |
| | 07-Dec-01 | | 11.91 | - | 77.47 |
| | 05-Mar-02 | | 8.51 | - | 80.87 |
| | 06-Jun-02 | | 7.41 | - | 81.97 |
| MW-15 | 01-Dec-97 | 87.33 | 5.10 | - | 82.23 |
| | 05-Aug-99 | | 6.28 | - | 81.05 |
| | 26-Apr-00 | | 4.75 | - | 82.58 |
| | 01-Aug-00 | | 9.11 | - | 78.22 |
| | 13-Dec-00 | | 8.57 | - | 78.76 |
| | 06-Feb-01 | | 6.36 | - | 80.97 |
| | 05-Jun-01 | | 5.68 | - | 81.65 |
| | 13-Sep-01 | | 7.61 | - | 79.72 |
| | 07-Dec-01 | | 9.91 | - | 77.42 |
| | 05-Mar-02 | | 5.86 | - | 81.47 |
| | 06-Jun-02 | | NM | - | NM |
| MW-16 | 01-Dec-97 | 93.74 | 9.69 | - | 84.05 |
| | 05-Aug-99 | | 11.22 | - | 82.52 |
| | 26-Apr-00 | | 9.50 | - | 84.24 |
| | 01-Aug-00 | | 14.35 | - | 79.39 |
| | 13-Dec-00 | | 13.45 | - | 80.29 |
| | 06-Feb-01 | | 10.89 | - | 82.85 |
| | 05-Jun-01 | | 10.34 | - | 83.40 |
| | 13-Sep-01 | | 12.58 | - | 81.16 |
| | 07-Dec-01 | | 13.41 | - | 80.33 |
| | 05-Mar-02 | | 8.67 | - | 85.07 |
| | 06-Jun-02 | | NM | - | NM |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| DMW-17 | 01-Dec-97 | 100.08 | 15.53 | - | 84.55 |
| | 05-Aug-99 | | 16.16 | - | 83.92 |
| | 26-Apr-00 | | 16.80 | - | 83.28 |
| | 01-Aug-00 | | 19.27 | - | 80.81 |
| | 13-Dec-00 | | 19.20 | - | 80.88 |
| | 06-Feb-01 | | 16.82 | - | 83.26 |
| | 05-Jun-01 | | 15.52 | - | 84.56 |
| | 13-Sep-01 | | 17.42 | - | 82.66 |
| | 07-Dec-01 | | 19.54 | - | 80.54 |
| | 05-Mar-02 | | NM | - | NM |
| | 06-Jun-02 | | NM | - | NM |

**Notes:**
TOC - Top-of-Casing elevation refrenced to common datum.
NM - Not measured.
All measurments in units of feet.
- = No Data

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| OMW-1 | 1-Dec-97 | 14.9 | 85.5 | 5.2 | 24.8 | 130 | 96 | BDL |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 1,570 | 19,000 | 474 | 4,050 | 25,094 | 33,900 | 1,440 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-2 | 1-Dec-97 | 9,900 | 42,300 | 2,040 | 12,100 | 66,340 | 242,000 | 71.2 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 4,400 | 7,570 | 2,890 | 6,790 | 21,650 | 9,490 | 592 |
| | 13-Sep-01 | 2,280 | 9,780 | 1,630 | 7,650 | 21,340 | 1,750 | 399 |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 3,660 | 2,070 | 858 | 2,788 | 9,376 | 8,390 | 294 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-3 | 1-Dec-97 | 9,820 | 54,500 | 2,160 | 11,900 | 78,380 | 81,200 | 445 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 8,770 | 34,700 | 2,610 | 14,760 | 60,840 | 8,940 | 503 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-4 | 1-Dec-97 | 8,140 | 21,000 | 1,510 | 11,500 | 42,150 | 215,000 | 813 |
| | 5-Aug-99 | 14,200 | 34,600 | 2,750 | 15,900 | 67,450 | 109,000 | <5 |
| | 26-Apr-00 | 13,400 | 33,200 | 3,420 | 13,270 | 63,290 | 102,000 | 1,060 |
| | 1-Aug-00 | 10,100 | 23,300 | 1,740 | 11,410 | 46,550 | 109,000 | 559 |
| | 13-Dec-00 | 6,730 | 16,300 | 635 | 4,170 | 27,835 | 32,300 | 742 |
| | 6-Feb-01 | 5,860 | 13,500 | 1,080 | 7,230 | 27,670 | 26,100 | 210 |
| | 5-Jun-01 | 3,570 | 10,900 | 965 | 9,510 | 24,945 | 5,730 | 302 |
| | 13-Sep-01 | 5,910 | 14,900 | 1,050 | 7,100 | 28,960 | 5,980 | 384 |
| | 7-Dec-01 | 10,000 | 19,200 | 2,210 | 11,600 | 43,010 | BDL | 682 |
| | 5-Mar-02 | 7,880 | 12,890 | 1,860 | 12,650 | 35,280 | 14,530 | 2,010 |
| | 6-Jun-02 | 2,520 | 2,700 | 483 | 3,620 | 9,323 | 3,850 | 497 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 5 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-5 | 1-Dec-97 | 5,930 | 47,600 | 2,100 | 12,600 | 68,230 | BDL | 125 |
| | 5-Aug-99 | 6,400 | 61,600 | 2,460 | 12,100 | 82,560 | 410 | 335 |
| | 26-Apr-00 | 6,680 | 48,300 | 2,390 | 9,610 | 66,980 | 681 | 609 |
| | 1-Aug-00 | 4,250 | 40,300 | 1,960 | 12,530 | 59,040 | 258 | 396 |
| | 13-Dec-00 | 4,530 | 38,100 | 2,520 | 14,640 | 59,790 | 381 | 4,770 |
| | 6-Feb-01 | 5,070 | 30,800 | 2,200 | 12,500 | 50,570 | 225 | 678 |
| | 5-Jun-01 | 6,070 | 52,000 | 2,900 | 13,720 | 74,690 | 228 | 342 |
| | 13-Sep-01 | 4,990 | 7,210 | 3,340 | 17,900 | 33,440 | 60.7 | 2,900 |
| | 7-Dec-01 | 3,520 | 38,600 | 1,700 | 11,490 | 55,310 | BDL | 408 |
| | 5-Mar-02 | 3,160 | 21,300 | 3,260 | 18,490 | 46,210 | 171 | 342 |
| | 6-Jun-02 | 3,820 | 26,700 | 2,570 | 14,620 | 47,710 | 199 | 397 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-6 | 1-Dec-97 | 5.5 | 137 | 6.0 | 149 | 297.5 | BDL | BDL |
| | 5-Aug-99 | 4.1 | 1.1 | 3.7 | 16.7 | 25.6 | 5 | BDL |
| | 26-Apr-00 | 13.0 | 19.2 | 15 | 48 | 95.2 | 27.2 | 6.44 |
| | 1-Aug-00 | 117 | 1820 | 128 | 877 | 2942 | 10.7 | 32.2 |
| | 13-Dec-00 | 47.9 | 460 | 35.4 | 332 | 875 | 14.8 | 7.2 |
| | 6-Feb-01 | 47.4 | 143 | 47.6 | 219.2 | 457 | 17.8 | 22.6 |
| | 5-Jun-01 | 9.3 | 44.5 | 23.5 | 141.3 | 219 | 7.5 | BDL |
| | 13-Sep-01 | 18.1 | 36.6 | 24.7 | 119.0 | 198 | 8.35 | 1.06 |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | 5.23 | BDL |
| | 5-Mar-02 | 79.8 | 765 | 114 | 1242 | 2201 | 35.1 | 75.8 |
| | 6-Jun-02 | 55.1 | 629 | 91.8 | 959 | 1735 | 25.9 | 5.10 |
| MW-7 | 1-Dec-97 | 1.1 | 1.7 | BDL | 1.1 | 3.9 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 41 | <1 |
| | 26-Apr-00 | 2.13 | 13.5 | BDL | 1.59 | 17.2 | 68.9 | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 53.8 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 52.9 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 18.7 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | 10.6 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | 6.16 | BDL | BDL | 6.16 | 1.68 | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 10.0 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-8 | 1-Dec-97 | BDL | 2.4 | 1.2 | 5.4 | 9.0 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 1.58 | 8.53 | BDL | BDL | 10.1 | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | 2.95 | BDL | BDL | 2.95 | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-9 | 1-Dec-97 | 77 | 14,000 | 2,390 | 20,700 | 37,167 | 114 | 384 |
| | 5-Aug-99 | 110 | 4,280 | 2,450 | 17,000 | 23,840 | 150 | <500 |
| | 26-Apr-00 | 163 | 2,640 | 3,520 | 14,760 | 21,083 | BDL | 2,090 |
| | 1-Aug-00 | 187 | 18,400 | 1,010 | 16,070 | 35,667 | BDL | 909 |
| | 13-Dec-00 | 9.14 | 657 | 108 | 1,340 | 2,114 | 26.0 | 47 |
| | 6-Feb-01 | 10.6 | 254 | 181 | 2,907 | 3,353 | 16.9 | 179 |
| | 5-Jun-01 | 27.7 | 402 | 139 | 1,798 | 2,367 | 17.2 | 66.6 |
| | 13-Sep-01 | 15.0 | 133 | 710 | 7,690 | 8,548 | 13.0 | 186 |
| | 7-Dec-01 | 34.4 | 35.5 | 28.9 | 713 | 812 | BDL | 20.6 |
| | 5-Mar-02 | 25.5 | 29.8 | 157 | 2,144 | 2,356 | BDL | 49.0 |
| | 6-Jun-02 | 13.2 | 24.6 | 105 | 1,420 | 1,563 | 3.17 | 44.5 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-10 | 1-Dec-97 | 6,220 | 46,300 | 2,320 | 14,800 | 69,640 | 938 | 542 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 8,020 | 32,900 | 856 | 8,280 | 50,056 | 8,780 | 327 |
| | 13-Sep-01 | 9,870 | 47,700 | 1,190 | 20,400 | 79,160 | 12,500 | 356 |
| | 7-Dec-01 | 5,590 | 56,000 | 8,150 | 61,700 | 131,440 | 1,050 | 2,540 |
| | 5-Mar-02 | 2.06 | 72.2 | 5.80 | 190.1 | 270 | 1,110 | 13.7 |
| | 6-Jun-02 | BDL | 57.8 | BDL | 165.0 | 223 | 3,780 | 27.0 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-11 | 1-Dec-97 | 1.4 | 3.4 | BDL | 4.7 | 9.5 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 7 | <5 |
| | 26-Apr-00 | 1.18 | 3.96 | BDL | BDL | 5.1 | 4.69 | 9.98 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | 2.51 | 91.0 | 15.0 | 104.4 | 212.9 | 26.3 | 17.2 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 39.5 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | 4.88 | 9.52 | 14.4 | 266 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | 1.32 | 1.32 | 358 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 1070 | BDL |
| | 6-Jun-02 | 1.84 | BDL | BDL | 1.02 | 2.86 | 2,220 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | - | 7 | <5 |
| MW-12 | 1-Dec-97 | 7,970 | 382 | 266 | 1,540 | 10,158 | 99,900 | 119 |
| | 5-Aug-99 | 5,000 | 260 | <200 | <200 | 5,260 | 41,200 | <1000 |
| | 26-Apr-00 | 135 | 4.51 | BDL | 11.0 | 151 | 6,800 | 18.2 |
| | 1-Aug-00 | 1670 | 17.1 | 4.33 | 114.9 | 1806 | 44,200 | BDL |
| | 13-Dec-00 | 119 | 9.1 | 2.11 | 26.7 | 157 | 4,230 | 31.7 |
| | 6-Feb-01 | 32.5 | 9.3 | 1.51 | 13.8 | 57 | 1,570 | 10.6 |
| | 5-Jun-01 | 61.0 | BDL | BDL | 2.1 | 63 | 1,960 | 17.2 |
| | 13-Sep-01 | 329 | 4.55 | 2.96 | 29.27 | 366 | 2,860 | 60.1 |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 906 | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 613 | BDL |
| SSTL | | 5 | 260 | <200 | <200 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-13 | 1-Dec-97 | BDL | 1.4 | BDL | 1.6 | 3 | 82.3 | BDL |
| | 5-Aug-99 | 3 | <1 | <1 | <1 | 3 | 604 | <5 |
| | 26-Apr-00 | 188 | 149 | BDL | BDL | 337 | 3,150 | BDL |
| | 1-Aug-00 | 207 | 5.74 | BDL | 32.8 | 245 | 3,641 | 24.3 |
| | 13-Dec-00 | 29.9 | 3.81 | 1.0 | 76.6 | 111 | 4,350 | 29.8 |
| | 6-Feb-01 | 377 | 12.10 | 2.8 | 105.2 | 497 | 5,200 | 54.9 |
| | 5-Jun-01 | 259 | 5.87 | 1.8 | 112.8 | 380 | 8,530 | 23.2 |
| | 13-Sep-01 | 374 | 7.44 | 4.52 | 127.5 | 513 | 7,150 | 24.7 |
| | 7-Dec-01 | 15.4 | BDL | BDL | 8.10 | 24 | 1,130 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 103 | BDL |
| | 6-Jun-02 | 3.24 | BDL | BDL | 6.25 | 9.49 | 6,360 | 1.42 |
| SSTL | | 3 | 1 | 1 | 1 | -- | 40 | 5 |
| MW-14 | 1-Dec-97 | 1.1 | 1.4 | BDL | 2.7 | 5 | 76.5 | BDL |
| | 5-Aug-99 | 57 | 7 | 1 | 23 | 88 | 606 | 5 |
| | 26-Apr-00 | BDL | 1.38 | BDL | BDL | 1.38 | 1.11 | BDL |
| | 1-Aug-00 | 138 | 4.04 | BDL | 39.04 | 181.08 | 35.3 | 13.0 |
| | 13-Dec-00 | BDL | BDL | BDL | 2.13 | 2.13 | 129 | 2.33 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 11.1 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | 54.9 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 1.53 | BDL |
| SSTL | | 5 | 7 | 1 | 23 | - | 40 | 5 |
| MW-15 | 1-Dec-97 | 1.0 | 1.6 | BDL | 2.5 | 5 | BDL | BDL |
| | 5-Aug-99 | 3 | 6 | 1 | 6 | 16 | 27 | <5 |
| | 26-Apr-00 | 1.01 | 1.32 | BDL | BDL | 2.33 | 2.82 | 5.66 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 2.77 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Destroyed | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 3 | 6 | 1 | 6 | - | 27 | <5 |
| MW-16 | 1-Dec-97 | BDL | 1.2 | BDL | 1.3 | 2.5 | BDL | BDL |
| | 5-Aug-99 | 2.2 | 8.8 | 1.6 | 7.1 | 19.7 | 4 | BDL |
| | 26-Apr-00 | 2.17 | 1.27 | BDL | BDL | 3.4 | 10.1 | BDL |
| | 1-Aug-00 | 5.02 | 3.01 | BDL | 3.5 | 11.5 | 16.1 | 1.35 |
| | 13-Dec-00 | 10.7 | BDL | BDL | 2.66 | 13.4 | 30.6 | 1.96 |
| | 6-Feb-01 | 6.25 | BDL | BDL | BDL | 6.25 | 32.7 | BDL |
| | 5-Jun-01 | 22.3 | BDL | BDL | 1.30 | 23.6 | 78.8 | BDL |
| | 13-Sep-01 | 18.9 | BDL | BDL | BDL | BDL | 35.6 | BDL |
| | 7-Dec-01 | 15.7 | BDL | BDL | 1.01 | 16.7 | 25.0 | BDL |
| | 5-Mar-02 | 15.1 | BDL | BDL | BDL | 15.1 | 104 | BDL |
| Destroyed | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| DMW-17 | 1-Dec-97 | 1.6 | 3.8 | 2.3 | 12.7 | 20.3 | BDL | BDL |
| | 5-Aug-99 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 26-Apr-00 | 1.06 | 1.24 | BDL | BDL | 2.3 | 8.97 | BDL |
| | 1-Aug-00 | BDL | 3.02 | BDL | BDL | 3.02 | 7.75 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 6.98 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 5.34 | BDL |
| | 5-Jun-01 | BDL | 2.0 | BDL | BDL | 2.0 | 23.8 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 3.42 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 6.82 | 1.1 |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |
| CP-WW | 1-Dec-97 | BDL | 1.2 | BDL | BDL | 1.2 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 2.96 | 1.09 | BDL | BDL | 4.1 | 315 | BDL |
| | 1-Aug-00 | 3.23 | 2.56 | BDL | 1.09 | 7 | 224 | BDL |
| | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |
| CLS-WW | 1-Dec-97 | 81.3 | 1.1 | BDL | 9.6 | 92 | 34.5 | BDL |
| | 5-Aug-99 | 81 | 1 | <1 | 10 | 92 | 35 | <5 |
| | 26-Apr-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | <1 | <1 | 10 | - | 35 | <5 |

Notes:
All results reported in parts per billion (ug/L) unless otherwise noted.
SSTL = Site specific target levels referenced in bid
FP = Free Product; NS = Not Sampled
BDL = Below detecatable Levels
Total BTEX = Summation of benzene, toluene, ethylbenzene and xylenes
MTBE = Methyl-tert-buytl-ether

# ATTACHMENT 3
# LABORATORY ANALYTICAL REPORT

# ACCESS ANALYTICAL, INC.

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063

RECEIVED

Page 1
June 14, 2002
Report # 206000403
Order # 48627
South Carolina Cert ID# 96023

Site Location/Project
SC.
DHE-12335 Crawfords.

Sample I.D.: MW-1
Collected: 06/06/02 00:00
Received: 06/08/02 10:00
Collected by: Client.

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 33900 | ug/L | 5030/8260B | 1.000 | 06/09/2002 | 06/09/2002 | 11:36 | PMD |
| Benzene | 1570 | ug/L | 5030/8260B | 1.000 | 06/09/2002 | 06/09/2002 | 11:36 | PMD |
| Toluene | 19000 | ug/L | 5030/8260B | 1.000 | 06/09/2002 | 06/09/2002 | 11:36 | PMD |
| Ethylbenzene | 474 | ug/L | 5030/8260B | 1.000 | 06/09/2002 | 06/09/2002 | 11:36 | PMD |
| m & p-Xylene | 2560 | ug/L | 5030/8260B | 1.000 | 06/09/2002 | 06/09/2002 | 11:36 | PMD |
| o-Xylene | 1490 | ug/L | 5030/8260B | 1.000 | 06/09/2002 | 06/09/2002 | 11:36 | PMD |
| Naphthalene | 1440 | ug/L | 5030/8260B | 1.000 | 06/09/2002 | 06/09/2002 | 11:36 | PMD |
| SURROGATE: Toluene-D8 | 98.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 102.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 113.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


June 14, 2002
Report # 206000403
Order # 48628
South Carolina Cert ID# 96023

Site Location/Project
SC.
DHE-12335 Crawfords.

Sample I.D.: MW-2
Collected: 06/06/02 00:00
Received: 06/08/02 10:00
Collected by: Client.

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 8390 | ug/L | 5030/8260B | 1.000 | 06/09/2002 | 06/09/2002 | 11:37 | PMD |
| Benzene | 3660 | ug/L | 5030/8260B | 1.000 | 06/09/2002 | 06/09/2002 | 11:37 | PMD |
| Toluene | 2070 | ug/L | 5030/8260B | 1.000 | 06/09/2002 | 06/09/2002 | 11:37 | PMD |
| Ethylbenzene | 858 | ug/L | 5030/8260B | 1.000 | 06/09/2002 | 06/09/2002 | 11:37 | PMD |
| m & p-Xylene | 1890 | ug/L | 5030/8260B | 1.000 | 06/09/2002 | 06/09/2002 | 11:37 | PMD |
| o-Xylene | 898 | ug/L | 5030/8260B | 1.000 | 06/09/2002 | 06/09/2002 | 11:37 | PMD |
| Naphthalene | 294 | ug/L | 5030/8260B | 1.000 | 06/09/2002 | 06/09/2002 | 11:37 | PMD |
| SURROGATE: Toluene-D8 | 93.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 103.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 104.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


June 14, 2002
Report # 206000403
Order # 48629
South Carolina Cert ID# 96023

Site Location/Project
SC.
DHE-12335 Crawfords.

Sample I.D.: MW-3
Collected: 06/06/02 00:00
Received: 06/08/02 10:00
Collected by: Client.

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 100 | | | | |
| Methyl-Tert-Butyl-Ether | 8940 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 08:16 | PMD |
| Benzene | 8770 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 08:16 | PMD |
| Toluene | 34700 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 08:16 | PMD |
| Ethylbenzene | 2610 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 08:16 | PMD |
| m & p-Xylene | 9950 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 08:16 | PMD |
| o-Xylene | 4810 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 08:16 | PMD |
| Naphthalene | 503 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 08:16 | PMD |
| SURROGATE: Toluene-D8 | 104.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 97.75% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 95.50% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


June 14, 2002
Report # 206000403
Order # 48630
South Carolina Cert ID# 96023

Site Location/Project
SC.
DHE-12335 Crawfords.

Sample I.D.: MW-4
Collected: 06/06/02 00:00
Received: 06/08/02 10:00
Collected by: Client.

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 100 | | | | |
| Methyl-Tert-Butyl-Ether | 3850 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 11:23 | PMD |
| Benzene | 2520 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 11:23 | PMD |
| Toluene | 2700 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 11:23 | PMD |
| Ethylbenzene | 483 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 11:23 | PMD |
| m & p-Xylene | 1700 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 11:23 | PMD |
| o-Xylene | 1920 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 11:23 | PMD |
| Naphthalene | 497 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 11:23 | PMD |
| SURROGATE: Toluene-D8 | 103.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 97.50% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 90.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


June 14, 2002
Report # 206000403
Order # 48631
South Carolina Cert ID# 96023

Site Location/Project
SC.
DHE-12335 Crawfords.

Sample I.D.: MW-5
Collected: 06/06/02 00:00
Received: 06/08/02 10:00
Collected by: Client.

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 100 | | | | |
| Methyl-Tert-Butyl-Ether | 199 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 08:18 | PMD |
| Benzene | 3820 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 08:18 | PMD |
| Toluene | 26700 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 08:18 | PMD |
| Ethylbenzene | 2570 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 08:18 | PMD |
| m & p-Xylene | 9930 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 08:18 | PMD |
| o-Xylene | 4690 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 08:18 | PMD |
| Naphthalene | 397 | ug/L | 5030/8260B | 100.000 | 06/10/2002 | 06/10/2002 | 08:18 | PMD |
| SURROGATE: Toluene-D8 | 104.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 99.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 95.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA·5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


June 14, 2002
Report # 206000403
Order # 48632
South Carolina Cert ID# 96023

Site Location/Project
SC.
DHE-12335 Crawfords.

Sample I.D.: MW-6
Collected: 06/06/02 00:00
Received: 06/08/02 10:00
Collected by: Client.

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 25.9 | ug/L | 5030/8260B | 1.000 | 06/10/2002 | 06/10/2002 | 08:19 | PMD |
| Benzene | 55.1 | ug/L | 5030/8260B | 1.000 | 06/10/2002 | 06/10/2002 | 08:19 | PMD |
| Toluene | 629 | ug/L | 5030/8260B | 1.000 | 06/10/2002 | 06/10/2002 | 08:19 | PMD |
| Ethylbenzene | 91.8 | ug/L | 5030/8260B | 1.000 | 06/10/2002 | 06/10/2002 | 08:19 | PMD |
| m & p-Xylene | 673 | ug/L | 5030/8260B | 1.000 | 06/10/2002 | 06/10/2002 | 08:19 | PMD |
| o-Xylene | 286 | ug/L | 5030/8260B | 1.000 | 06/10/2002 | 06/10/2002 | 08:19 | PMD |
| Naphthalene | 5.10 | ug/L | 5030/8260B | 1.000 | 06/10/2002 | 06/10/2002 | 08:19 | PMD |
| SURROGATE: Toluene-D8 | 105.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 98.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 94.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


June 14, 2002
Report # 206000403
Order # 48633
South Carolina Cert ID# 96023

Site Location/Project
SC.
DHE-12335 Crawfords.

Sample I.D.: MW-7
Collected: 06/06/02 00:00
Received: 06/08/02 10:00
Collected by: Client.

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 10.0 | ug/L | 5030/8260B | 1.000 | 06/10/2002 | 06/10/2002 | 08:21 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 06/10/2002 | 06/10/2002 | 08:21 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 06/10/2002 | 06/10/2002 | 08:21 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 06/10/2002 | 06/10/2002 | 08:21 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 06/10/2002 | 06/10/2002 | 08:21 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 06/10/2002 | 06/10/2002 | 08:21 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 06/10/2002 | 06/10/2002 | 08:21 | PMD |
| SURROGATE: Toluene-D8 | 103.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 98.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 103.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

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H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


June 14, 2002
Report # 206000403
Order # 48634
South Carolina Cert ID# 96023

Site Location/Project
SC.
DHE-12335 Crawfords.

Sample I.D.: MW-8
Collected: 06/06/02 00:00
Received: 06/08/02 10:00
Collected by: Client.

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:21 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:21 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:21 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:21 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:21 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:21 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:21 | PMD |
| SURROGATE: Toluene-D8 | 105.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 99.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 95.50% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
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Company Representative

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121 Centrum Dr. Ste 2

Irmo, SC 29063


June 14, 2002
Report # 206000403
Order # 48635
South Carolina Cert ID# 96023

Site Location/Project
SC.
DHE-12335 Crawfords.

Sample I.D.: MW-9
Collected: 06/06/02 00:00
Received: 06/08/02 10:00
Collected by: Client.

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 3.17 | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:22 | PMD |
| Benzene | 13.2 | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:22 | PMD |
| Toluene | 24.6 | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:22 | PMD |
| Ethylbenzene | 105 | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:22 | PMD |
| m & p-Xylene | 1080 | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:22 | PMD |
| o-Xylene | 340 | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:22 | PMD |
| Naphthalene | 44.5 | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:22 | PMD |
| SURROGATE: Toluene-D8 | 100.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 105.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 102.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

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H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


June 14, 2002
Report # 206000403
Order # 48636
South Carolina Cert ID# 96023

Site Location/Project
SC.
DHE-12335 Crawfords.

Sample I.D.: MW-10
Collected: 06/06/02 00:00
Received: 06/08/02 10:00
Collected by: Client.

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 10 | | | | |
| Methyl-Tert-Butyl-Ether | 3780 | ug/L | 5030/8260B | 10.000 | 06/11/2002 | 06/11/2002 | 11:24 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 10.000 | 06/11/2002 | 06/11/2002 | 11:24 | PMD |
| Toluene | 57.8 | ug/L | 5030/8260B | 10.000 | 06/11/2002 | 06/11/2002 | 11:24 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 10.000 | 06/11/2002 | 06/11/2002 | 11:24 | PMD |
| m & p-Xylene | 98.5 | ug/L | 5030/8260B | 10.000 | 06/11/2002 | 06/11/2002 | 11:24 | PMD |
| o-Xylene | 66.5 | ug/L | 5030/8260B | 10.000 | 06/11/2002 | 06/11/2002 | 11:24 | PMD |
| Naphthalene | 27.0 | ug/L | 5030/8260B | 10.000 | 06/11/2002 | 06/11/2002 | 11:24 | PMD |
| SURROGATE: Toluene-D8 | 98.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 97.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 101.50% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
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Company Representative

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H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


June 14, 2002
Report # 206000403
Order # 48637
South Carolina Cert ID# 96023

Site Location/Project
SC.
DHE-12335 Crawfords.

Sample I.D.: MW-11
Collected: 06/06/02 00:00
Received: 06/08/02 10:00
Collected by: Client.

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 2220 | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:23 | PMD |
| Benzene | 1.84 | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:23 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:23 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:23 | PMD |
| m & p-Xylene | 1.02 | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:23 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:23 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:23 | PMD |
| SURROGATE: Toluene-D8 | 101.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 99.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 94.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


June 14, 2002
Report # 206000403
Order # 48638
South Carolina Cert ID# 96023

Site Location/Project
SC.
DHE-12335 Crawfords.

Sample I.D.: MW-12
Collected: 06/06/02 00:00
Received: 06/08/02 10:00
Collected by: Client.

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 613 | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:24 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:24 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:24 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:24 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:24 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:24 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:24 | PMD |
| SURROGATE: Toluene-D8 | 102.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 99.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 90.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


June 14, 2002
Report # 206000403
Order # 48639
South Carolina Cert ID# 96023

Site Location/Project
SC.
DHE-12335 Crawfords.

Sample I.D.: MW-13
Collected: 06/06/02 00:00
Received: 06/08/02 10:00
Collected by: Client.

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 6360 | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 12:41 | CJO |
| Benzene | 3.24 | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 12:41 | CJO |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 12:11 | CJO |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 12:11 | CJO |
| m & p-Xylene | 2.55 | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 12:41 | CJO |
| o-Xylene | 3.70 | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 12:41 | CJO |
| Naphthalene | 1.42 | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 12:11 | CJO |
| SURROGATE: Toluene-D8 | 108.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 96.75% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 94.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


June 14, 2002
Report # 206000403
Order # 48640
South Carolina Cert ID# 96023

Site Location/Project
SC.
DHE-12335 Crawfords.

Sample I.D.: MW-14
Collected: 06/06/02 00:00
Received: 06/08/02 10:00
Collected by: Client.

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 1.53 | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:25 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:25 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:25 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:25 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:25 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:25 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 08:25 | PMD |
| SURROGATE: Toluene-D8 | 103.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 104.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 98.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


June 14, 2002
Report # 206000403
Order # 48641
South Carolina Cert ID# 96023

Site Location/Project
SC.
DHE-12335 Crawfords.

Sample I.D.: MW-17
Collected: 06/06/02 00:00
Received: 06/08/02 10:00
Collected by: Client.

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 6.82 | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 11:25 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 11:25 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 11:25 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 11:25 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 11:25 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 11:25 | PMD |
| Naphthalene | 1.06 | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 11:25 | PMD |
| SURROGATE: Toluene-D8 | 101.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 99.25% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 95.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


June 14, 2002
Report # 206000403
Order # 48642
South Carolina Cert ID# 96023

Site Location/Project
SC.
DHE-12335 Crawfords.

Sample I.D.: CLS-WW
Collected: 06/06/02 00:00
Received: 06/08/02 10:00
Collected by: Client.

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 11:26 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 11:26 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 11:26 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 11:26 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 11:26 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 11:26 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 06/11/2002 | 06/11/2002 | 11:26 | PMD |
| SURROGATE: Toluene-D8 | 102.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 99.50% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 96.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Al.=#41180, Ct.=#PH0217, Ks.=#E270 + E1245, Ky.=#90087, La.=#9601, Md.=#271, Ma.=#M-FL535
ND.=#R163, OK.=#9523, SC.=#96023, Tn.=#TN02826
Unless otherwise noted, samples submitted for EPA·5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

# Access Analytical - Chain of Custody Record

E·A

Project Submission #: 2106-403

Ord#: 48627-48642

RUSH #

Laboratory ID: SR-M

PO #:

Company Name: H2O Environmental

Address: 121 Centrum Dr. Ste 2

City: Irmo State: SC Zip: 29063

Project Name: DHE-12335 Crawfords

Report To: Rick Gillespie

Sampled By (print):

Preservative (*see codes below): 1

↓ REQUESTED LAB ANALYSIS: ↓

BTEX, MTBE, NAPH

ACCESS ANALYTICAL, INC.

1248 Lake Murray Blvd.
Irmo, SC 29063

Phone: (803) 781-4243
Fax: 781-4303
Toll Free (888) 315-4243
www.accessanalyticalinc.com

| Sample Label | Date Collected | Time Collected | Matrix | # of Cont | | | NOTES / COMMENTS |
|---|---|---|---|---|---|---|---|
| MW-1 | 6-06-02 | | GW | 2 | ⊘ | 48627 | |
| MW-2 | ↓ | | ↓ | | ⊘ | 48628 | |
| MW-3 | | | | | ⊘ | 48629 | |
| MW-4 | | | | | ⊘ | 48630 | |
| MW-5 | | | | | ⊘ | 48631 | |
| MW-6 | | | | | ⊘ | 48632 | |
| MW-7 | | | | | ⊘ | 48633 | |
| MW-8 | | | | | ⊘ | 48634 | |
| MW-9 | | | | | | 48635 | |
| MW-10 | ↓ | | ↓ | | ⊘ | 48636 | |

**Turnaround Time:**

✓ Std. (5-7 Bus. days)

___ RUSH*

*Date Required:_____

(For rush work, results faxed by end of business day on date required)

Samples Recd. on Ice?

✓ Yes

___ No

Project Location:

✓ SC

___ NC

___ Other_____(specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| [signature] | 6/7/02 | 1520 | [signature] |
| [signature] | 6/7/02 | 1541 | FEDEX |
| FEDEX | 6/8/02 | 10:00 | E·A STL |

* **Preservative Codes** (*place corresponding # in block above analysis field*): 0=None, 1=HCL, 2=$HNO_3$, 3=$H_2SO_4$, 4=NaOH, 5=$Na_2S_2O_3$, 6=$NaHSO_4$, Other=Specify



Access Analytical, Inc.
See Reverse for Terms and Conditions

Original Copy - Returned w/Report
Yellow Copy - Access File Copy
Pink Copy - Client Copy

# Access Analytical - Chain of Custody Record

Laboratory ID: 512-M

Project Submission #: 2/06-403 RUSH # _____ PO #: _____

Company Name: H2D Environmental
Address: 121 Centrum Dr. Ste 2
City: Irmo State: SC Zip: 29063
Project Name: DHE-12335 Crawfords
Report To: Rick Gillespie
Sampled By (print):

Preservative: (*see codes below) 1

↓ REQUESTED LAB ANALYSIS: ↓

ACCESS ANALYTICAL, INC.
1248 Lake Murray Blvd.
Irmo, SC 29063
Phone: (803) 781-4243
Fax: 781-4303
Toll Free (888) 315-4243
www.accessanalyticalinc.com

| Sample Label | Date Collected | Time Collected | Matrix | # of Cont | BTEX, MTBE, NAPH | | NOTES / COMMENTS |
|---|---|---|---|---|---|---|---|
| MW-11 | 6-06-02 | | GW | 2 | X | 48637 | |
| MW-12 | " | | " | 2 | X | 48638 | |
| MW-13 | " | | " | 2 | X | 48639 | |
| MW-14 | " | | " | 2 | X | 48640 | |
| MW-15 | NS | NS | | | NS | | |
| MW-16 | NS | NS | | | NS | | |
| MW-17 | 60602 | | | 2 | X | 48641 | |
| CLS-WW | 60602 | | | 2 | X | 48642 | |
| ~~CP-WW~~ | N/S | | NS | | NS | | |
| | | | | | | | |

**Turnaround Time:**
✓ Std. (5-7 Bus. days)
___RUSH*
*Date Required:_____
(For rush work, results faxed by end of business day on date required)

Samples Recd. on Ice? ✓ Yes ___ No

Project Location: ✓ SC ___ NC ___ Other_____(specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| [signature] | 6/7/02 | 1520 | [signature] |
| [signature] | 6/7/02 | 1541 | FEDEX |
| FEDEX | 6/8/02 | 10:00 | EA STL |
| | | | |

* **Preservative Codes** *(place corresponding # in block above analysis field)*: 0=None, 1=HCL, 2=$HNO_3$, 3=$H_2SO_4$, 4=NaOH, 5=$Na_2S_2O_3$, 6=$NaHSO_4$, Other=Specify



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See Reverse for Terms and Conditions

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Pink Copy - Client Copy

# ATTACHMENT 4
# BIOREMEDIATION APPROVAL DOCUMENTATION

## Rick Gillespie

**From:** Art A. Shrader [shradeaa@COLUMB26.DHEC.STATE.SC.US]
**Sent:** Wednesday, August 29, 2001 12:10 PM
**To:** brian@enzymetech.com
**Cc:** dollcs@COLUMB26.DHEC.STATE.SC.US; montsla@COLUMB26.DHEC.STATE.SC.US
**Subject:** Re: Enzyme Technologies Introduction -Reply -Reply

Brian,

Dr. John F Brown, DVM, PhD, the State Toxicologist, has reviewed your treatment method and "provided the products and procedures are utilized at sites approved by appropriate DHEC programs, he finds no significant threat to the public health and environmental integrity of South Carolina and he has no objection to the procedures being carried out at approved designated sites."

Dr. Brown's review does not address the effectiveness of the procedure using the proprietary process.

Art Shrader

RECEIVED
OCT 2 9 2002
Underground Storage
Tank Program

October 28, 2002

Mr. John Abernathy
Underground Storage Tank Program
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

UST
54Heal
DOCKETING

RE: 9th Quarterly Report
Crawford's Country Store
5870 Hwy 28 North
Antreville, South Carolina
SCDHEC Site ID # 12335

Dear Mr. Abernathy:

On February 4, 2000, the South Carolina Department of Health and Environmental Control (SCDHEC) provided notice to proceed to $H_2O$ Environmental, Inc. ($H_2O$) to perform Corrective Action at Crawford's Country Store located at 5870 Highway 28 North, Antreville, South Carolina. See Figure 1, Attachment 1 for a layout of the site and remediation system. The objective of the project is to reduce the Chemicals of Concern (COC) in monitoring wells OMW-1, MW-2 through MW-5, MW-7 through MW-15, DMW-17, CP-WW and CLS-WW to the site specific target levels (SSTLs). A chronological summary of site activities is provided below:

| | |
|---|---|
| 2/4/00 | SCDHEC awarded Bid Number SB-9570-12/02/99-TC |
| 3/02/00 | Corrective Action Plan/Engineering Report submitted to SCDHEC |
| 4/18/00 | CAP/ER approved |
| 4/26/00 | Initial groundwater sampling event |
| 5/17/00 | Initial groundwater results submitted |
| 5/22/00-5/31/00 | System installed |
| 5/31/00 | System was inspected and approved Todd Adams of SCDHEC |
| 5/31/00 | Invoice submitted for payment of 40% of the contract amount |
| 6/14/00 | System start-up |
| 8/01/00 | 1st quarter sampling event |
| 8/28/99 | 1st quarter report submitted |
| 9/13/00 | Free product recovery from OMW-1, MW-2 and MW-3 |
| 12/13/00 | 2nd quarter sampling event |
| 2/16/01 | 2nd quarter report submitted |
| 2/6/01 | 3rd quarter sampling event |
| 3/15/01 | 3rd quarter report submitted |
| 6/5/01 | 4th quarter sampling event |

| | |
|---|---|
| 7/31/01 | 4th quarter report submitted |
| 9/13/01 | 5th quarter sampling event |
| 10/18/01 | 5th quarter report submitted |
| 12/7/01 | 6th quarter sampling event |
| 2/4/02 | 6th quarter report submitted |
| 3/5/02 | 7th quarter sampling event |
| 4/26/02 | 7th quarter report submitted |
| 6/6/02 | 8th quarter sampling event |
| 7/10/02 | 8th quarter report submitted |
| 9/17/02 | 9th quarter sampling event |

An air injection/vapor extraction system was installed in May 2000 and put in operation in June 2000. The system consists of ten air injection/vapor extraction wells SV-1 through SV-10. In order to target the source area, $H_2O$ is rotating air sparging in injection/vapor extraction wells SV-1 through SV-10 and extracting vapor from injection/vapor extraction wells SV-1 through SV-8. Refer to Figure 1, Attachment 1 for a map illustrating the system layout. The following table summarizes the general operating characteristics of the system.

**Summary of System Operating Characteristics**

| Well ID | Activity | PSI | CFM | IWG |
|---|---|---|---|---|
| SV-1 - SV-8 | Vapor Extraction | -- | -- | 55 |
| SV-1 - SV-10 | Air Sparging | 10 | 6 | -- |

An air sample was collected from the effluent of the vapor extraction system on August 1, 2000. Based on the review of the laboratory analysis, it is estimated that contaminant emissions will not exceed 1,000 pounds per month. An air sample was not collected this quarter because the OVA field screening results were below detection limits.

On September 17, 2002, $H_2O$ Environmental Inc. personnel gauged and collected groundwater samples from monitoring wells MW-1, MW-3 through MW-14, MW-17, and water well CLS-WW at the site. Monitoring well MW-2 contained free product and a groundwater sample was collected. Monitoring wells MW-15 and MW-16 were destroyed by field cultivation and groundwater samples could not be collected. Water well CP-WW located at the Green residence was not operational at the time of the sampling event and a groundwater sample could not be collected. A new water well has been installed and is currently being used by the Green residence. The groundwater samples were analyzed for Benzene, Toluene, Ethylbenzene, total Xylenes (BTEX), Methyl-Tert-Butyl Ether (MTBE), and Naphthalene. Following groundwater sampling, a bacteria nutrient mixture was injected into the subsurface. The bioremediation technology was approved for use on August 12, 2002.

A review of the groundwater elevation data indicated a groundwater flow direction to the south-southeast. Table 1, Attachment 2, summarizes field data collected during monitoring well purging. The groundwater elevations are summarized on Table 2, Attachment 2, and illustrated on Figure 2, Attachment 1. The groundwater quality for Chemicals of Concern is summarized on Table 3, Attachment 2, and illustrated on Figure 3, Attachment 1. A copy of the laboratory analytical report is provided in Attachment 3. Groundwater generated during well purging was either placed in on-site 55-gallon drums or discharged on site as warranted by the data. Any disposal manifests will be forwarded to DHEC upon receipt.

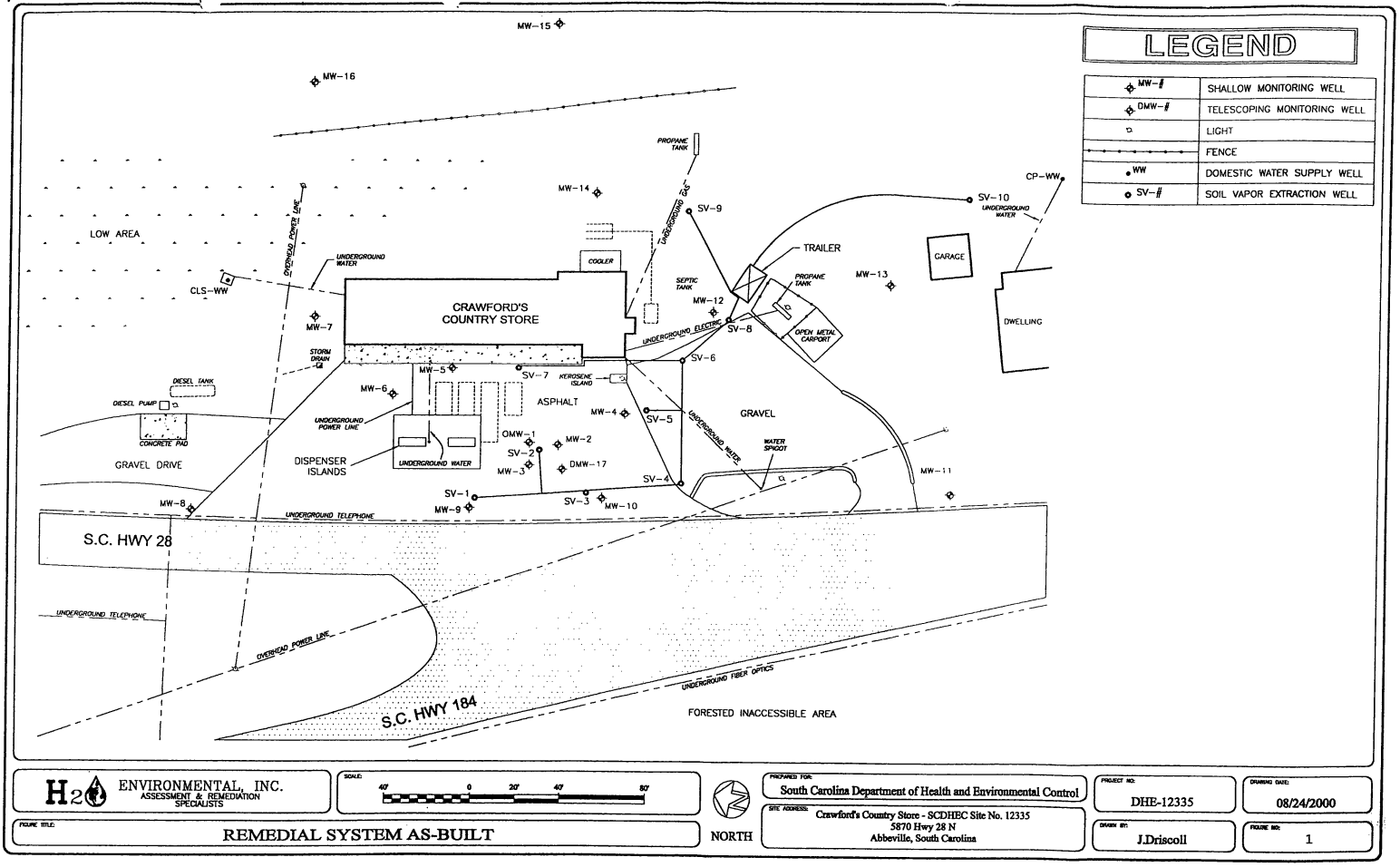
Based on the groundwater quality, $H_2O$ will continue to operate the remediation system. If you have any questions or comments please do not hesitate to contact me at (803) 749-4080.

Sincerely,

**$H_2O$ Environmental, Inc.**
Class I Site Rehabilitation Contractor No. 32

Richard D. Gillespie, P.G.
Senior Geologist 10-28-02
License Number 2199

# ATTACHMENT 1
# FIGURES




## LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

FIGURE TITLE: REMEDIAL SYSTEM AS-BUILT

PREPARED FOR: South Carolina Department of Health and Environmental Control

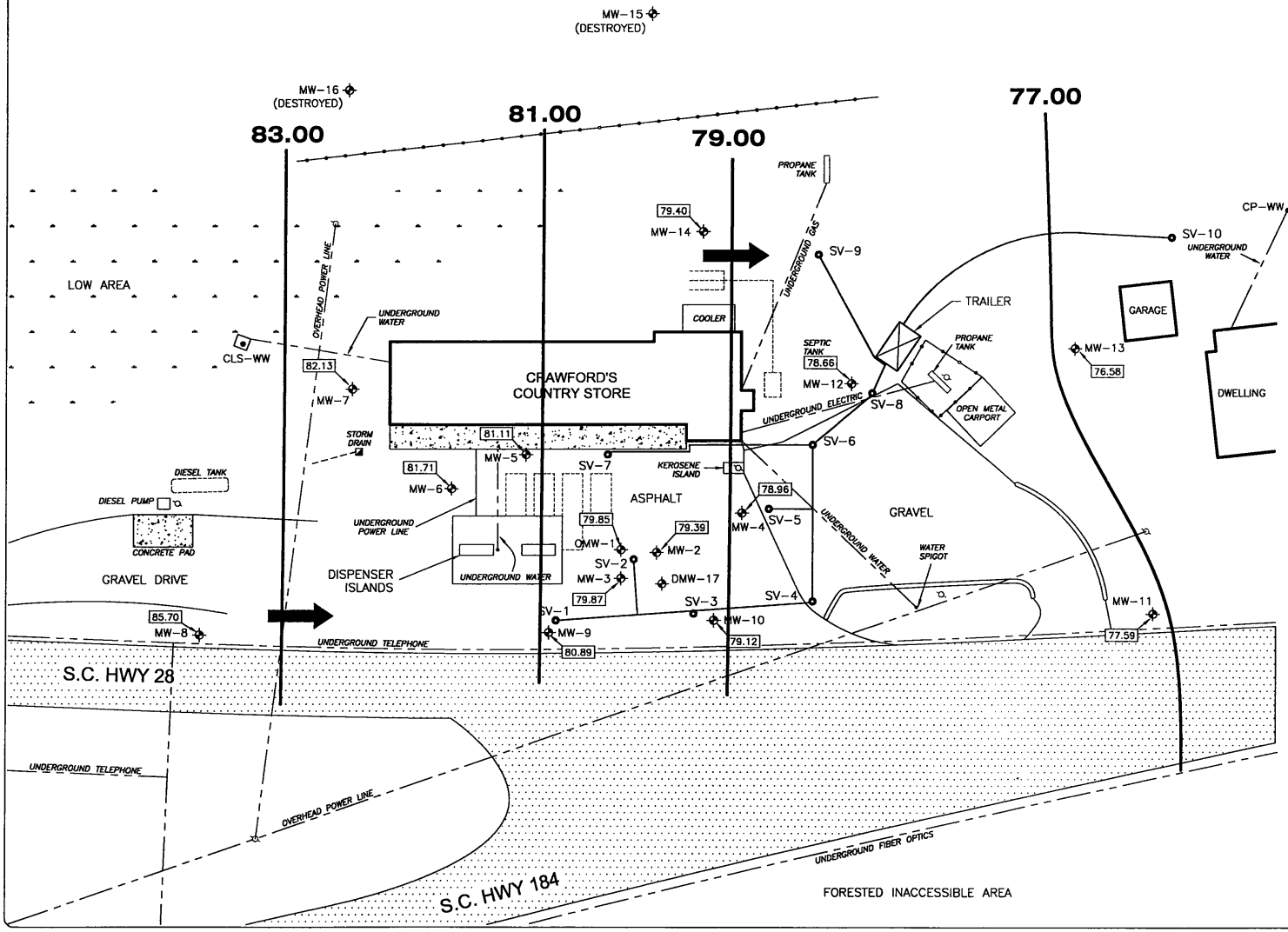
SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 08/24/2000

DRAWN BY: J.Driscoll

FIGURE NO: 1




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |
| 0.00 | WATER TABLE ELEVATION (FEET) |
| | GROUNDWATER FLOW DIRECTION |
| 0.00 | GROUNDWATER ELEVATION CONTOUR |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

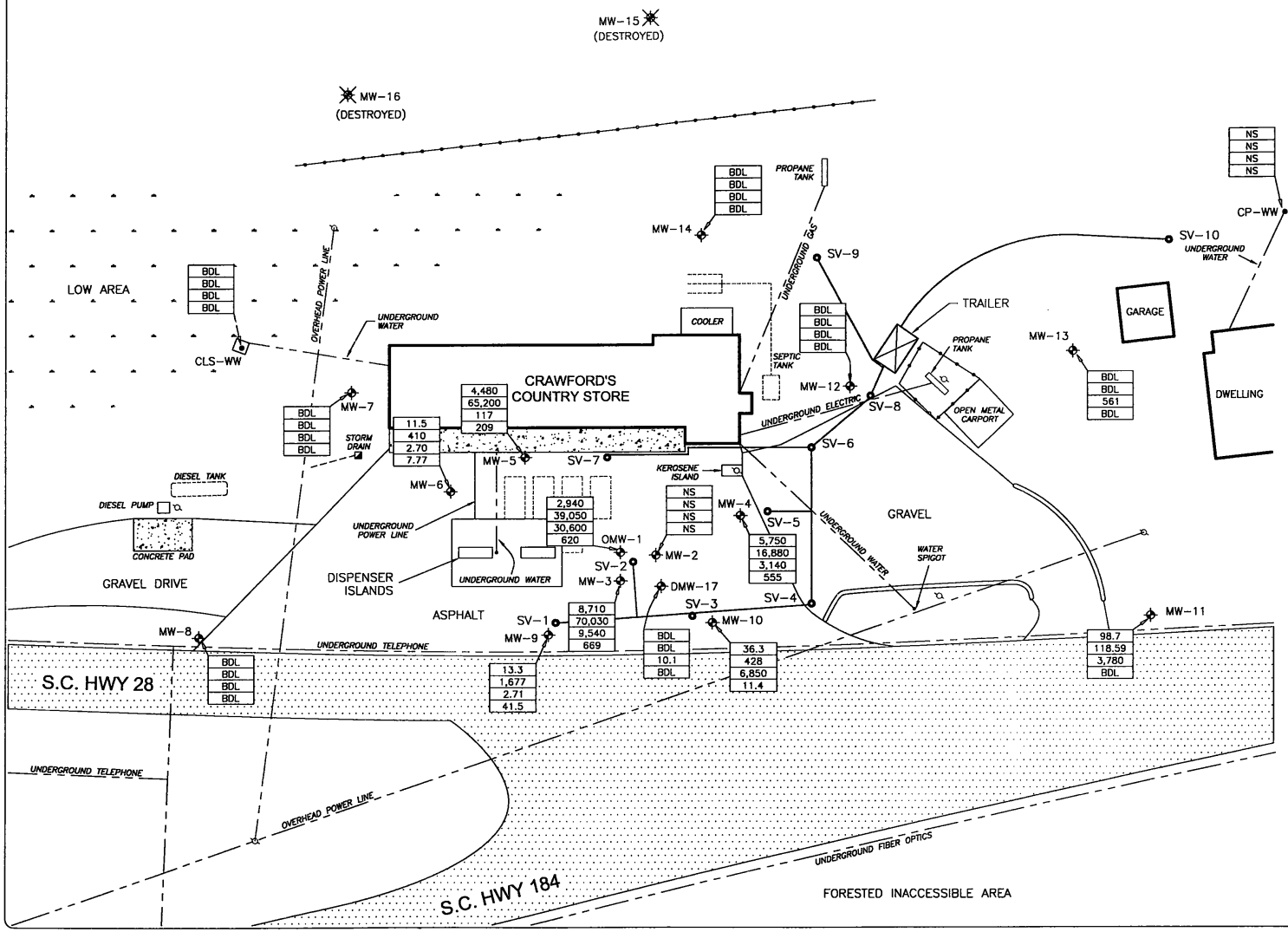
PROJECT NO: DHE-12335

DRAWING DATE: 10/3/2002

DRAWN BY: JJD

FIGURE NO: 2

FIGURE TITLE: GROUNDWATER FLOW MAP - 9/17/2002




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

| | |
|---|---|
| BDL | BENZENE |
| BDL | TOTAL BTEX |
| BDL | MTBE |
| BDL | NAPHTHALENE |

All results reported in parts per billion (ug/L).
FP = Free product.
BDL = Below detectable levels
NS = Not Sampled.

H2O ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 10/3/2002

DRAWN BY: JJD

FIGURE NO: 3

FIGURE TITLE: GROUNDWATER QUALITY MAP - 9/17/2002

# ATTACHMENT 2
# TABLES

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 8/5/1999 | 17.95 | 22' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.68 | 22' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 21.50 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 21.46 | 22' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 19.89 | 22' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.18 | 22' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 18.74 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21.75 | 22' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 19.77 | 22' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 16.59 | 22' | 2" | 2.6 | NM | NM | NM | NM |
| | 9/17/2002 | 19.97 | 22' | 2" | 1.0 | NM | NM | 0.93 | 25.1 |
| MW-2 | 8/5/1999 | 19.19 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 22.30 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 21.36 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 18.89 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.42 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 19.03 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21.98 | 25' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 19.90 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 16.88 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 20.44 | 25' | 2" | NM | NM | NM | NM | NM |
| MW-3 | 8/5/1999 | 17.96 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.73 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 20.85 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 22.18 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 19.26 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.41 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 18.80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21.24 | 25' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 18.69 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 15.44 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 9/17/2002 | 20.11 | 25' | 2" | 2.4 | NM | NM | 1.21 | 24.3 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-4 | 8/5/2000 | 17.59 | 25' | 2" | 3.7 | 4.3 | 75.7 | 2.06 | 21.0 |
| | 4/26/2000 | 16.51 | 25' | 2" | 4.2 | 6.0 | 0.78 | 1.82 | 20.2 |
| | 8/1/2000 | 20.63 | 25' | 2" | 2.1 | 5.4 | 0.52 | 3.91 | 21.9 |
| | 12/13/2000 | 20.81 | 25' | 2" | 2.0 | 5.5 | NM | 1.90 | 18.5 |
| | 2/6/2001 | 19.09 | 25' | 2" | 2.9 | NM | NM | NM | NM |
| | 6/5/2001 | 17.70 | 25' | 2" | 3.6 | 5.3 | NM | 1.80 | 21.8 |
| | 9/13/2001 | 19.16 | 25' | 2" | 2.9 | NM | NM | 2.29 | 22.2 |
| | 12/7/2001 | 21.86 | 25' | 2" | 1.5 | 7.1 | NM | 2.42 | 21.5 |
| | 3/5/2002 | 18.91 | 25' | 2" | 3.0 | 6.9 | NM | 5.40 | 15.3 |
| | 6/6/2002 | 16.93 | 25' | 2" | 3.9 | NM | NM | NM | NM |
| | 9/17/2002 | 20.63 | 25' | 2" | 2.1 | NM | NM | 3.20 | 24.1 |
| MW-5 | 8/5/1999 | 15.95 | 25' | 2" | 4.4 | 4.5 | 111.8 | 1.65 | 21.0 |
| | 4/26/2000 | 14.35 | 25' | 2" | 5.2 | 6.2 | 0.92 | 2.73 | 19.4 |
| | 8/1/2000 | 19.18 | 25' | 2" | 2.8 | 5.1 | 0.5 | 1.25 | 20.8 |
| | 12/13/2000 | 19.68 | 25' | 2" | 2.6 | 5.3 | NM | 2.51 | 18.4 |
| | 2/6/2001 | 16.50 | 25' | 2" | 4.2 | NM | NM | NM | NM |
| | 6/5/2001 | 15.51 | 25' | 2" | 4.6 | 4.5 | NM | 1.88 | 21.5 |
| | 9/13/2001 | 17.48 | 25' | 2" | 3.7 | NM | NM | 1.94 | 22.2 |
| | 12/7/2001 | 20.09 | 25' | 2" | 2.4 | 6.9 | NM | 2.16 | 21.8 |
| | 3/5/2002 | 16.15 | 25' | 2" | 4.3 | 6.8 | NM | 3.90 | 18.4 |
| | 6/6/2002 | 15.11 | 25' | 2" | 4.8 | NM | NM | NM | NM |
| | 9/17/2002 | 18.31 | 25' | 2" | 3.3 | NM | NM | 1.72 | 22.9 |
| MW-6 | 8/5/1999 | 15.44 | 25' | 2" | 4.7 | 4.6 | 96 | 2.35 | 22.0 |
| | 4/26/2000 | 13.65 | 25' | 2" | 5.6 | 6.1 | 0.92 | 1.72 | 18.6 |
| | 8/1/2000 | 18.75 | 25' | 2" | 3.1 | 4.95 | 0.48 | 2.23 | 20.4 |
| | 12/13/2000 | 18.23 | 25' | 2" | 3.3 | 5.14 | NM | 1.42 | 18.4 |
| | 2/6/2001 | 15.34 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 6/5/2001 | 14.84 | 25' | 2" | 5.0 | 5.57 | NM | 1.44 | 21.8 |
| | 9/13/2001 | 16.96 | 25' | 2" | 3.9 | NM | NM | 1.80 | 20.9 |
| | 12/7/2001 | 19.70 | 25' | 2" | 2.6 | 6.9 | NM | 2.05 | 20.4 |
| | 3/5/2002 | 15.20 | 25' | 2" | 4.8 | 6.7 | NM | 3.64 | 16.1 |
| | 6/6/2002 | 15.51 | 25' | 2" | 4.6 | NM | NM | NM | NM |
| | 9/17/2002 | 17.76 | 25' | 2" | 3.5 | NM | NM | 1.78 | 22.6 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-7 | 8/5/1999 | 15.41 | 25' | 2" | 4.7 | 4.6 | 92.8 | 2.74 | 19.0 |
| | 4/26/2000 | 13.54 | 25' | 2" | 5.6 | 6.2 | 0.91 | 2.46 | 17.4 |
| | 8/1/2000 | 18.72 | 25' | 2" | 3.1 | 5.2 | 0.45 | 2.31 | 18.7 |
| | 12/13/2000 | 18.01 | 25' | 2" | 3.4 | 5.6 | NM | 1.96 | 16.5 |
| | 2/6/2001 | 15.41 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 6/5/2001 | 14.61 | 25' | 2" | 5.1 | 5.4 | NM | 2.25 | 19.9 |
| | 9/13/2001 | 16.91 | 25' | 2" | 4.0 | NM | NM | 2.50 | 20.9 |
| | 12/7/2001 | 19.64 | 25' | 2" | 2.6 | 7.1 | NM | 2.18 | 19.5 |
| | 3/5/2002 | 14.75 | 25' | 2" | 5.0 | 6.8 | NM | 7.83 | 14.6 |
| | 6/6/2002 | 14.43 | 25' | 2" | 5.2 | NM | NM | NM | NM |
| | 9/17/2002 | 17.34 | 25' | 2" | 3.7 | NM | NM | 1.29 | 21.5 |
| MW-8 | 8/5/2000 | 14.59 | 25' | 2" | 5.1 | 4.9 | 45.4 | 3.01 | 21.0 |
| | 4/26/2000 | 11.56 | 25' | 2" | 6.6 | 6.3 | 0.72 | 2.06 | 18.4 |
| | 8/1/2000 | 19.18 | 25' | 2" | 2.8 | 5.3 | 0.53 | 0.81 | 23.0 |
| | 12/13/2000 | 17.96 | 25' | 2" | 3.4 | 5.4 | NM | 1.93 | 18.7 |
| | 2/6/2001 | 13.34 | 25' | 2" | 5.7 | NM | NM | NM | NM |
| | 6/5/2001 | 13.15 | 25' | 2" | 5.8 | 5.4 | NM | 2.02 | 21.5 |
| | 9/13/2001 | 16.64 | 25' | 2" | 4.1 | NM | NM | 1.56 | 20.3 |
| | 12/7/2001 | 19.73 | 25' | 2" | 2.6 | 6.9 | NM | 1.40 | 20.4 |
| | 3/5/2002 | 11.41 | 25' | 2" | 6.6 | 6.7 | NM | 5.60 | 15.8 |
| | 6/6/2002 | 12.93 | 25' | 2" | 5.9 | NM | NM | NM | NM |
| | 9/17/2002 | 16.72 | 25' | 2" | 4.0 | NM | NM | 1.16 | 23.6 |
| MW-9 | 8/5/2000 | 16.74 | 25' | 2" | 4.0 | 4.9 | 57.2 | 1.47 | 22.0 |
| | 4/26/2000 | 15.09 | 25' | 2" | 4.8 | 5.9 | 0.72 | 1.45 | 20.4 |
| | 8/1/2000 | 21.2 | 25' | 2" | 1.9 | 5.7 | 0.59 | 2.62 | 23.9 |
| | 12/13/2000 | 19.73 | 25' | 2" | 2.6 | 5.4 | NM | 1.12 | 18.6 |
| | 2/6/2001 | 17.54 | 25' | 2" | 3.6 | NM | NM | NM | NM |
| | 6/5/2001 | 16.35 | 25' | 2" | 4.2 | NM | NM | NM | NM |
| | 9/13/2001 | 18.40 | 25' | 2" | 3.2 | 4.4 | NM | 2.91 | 23.5 |
| | 12/7/2001 | 21.00 | 25' | 2" | 2.0 | 6.9 | NM | 3.43 | 22.6 |
| | 3/5/2002 | 17.38 | 25' | 2" | 3.7 | 6.8 | NM | 1.83 | 19.4 |
| | 6/6/2002 | 16.80 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 19.64 | 25' | 2" | 2.6 | NM | NM | 0.97 | 23.7 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-10 | 8/5/1999 | 18.06 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.75 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 20.50 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 19.40 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 18.84 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.38 | 25' | 2" | 3.7 | 5.6 | NM | 1.4 | 22.9 |
| | 9/13/2001 | 18.82 | 25' | 2" | 3.0 | 5.2 | NM | 3.20 | 23.2 |
| | 12/7/2001 | 23.90 | 25' | 2" | 0.5 | NM | NM | NM | NM |
| | 3/5/2002 | 19.09 | 25' | 2" | 2.9 | 6.9 | NM | 9.55 | 19.3 |
| | 6/6/2002 | 16.78 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 20.53 | 25' | 2" | 2.2 | NM | NM | 2.90 | 23.3 |
| MW-11 | 8/5/1999 | 15.60 | 25' | 2" | 4.6 | 4.8 | 42.7 | 6.38 | 22.0 |
| | 4/26/2000 | 13.65 | 25' | 2" | 5.6 | 6.2 | 0.6 | 4.48 | 20.8 |
| | 8/1/2000 | 18.61 | 25' | 2" | 3.1 | 5.6 | 0.31 | 4.79 | 21.4 |
| | 12/13/2000 | 19.01 | 25' | 2" | 2.9 | 5.7 | NM | 5.15 | 19.8 |
| | 2/6/2001 | 17.43 | 25' | 2" | 3.7 | NM | NM | NM | NM |
| | 6/5/2001 | 15.96 | 25' | 2" | 4.4 | 5.8 | NM | 6.01 | 21.4 |
| | 9/13/2001 | 17.23 | 25' | 2" | 3.8 | 4.6 | NM | 5.82 | 22.4 |
| | 12/7/2001 | 19.74 | 25' | 2" | 2.6 | 6.8 | NM | 4.76 | 21.7 |
| | 3/5/2002 | 17.12 | 25' | 2" | 3.9 | 6.9 | NM | 7.56 | 15.2 |
| | 6/6/2002 | 15.03 | 25' | 2" | 4.9 | NM | NM | NM | NM |
| | 9/17/2002 | 18.88 | 25' | 2" | 3.0 | NM | NM | 1.68 | 23.2 |
| MW-12 | 8/5/1999 | 17.33 | 25' | 2" | 3.8 | 4.6 | 129.2 | 2.09 | 19.0 |
| | 4/26/2000 | 16.06 | 25' | 2" | 4.4 | 6.3 | 1.03 | 2.9 | 18.5 |
| | 8/1/2000 | 20.15 | 25' | 2" | 2.4 | 4.5 | 0.67 | 5.01 | 19.6 |
| | 12/13/2000 | 23.7 | 25' | 2" | 0.6 | 5.4 | NM | 2.9 | 17.1 |
| | 2/6/2001 | 18.45 | 25' | 2" | 3.2 | NM | NM | NM | NM |
| | 6/5/2001 | 17.26 | 25' | 2" | 3.8 | 10.2 | NM | 2.07 | 19.3 |
| | 9/13/2001 | 18.63 | 25' | 2" | 3.1 | NM | NM | 2.71 | 20.5 |
| | 12/7/2001 | 21.37 | 25' | 2" | 1.8 | 7.2 | NM | 8.00 | 19.9 |
| | 3/5/2002 | 18.65 | 25' | 2" | 3.1 | 6.8 | NM | 8.53 | 15.7 |
| | 6/6/2002 | 16.90 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 19.97 | 25' | 2" | 2.5 | 8.0 | NM | 8.07 | 21.7 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-13 | 8/5/1999 | 21.26 | 25' | 2" | 1.8 | 4.2 | 51.7 | 2.32 | 18.0 |
| | 4/26/2000 | 20.02 | 25' | 2" | 2.4 | 6.3 | 0.62 | 3.00 | 18.5 |
| | 8/1/2000 | 24.05 | 25' | 2" | 0.5 | 5.2 | 0.42 | 2.14 | 19.7 |
| | 12/13/2000 | 24.13 | 25' | 2" | 0.4 | 5.5 | NM | 1.04 | 15.9 |
| | 2/6/2001 | 22.43 | 25' | 2" | 1.3 | NM | NM | NM | NM |
| | 6/5/2001 | 21.34 | 25' | 2" | 1.8 | NM | 5.4 | 2.61 | 19.6 |
| | 9/13/2001 | 22.91 | 25' | 2" | 1.0 | NM | NM | NM | 20.3 |
| | 12/7/2001 | 25.22 | 25.22' | 2" | 0.0 | NM | NM | NM | NM |
| | 3/5/2002 | 22.21 | 25.22' | 2" | 1.5 | 6.9 | NM | 7.99 | 16.4 |
| | 6/6/2002 | 20.82 | 25.22' | 2" | 2.2 | NM | NM | NM | NM |
| | 9/17/2002 | 24.22 | 25.22' | 2" | 0.5 | NM | NM | 4.02 | 22.1 |
| MW-14 | 8/5/1999 | 7.96 | 25' | 2" | 8.3 | 5.0 | 312 | 0.80 | 19.0 |
| | 4/26/2000 | 6.46 | 25' | 2" | 9.1 | 6.1 | 1.56 | 1.72 | 15.5 |
| | 8/1/2000 | 10.8 | 25' | 2" | 6.9 | 5.4 | 0.93 | 1.43 | 18.8 |
| | 12/13/2000 | 10.8 | 25' | 2" | 6.9 | 5.5 | NM | 1.72 | 14.7 |
| | 2/6/2001 | 8.72 | 25' | 2" | 8.0 | NM | NM | NM | NM |
| | 6/5/2001 | 7.32 | 25' | 2" | 8.6 | 5.8 | NM | 2.08 | 17.4 |
| | 9/13/2001 | 9.31 | 25' | 2" | 7.7 | NM | NM | 1.77 | 21.0 |
| | 12/7/2001 | 11.91 | 25' | 2" | 6.4 | 6.9 | NM | 1.84 | 20.5 |
| | 3/5/2002 | 8.51 | 25' | 2" | 8.1 | 6.9 | NM | 5.90 | 12.2 |
| | 6/6/2002 | 7.41 | 25' | 2" | 8.6 | NM | NM | NM | NM |
| | 9/17/2002 | 9.98 | 25' | 2" | 7.3 | NM | NM | 4.58 | 21.4 |
| MW-15 | 8/5/1999 | 6.28 | 25' | 2" | 9.2 | 4.8 | 86.5 | 0.87 | 18.0 |
| | 4/26/2000 | 4.75 | 25' | 2" | 9.9 | 6.5 | 0.6 | 3.32 | 16.2 |
| | 8/1/2000 | 9.11 | 25' | 2" | 7.8 | 5.5 | 0.41 | 3.17 | 19.5 |
| | 12/13/2000 | 8.57 | 25' | 2" | 8.0 | 5.6 | NM | 1.93 | 15.1 |
| | 2/6/2001 | 6.36 | 25' | 2" | 9.1 | NM | NM | NM | NM |
| | 6/5/2001 | 5.68 | 25' | 2" | 9.4 | 6.1 | NM | 2.41 | 19.2 |
| | 9/13/2001 | 7.61 | 25' | 2" | 8.5 | NM | NM | 2.90 | 21.2 |
| | 12/7/2001 | 9.91 | 25' | 2" | 7.4 | 6.9 | NM | 3.66 | 20.3 |
| | 3/5/2002 | 5.86 | 25' | 2" | 9.4 | 6.6 | NM | 6.50 | 12.6 |
| | 6/6/2002 | NM | 25' | 2" | NM | NM | NM | NM | NM |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-16 | 8/5/1999 | 11.22 | 25' | 2" | 6.7 | 4.9 | 49 | 0.79 | 18.0 |
| | 4/26/2000 | 9.50 | 25' | 2" | 7.6 | 6.5 | 0.61 | 1.66 | 15.5 |
| | 8/1/2000 | 14.35 | 25' | 2" | 5.2 | 6.0 | 0.95 | 1.64 | 19.3 |
| | 12/13/2000 | 13.45 | 25' | 2" | 5.6 | 5.8 | NM | 2.27 | 15.6 |
| | 2/6/2001 | 10.89 | 25' | 2" | 6.9 | NM | NM | NM | NM |
| | 6/5/2001 | 10.34 | 25' | 2" | 7.2 | 6.5 | NM | 2.02 | 18.3 |
| | 9/13/2001 | 12.58 | 25' | 2" | 6.1 | NM | NM | 1.87 | 21.5 |
| | 12/7/2001 | 13.41 | 25' | 2" | 5.7 | 6.9 | NM | 4.75 | 19.1 |
| | 3/5/2002 | 8.67 | 25' | 2" | 8.0 | 6.7 | NM | 5.20 | 12.4 |
| | 6/6/2002 | NM | 25' | 2" | NM | NM | NM | NM | NM |
| MW-17 | 8/5/1999 | 16.16 | 75' | 2" | 28.8 | 5.6 | 90.8 | 2.76 | 20.5 |
| | 4/26/2000 | 16.8 | 75' | 2" | 28.5 | 6.4 | 0.86 | 6.1 | 20.8 |
| | 8/1/2000 | 19.27 | 75' | 2" | 27.3 | 6.2 | 0.59 | 3.12 | 22.5 |
| | 12/13/2000 | 19.20 | 75' | 2" | 27.3 | NM | NM | NM | NM |
| | 2/6/2001 | 16.82 | 75' | 2" | 28.5 | NM | NM | NM | NM |
| | 6/5/2001 | 15.52 | 75' | 2" | 29.1 | 7.1 | NM | 2.67 | 21.8 |
| | 9/13/2001 | 17.42 | 75' | 2" | 28.2 | NM | NM | 3.60 | 22.5 |
| | 12/7/2001 | 19.54 | 75' | 2" | 27.1 | 7.1 | NM | 2.73 | 22.5 |
| | 3/5/2002 | NM | 75' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | NM | 75' | 2" | NM | NM | NM | NM | NM |
| | 9/17/2002 | 18.32 | 75' | 2" | 27.7 | NM | NM | 4.12 | 23.1 |

NOTES:
NS - Not sampled
Temperature in Degrees Celcius
Dissolved Oxygen in mg/L
Depth to Water and Depth to bottom in units of feet
Well volumes (Gallons)
Specific Conductivity (umhos/cm)

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| OMW-1 | 01-Dec-97 | 99.82 | 17.13 | - | 82.69 |
| | 05-Aug-99 | | 17.95 | 1.05 | 81.87 |
| | 26-Apr-00 | | 15.68 | 0.99 | 84.14 |
| | 01-Aug-00 | | 21.50 | 1.40 | 78.32 |
| | 13-Dec-00 | | 21.46 | 1.70 | 78.36 |
| | 06-Feb-01 | | 19.89 | 1.78 | 79.93 |
| | 05-Jun-01 | | 17.18 | 0.19 | 82.64 |
| | 16-Aug-01 | | 18.10 | 0.13 | 81.72 |
| | 13-Sep-01 | | 18.74 | 0.02 | 81.08 |
| | 26-Sep-01 | | 19.31 | 0.07 | 80.51 |
| | 27-Sep-01 | | 19.32 | 0.01 | 80.50 |
| | 19-Oct-01 | | 19.93 | 0.02 | 79.89 |
| | 09-Nov-01 | | 21.00 | 0.39 | 78.82 |
| | 21-Nov-01 | | 21.63 | 1.28 | 78.19 |
| | 05-Dec-01 | | 21.65 | 0.96 | 78.17 |
| | 07-Dec-01 | | 21.75 | 0.76 | 78.07 |
| | 10-Dec-01 | | 21.65 | 0.01 | 78.17 |
| | 11-Dec-01 | | 21.65 | sheen | 78.17 |
| | | | 21.61 | 0.40 | 78.21 |
| | 07-Jan-02 | | 21.76 | 0.40 | 78.06 |
| | 04-Feb-02 | | 21.45 | 1.31 | 78.37 |
| | 05-Mar-02 | | 19.77 | 0.17 | 80.05 |
| | 19-Apr-02 | | 16.65 | 0.01 | 83.17 |
| | 17-May-02 | | 15.76 | 0.01 | 84.06 |
| | 24-May-02 | | 15.86 | sheen | 83.96 |
| | 28-May-02 | | 16.09 | sheen | 83.73 |
| | 30-May-02 | | 19.11 | sheen | 80.71 |
| | 06-Jun-02 | | 16.59 | - | 83.23 |
| | 17-Sep-02 | | 19.97 | - | 79.85 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-2 | 01-Dec-97 | 99.83 | 17.43 | - | 82.40 |
| | 05-Aug-99 | | 19.19 | 2.29 | 80.64 |
| | 26-Apr-00 | | 15.80 | 2.18 | 84.03 |
| | 01-Aug-00 | | 22.30 | 2.10 | 77.53 |
| | 13-Dec-00 | | 21.36 | 0.84 | 78.47 |
| | 06-Feb-01 | | 18.89 | sheen | 80.94 |
| | 05-Jun-01 | | 17.42 | sheen | 82.41 |
| | 16-Aug-01 | | 18.35 | - | 81.48 |
| | 13-Sep-01 | | 19.03 | - | 80.80 |
| | 26-Sep-01 | | 19.42 | sheen | 80.41 |
| | 27-Sep-01 | | 19.69 | 0.01 | 80.14 |
| | 19-Oct-01 | | 20.22 | - | 79.61 |
| | 09-Nov-01 | | 21.02 | 0.01 | 78.81 |
| | 21-Nov-01 | | 20.70 | sheen | 79.13 |
| | 05-Dec-01 | | 21.59 | 0.63 | 78.24 |
| | 07-Dec-01 | | 21.98 | 0.02 | 77.85 |
| | 10-Dec-01 | | 22.00 | 0.01 | 77.83 |
| | 11-Dec-01 | | 21.91 | sheen | 77.92 |
| | | | 21.73 | 0.02 | 78.10 |
| | 07-Jan-02 | | 22.34 | 0.22 | 77.49 |
| | 04-Feb-02 | | 20.50 | 0.15 | 79.33 |
| | 05-Mar-02 | | 19.90 | sheen | 79.93 |
| | 19-Apr-02 | | 17.03 | 0.01 | 82.80 |
| | 17-May-02 | | 16.25 | 0.01 | 83.58 |
| | 24-May-02 | | 16.28 | 0.01 | 83.55 |
| | 28-May-02 | | 16.49 | sheen | 83.34 |
| | 30-May-02 | | 19.50 | - | 80.33 |
| | 06-Jun-02 | | 16.88 | - | 82.95 |
| | 17-Sep-02 | | 20.44 | 0.05 | 79.39 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-3 | 01-Dec-97 | 99.98 | 17.00 | - | 82.98 |
| | 05-Aug-99 | | 17.96 | 1.01 | 82.02 |
| | 26-Apr-00 | | 15.73 | 0.68 | 84.25 |
| | 01-Aug-00 | | 20.85 | 0.78 | 79.13 |
| | 13-Dec-00 | | 22.18 | 2.22 | 77.80 |
| | 06-Feb-01 | | 19.26 | 0.96 | 80.72 |
| | 05-Jun-01 | | 17.41 | 0.40 | 82.57 |
| | 16-Aug-01 | | 18.19 | 0.09 | 81.79 |
| | 13-Sep-01 | | 18.80 | 0.02 | 81.18 |
| | 26-Sep-01 | | 19.25 | sheen | 80.73 |
| | 27-Sep-01 | | 19.32 | 0.04 | 80.66 |
| | 19-Oct-01 | | 20.04 | 0.06 | 79.94 |
| | 09-Nov-01 | | 20.86 | sheen | 79.12 |
| | 21-Nov-01 | | 20.59 | sheen | 79.39 |
| | 05-Dec-01 | | 21.10 | sheen | 78.88 |
| | 07-Dec-01 | | 21.24 | sheen | 78.74 |
| | 10-Dec-01 | | 21.62 | 0.01 | 78.36 |
| | 11-Dec-01 | | 21.65 | sheen | 78.33 |
| | | | 22.01 | 0.56 | 77.97 |
| | 07-Jan-02 | | 22.87 | 1.15 | 77.11 |
| | 04-Feb-02 | | 21.20 | 0.75 | 78.78 |
| | 05-Mar-02 | | 18.69 | 0.27 | 81.29 |
| | 19-Apr-02 | | 16.60 | sheen | 83.38 |
| | 17-May-02 | | 15.78 | 0.01 | 84.20 |
| | 24-May-02 | | 15.88 | sheen | 84.10 |
| | 28-May-02 | | 16.12 | sheen | 83.86 |
| | 30-May-02 | | 12.14 | - | 87.84 |
| | 06-Jun-02 | | 15.44 | - | 84.54 |
| | 17-Sep-02 | | 20.11 | - | 79.87 |
| MW-4 | 01-Dec-97 | 99.59 | 17.60 | - | 81.99 |
| | 05-Aug-99 | | 17.59 | - | 82.00 |
| | 26-Apr-00 | | 16.51 | - | 83.08 |
| | 01-Aug-00 | | 20.63 | - | 78.96 |
| | 13-Dec-00 | | 20.81 | - | 78.78 |
| | 06-Feb-01 | | 19.09 | - | 80.50 |
| | 05-Jun-01 | | 17.70 | - | 81.89 |
| | 13-Sep-01 | | 19.16 | - | 80.43 |
| | 07-Dec-01 | | 21.86 | - | 77.73 |
| | 05-Mar-02 | | 18.91 | - | 80.68 |
| | 06-Jun-02 | | 16.93 | - | 82.66 |
| | 17-Sep-02 | | 20.63 | - | 78.96 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-5 | 01-Dec-97 | 99.42 | 15.04 | - | 84.38 |
| | 05-Aug-99 | | 15.95 | - | 83.47 |
| | 26-Apr-00 | | 14.35 | - | 85.07 |
| | 01-Aug-00 | | 19.18 | - | 80.24 |
| | 13-Dec-00 | | 19.68 | - | 79.74 |
| | 06-Feb-01 | | 16.50 | - | 82.92 |
| | 05-Jun-01 | | 15.51 | - | 83.91 |
| | 13-Sep-01 | | 17.48 | - | 81.94 |
| | 07-Dec-01 | | 20.09 | - | 79.33 |
| | 05-Mar-02 | | 16.15 | - | 83.27 |
| | 06-Jun-02 | | 15.11 | - | 84.31 |
| | 17-Sep-02 | | 18.31 | - | 81.11 |
| MW-6 | 01-Dec-97 | 99.47 | 14.37 | - | 85.10 |
| | 05-Aug-99 | | 15.44 | - | 84.03 |
| | 26-Apr-00 | | 13.65 | - | 85.82 |
| | 01-Aug-00 | | 18.75 | - | 80.72 |
| | 13-Dec-00 | | 18.23 | - | 81.24 |
| | 06-Feb-01 | | 15.34 | - | 84.13 |
| | 05-Jun-01 | | 14.84 | - | 84.63 |
| | 13-Sep-01 | | 16.96 | - | 82.51 |
| | 07-Dec-01 | | 19.70 | - | 79.77 |
| | 05-Mar-02 | | 15.20 | - | 84.27 |
| | 06-Jun-02 | | 15.51 | - | 83.96 |
| | 17-Sep-02 | | 17.76 | - | 81.71 |
| MW-7 | 01-Dec-97 | 99.47 | 13.96 | - | 85.51 |
| | 05-Aug-99 | | 15.41 | - | 84.06 |
| | 26-Apr-00 | | 13.54 | - | 85.93 |
| | 01-Aug-00 | | 18.72 | - | 80.75 |
| | 13-Dec-00 | | 18.01 | - | 81.46 |
| | 06-Feb-01 | | 15.41 | - | 84.06 |
| | 05-Jun-01 | | 14.61 | - | 84.86 |
| | 13-Sep-01 | | 16.91 | - | 82.56 |
| | 07-Dec-01 | | 19.64 | - | 79.83 |
| | 05-Mar-02 | | 14.75 | - | 84.72 |
| | 06-Jun-02 | | 14.43 | - | 85.04 |
| | 17-Sep-02 | | 17.34 | - | 82.13 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-8 | 01-Dec-97 | 102.42 | 12.53 | - | 89.89 |
| | 05-Aug-99 | | 14.59 | - | 87.83 |
| | 26-Apr-00 | | 11.56 | - | 90.86 |
| | 01-Aug-00 | | 19.18 | - | 83.24 |
| | 13-Dec-00 | | 17.96 | - | 84.46 |
| | 06-Feb-01 | | 13.34 | - | 89.08 |
| | 05-Jun-01 | | 13.15 | - | 89.27 |
| | 13-Sep-01 | | 16.64 | - | 85.78 |
| | 07-Dec-01 | | 19.73 | - | 82.69 |
| | 05-Mar-02 | | 11.41 | - | 91.01 |
| | 06-Jun-02 | | 12.93 | - | 89.49 |
| | 17-Sep-02 | | 16.72 | - | 85.70 |
| MW-9 | 01-Dec-97 | 100.53 | 16.17 | - | 84.36 |
| | 05-Aug-99 | | 16.74 | - | 83.79 |
| | 26-Apr-00 | | 15.09 | - | 85.44 |
| | 01-Aug-00 | | 21.20 | - | 79.33 |
| | 13-Dec-00 | | 19.73 | - | 80.80 |
| | 06-Feb-01 | | 17.54 | - | 82.99 |
| | 05-Jun-01 | | 16.35 | - | 84.18 |
| | 13-Sep-01 | | 18.40 | - | 82.13 |
| | 07-Dec-01 | | 21.00 | - | 79.53 |
| | 05-Mar-02 | | 17.38 | - | 83.15 |
| | 06-Jun-02 | | 16.80 | - | 83.73 |
| | 17-Sep-02 | | 19.64 | - | 80.89 |
| MW-10 | 01-Dec-97 | 99.65 | 17.40 | - | 82.25 |
| | 05-Aug-99 | | 18.06 | 1.01 | 81.59 |
| | 26-Apr-00 | | 15.75 | 1.65 | 83.90 |
| | 01-Aug-00 | | 20.50 | 0.03 | 79.15 |
| | 13-Dec-00 | | 19.40 | 0.01 | 80.25 |
| | 06-Feb-01 | | 18.84 | sheen | 80.81 |
| | 05-Jun-01 | | 17.38 | - | 82.27 |
| | 16-Aug-01 | | 18.15 | - | 81.50 |
| | 13-Sep-01 | | 18.82 | - | 80.83 |
| | 07-Dec-01 | | 23.90 | - | 75.75 |
| | 11-Dec-01 | | 21.88 | - | 77.77 |
| | 04-Feb-02 | | 20.65 | - | 79.00 |
| | 05-Mar-02 | | 19.09 | - | 80.56 |
| | 06-Jun-02 | | 16.78 | - | 82.87 |
| | 17-Sep-02 | | 20.53 | - | 79.12 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-11 | 01-Dec-97 | 96.47 | 15.74 | - | 80.73 |
| | 05-Aug-99 | | 15.60 | - | 80.87 |
| | 26-Apr-00 | | 13.65 | - | 82.82 |
| | 01-Aug-00 | | 18.61 | - | 77.86 |
| | 13-Dec-00 | | 19.01 | - | 77.46 |
| | 06-Feb-01 | | 17.43 | - | 79.04 |
| | 05-Jun-01 | | 15.96 | - | 80.51 |
| | 13-Sep-01 | | 17.23 | - | 79.24 |
| | 07-Dec-01 | | 19.74 | - | 76.73 |
| | 05-Mar-02 | | 17.12 | - | 79.35 |
| | 06-Jun-02 | | 15.03 | - | 81.44 |
| | 17-Sep-02 | | 18.88 | - | 77.59 |
| MW-12 | 01-Dec-97 | 98.63 | 17.03 | - | 81.60 |
| | 05-Aug-99 | | 17.33 | - | 81.30 |
| | 26-Apr-00 | | 16.06 | - | 82.57 |
| | 01-Aug-00 | | 20.15 | - | 78.48 |
| | 13-Dec-00 | | 23.70 | - | 74.93 |
| | 06-Feb-01 | | 18.45 | - | 80.18 |
| | 05-Jun-01 | | 17.26 | - | 81.37 |
| | 13-Sep-01 | | 18.63 | - | 80.00 |
| | 07-Dec-01 | | 21.37 | - | 77.26 |
| | 05-Mar-02 | | 18.65 | - | 79.98 |
| | 06-Jun-02 | | 16.90 | - | 81.73 |
| | 17-Sep-02 | | 19.97 | - | 78.66 |
| MW-13 | 01-Dec-97 | 100.80 | 21.05 | - | 79.75 |
| | 05-Aug-99 | | 21.26 | - | 79.54 |
| | 26-Apr-00 | | 20.02 | - | 80.78 |
| | 01-Aug-00 | | 24.05 | - | 76.75 |
| | 13-Dec-00 | | 24.13 | - | 76.67 |
| | 06-Feb-01 | | 22.43 | - | 78.37 |
| | 05-Jun-01 | | 21.34 | - | 79.46 |
| | 13-Sep-01 | | 22.91 | - | 77.89 |
| | 07-Dec-01 | | 25.22 | - | 75.58 |
| | 05-Mar-02 | | 22.21 | - | 78.59 |
| | 06-Jun-02 | | 20.82 | - | 79.98 |
| | 17-Sep-02 | | 24.22 | - | 76.58 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-14 | 01-Dec-97 | 89.38 | 7.27 | - | 82.11 |
| | 05-Aug-99 | | 7.96 | - | 81.42 |
| | 26-Apr-00 | | 6.46 | - | 82.92 |
| | 11-Aug-00 | | 10.80 | - | 78.58 |
| | 13-Dec-00 | | 10.80 | - | 78.58 |
| | 06-Feb-01 | | 8.72 | - | 80.66 |
| | 05-Jun-01 | | 7.32 | - | 82.06 |
| | 13-Sep-01 | | 9.31 | - | 80.07 |
| | 07-Dec-01 | | 11.91 | - | 77.47 |
| | 05-Mar-02 | | 8.51 | - | 80.87 |
| | 06-Jun-02 | | 7.41 | - | 81.97 |
| | 17-Sep-02 | | 9.98 | - | 79.40 |
| MW-15 | 01-Dec-97 | 87.33 | 5.10 | - | 82.23 |
| | 05-Aug-99 | | 6.28 | - | 81.05 |
| | 26-Apr-00 | | 4.75 | - | 82.58 |
| | 01-Aug-00 | | 9.11 | - | 78.22 |
| | 13-Dec-00 | | 8.57 | - | 78.76 |
| | 06-Feb-01 | | 6.36 | - | 80.97 |
| | 05-Jun-01 | | 5.68 | - | 81.65 |
| | 13-Sep-01 | | 7.61 | - | 79.72 |
| | 07-Dec-01 | | 9.91 | - | 77.42 |
| | 05-Mar-02 | | 5.86 | - | 81.47 |
| | 06-Jun-02 | | NM | - | NM |
| MW-16 | 01-Dec-97 | 93.74 | 9.69 | - | 84.05 |
| | 05-Aug-99 | | 11.22 | - | 82.52 |
| | 26-Apr-00 | | 9.50 | - | 84.24 |
| | 01-Aug-00 | | 14.35 | - | 79.39 |
| | 13-Dec-00 | | 13.45 | - | 80.29 |
| | 06-Feb-01 | | 10.89 | - | 82.85 |
| | 05-Jun-01 | | 10.34 | - | 83.40 |
| | 13-Sep-01 | | 12.58 | - | 81.16 |
| | 07-Dec-01 | | 13.41 | - | 80.33 |
| | 05-Mar-02 | | 8.67 | - | 85.07 |
| | 06-Jun-02 | | NM | - | NM |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| DMW-17 | 01-Dec-97 | 100.08 | 15.53 | - | 84.55 |
| | 05-Aug-99 | | 16.16 | - | 83.92 |
| | 26-Apr-00 | | 16.80 | - | 83.28 |
| | 01-Aug-00 | | 19.27 | - | 80.81 |
| | 13-Dec-00 | | 19.20 | - | 80.88 |
| | 06-Feb-01 | | 16.82 | - | 83.26 |
| | 05-Jun-01 | | 15.52 | - | 84.56 |
| | 13-Sep-01 | | 17.42 | - | 82.66 |
| | 07-Dec-01 | | 19.54 | - | 80.54 |
| | 05-Mar-02 | | NM | - | NM |
| | 06-Jun-02 | | NM | - | NM |
| | 17-Sep-02 | | 18.32 | - | 81.76 |

**Notes:**
TOC - Top-of-Casing elevation refrenced to common datum.
NM - Not measured.
All measurments in units of feet.
- = No Data

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| OMW-1 | 1-Dec-97 | 14.9 | 85.5 | 5.2 | 24.8 | 130 | 96 | BDL |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 1,570 | 19,000 | 474 | 4,050 | 25,094 | 33,900 | 1,440 |
| | 17-Sep-02 | 2,940 | 25,200 | 1,330 | 9,580 | 39,050 | 30,600 | 620 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-2 | 1-Dec-97 | 9,900 | 42,300 | 2,040 | 12,100 | 66,340 | 242,000 | 71.2 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 4,400 | 7,570 | 2,890 | 6,790 | 21,650 | 9,490 | 592 |
| | 13-Sep-01 | 2,280 | 9,780 | 1,630 | 7,650 | 21,340 | 1,750 | 399 |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 3,660 | 2,070 | 858 | 2,788 | 9,376 | 8,390 | 294 |
| | 17-Sep-02 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-3 | 1-Dec-97 | 9,820 | 54,500 | 2,160 | 11,900 | 78,380 | 81,200 | 445 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 8,770 | 34,700 | 2,610 | 14,760 | 60,840 | 8,940 | 503 |
| | 17-Sep-02 | 8,710 | 41,300 | 2,950 | 17,070 | 70,030 | 9,540 | 669 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |

# TABLE 3
# SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-4 | 1-Dec-97 | 8,140 | 21,000 | 1,510 | 11,500 | 42,150 | 215,000 | 813 |
| | 5-Aug-99 | 14,200 | 34,600 | 2,750 | 15,900 | 67,450 | 109,000 | <5 |
| | 26-Apr-00 | 13,400 | 33,200 | 3,420 | 13,270 | 63,290 | 102,000 | 1,060 |
| | 1-Aug-00 | 10,100 | 23,300 | 1,740 | 11,410 | 46,550 | 109,000 | 559 |
| | 13-Dec-00 | 6,730 | 16,300 | 635 | 4,170 | 27,835 | 32,300 | 742 |
| | 6-Feb-01 | 5,860 | 13,500 | 1,080 | 7,230 | 27,670 | 26,100 | 210 |
| | 5-Jun-01 | 3,570 | 10,900 | 965 | 9,510 | 24,945 | 5,730 | 302 |
| | 13-Sep-01 | 5,910 | 14,900 | 1,050 | 7,100 | 28,960 | 5,980 | 384 |
| | 7-Dec-01 | 10,000 | 19,200 | 2,210 | 11,600 | 43,010 | BDL | 682 |
| | 5-Mar-02 | 7,880 | 12,890 | 1,860 | 12,650 | 35,280 | 14,530 | 2,010 |
| | 6-Jun-02 | 2,520 | 2,700 | 483 | 3,620 | 9,323 | 3,850 | 497 |
| | 17-Sep-02 | 5,750 | 3,480 | 1,480 | 6,170 | 16,880 | 3,140 | 555 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 5 |
| MW-5 | 1-Dec-97 | 5,930 | 47,600 | 2,100 | 12,600 | 68,230 | BDL | 125 |
| | 5-Aug-99 | 6,400 | 61,600 | 2,460 | 12,100 | 82,560 | 410 | 335 |
| | 26-Apr-00 | 6,680 | 48,300 | 2,390 | 9,610 | 66,980 | 681 | 609 |
| | 1-Aug-00 | 4,250 | 40,300 | 1,960 | 12,530 | 59,040 | 258 | 396 |
| | 13-Dec-00 | 4,530 | 38,100 | 2,520 | 14,640 | 59,790 | 381 | 4,770 |
| | 6-Feb-01 | 5,070 | 30,800 | 2,200 | 12,500 | 50,570 | 225 | 678 |
| | 5-Jun-01 | 6,070 | 52,000 | 2,900 | 13,720 | 74,690 | 228 | 342 |
| | 13-Sep-01 | 4,990 | 7,210 | 3,340 | 17,900 | 33,440 | 60.7 | 2,900 |
| | 7-Dec-01 | 3,520 | 38,600 | 1,700 | 11,490 | 55,310 | BDL | 408 |
| | 5-Mar-02 | 3,160 | 21,300 | 3,260 | 18,490 | 46,210 | 171 | 342 |
| | 6-Jun-02 | 3,820 | 26,700 | 2,570 | 14,620 | 47,710 | 199 | 397 |
| | 17-Sep-02 | 4,480 | 42,800 | 2,820 | 15,100 | 65,200 | 117 | 209 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-6 | 1-Dec-97 | 5.5 | 137 | 6.0 | 149 | 297.5 | BDL | BDL |
| | 5-Aug-99 | 4.1 | 1.1 | 3.7 | 16.7 | 25.6 | 5 | BDL |
| | 26-Apr-00 | 13.0 | 19.2 | 15 | 48 | 95.2 | 27.2 | 6.44 |
| | 1-Aug-00 | 117 | 1820 | 128 | 877 | 2942 | 10.7 | 32.2 |
| | 13-Dec-00 | 47.9 | 460 | 35.4 | 332 | 875 | 14.8 | 7.2 |
| | 6-Feb-01 | 47.4 | 143 | 47.6 | 219.2 | 457 | 17.8 | 22.6 |
| | 5-Jun-01 | 9.3 | 44.5 | 23.5 | 141.3 | 219 | 7.5 | BDL |
| | 13-Sep-01 | 18.1 | 36.6 | 24.7 | 119.0 | 198 | 8.35 | 1.06 |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | 5.23 | BDL |
| | 5-Mar-02 | 79.8 | 765 | 114 | 1,242 | 2,201 | 35.1 | 75.8 |
| | 6-Jun-02 | 55.1 | 629 | 91.8 | 959 | 1,735 | 25.9 | 5.10 |
| | 17-Sep-02 | 11.5 | 115 | 25.4 | 258 | 410 | 2.70 | 7.77 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-7 | 1-Dec-97 | 1.1 | 1.7 | BDL | 1.1 | 3.9 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 41 | <1 |
| | 26-Apr-00 | 2.13 | 13.5 | BDL | 1.59 | 17.2 | 68.9 | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 53.8 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 52.9 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 18.7 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | 10.6 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | 6.16 | BDL | BDL | 6.16 | 1.68 | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 10.0 | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-8 | 1-Dec-97 | BDL | 2.4 | 1.2 | 5.4 | 9.0 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 1.58 | 8.53 | BDL | BDL | 10.1 | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | 2.95 | BDL | BDL | 2.95 | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-9 | 1-Dec-97 | 77 | 14,000 | 2,390 | 20,700 | 37,167 | 114 | 384 |
| | 5-Aug-99 | 110 | 4,280 | 2,450 | 17,000 | 23,840 | 150 | <500 |
| | 26-Apr-00 | 163 | 2,640 | 3,520 | 14,760 | 21,083 | BDL | 2,090 |
| | 1-Aug-00 | 187 | 18,400 | 1,010 | 16,070 | 35,667 | BDL | 909 |
| | 13-Dec-00 | 9.14 | 657 | 108 | 1,340 | 2,114 | 26.0 | 47 |
| | 6-Feb-01 | 10.6 | 254 | 181 | 2,907 | 3,353 | 16.9 | 179 |
| | 5-Jun-01 | 27.7 | 402 | 139 | 1,798 | 2,367 | 17.2 | 66.6 |
| | 13-Sep-01 | 15.0 | 133 | 710 | 7,690 | 8,548 | 13.0 | 186 |
| | 7-Dec-01 | 34.4 | 35.5 | 28.9 | 713 | 812 | BDL | 20.6 |
| | 5-Mar-02 | 25.5 | 29.8 | 157 | 2,144 | 2,356 | BDL | 49.0 |
| | 6-Jun-02 | 13.2 | 24.6 | 105 | 1,420 | 1,563 | 3.17 | 44.5 |
| | 17-Sep-02 | 13.3 | 21.0 | 111 | 1,532 | 1,677 | 2.71 | 41.5 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-10 | 1-Dec-97 | 6,220 | 46,300 | 2,320 | 14,800 | 69,640 | 938 | 542 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 8,020 | 32,900 | 856 | 8,280 | 50,056 | 8,780 | 327 |
| | 13-Sep-01 | 9,870 | 47,700 | 1,190 | 20,400 | 79,160 | 12,500 | 356 |
| | 7-Dec-01 | 5,590 | 56,000 | 8,150 | 61,700 | 131,440 | 1,050 | 2,540 |
| | 5-Mar-02 | 2.06 | 72.2 | 5.80 | 190.1 | 270 | 1,110 | 13.7 |
| | 6-Jun-02 | BDL | 57.8 | BDL | 165.0 | 223 | 3,780 | 27.0 |
| | 17-Sep-02 | 36.3 | 75.9 | 7.38 | 308 | 428 | 6,850 | 11.4 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-11 | 1-Dec-97 | 1.4 | 3.4 | BDL | 4.7 | 9.5 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 7 | <5 |
| | 26-Apr-00 | 1.18 | 3.96 | BDL | BDL | 5.1 | 4.69 | 9.98 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | 2.51 | 91.0 | 15.0 | 104.4 | 212.9 | 26.3 | 17.2 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 39.5 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | 4.88 | 9.52 | 14.4 | 266 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | 1.32 | 1.32 | 358 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 1070 | BDL |
| | 6-Jun-02 | 1.84 | BDL | BDL | 1.02 | 2.86 | 2,220 | BDL |
| | 17-Sep-02 | 98.7 | BDL | BDL | 19.89 | 118.59 | 3,780 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | - | 7 | <5 |
| MW-12 | 1-Dec-97 | 7,970 | 382 | 266 | 1,540 | 10,158 | 99,900 | 119 |
| | 5-Aug-99 | 5,000 | 260 | <200 | <200 | 5,260 | 41,200 | <1000 |
| | 26-Apr-00 | 135 | 4.51 | BDL | 11.0 | 151 | 6,800 | 18.2 |
| | 1-Aug-00 | 1670 | 17.1 | 4.33 | 114.9 | 1806 | 44,200 | BDL |
| | 13-Dec-00 | 119 | 9.1 | 2.11 | 26.7 | 157 | 4,230 | 31.7 |
| | 6-Feb-01 | 32.5 | 9.3 | 1.51 | 13.8 | 57 | 1,570 | 10.6 |
| | 5-Jun-01 | 61.0 | BDL | BDL | 2.1 | 63 | 1,960 | 17.2 |
| | 13-Sep-01 | 329 | 4.55 | 2.96 | 29.27 | 366 | 2,860 | 60.1 |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 906 | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 613 | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | 260 | <200 | <200 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-13 | 1-Dec-97 | BDL | 1.4 | BDL | 1.6 | 3 | 82.3 | BDL |
| | 5-Aug-99 | 3 | <1 | <1 | <1 | 3 | 604 | <5 |
| | 26-Apr-00 | 188 | 149 | BDL | BDL | 337 | 3,150 | BDL |
| | 1-Aug-00 | 207 | 5.74 | BDL | 32.8 | 245 | 3,641 | 24.3 |
| | 13-Dec-00 | 29.9 | 3.81 | 1.0 | 76.6 | 111 | 4,350 | 29.8 |
| | 6-Feb-01 | 377 | 12.10 | 2.8 | 105.2 | 497 | 5,200 | 54.9 |
| | 5-Jun-01 | 259 | 5.87 | 1.8 | 112.8 | 380 | 8,530 | 23.2 |
| | 13-Sep-01 | 374 | 7.44 | 4.52 | 127.5 | 513 | 7,150 | 24.7 |
| | 7-Dec-01 | 15.4 | BDL | BDL | 8.10 | 24 | 1,130 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 103 | BDL |
| | 6-Jun-02 | 3.24 | BDL | BDL | 6.25 | 9.49 | 6,360 | 1.42 |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | 561 | BDL |
| SSTL | | 3 | 1 | 1 | 1 | -- | 40 | 5 |
| MW-14 | 1-Dec-97 | 1.1 | 1.4 | BDL | 2.7 | 5 | 76.5 | BDL |
| | 5-Aug-99 | 57 | 7 | 1 | 23 | 88 | 606 | 5 |
| | 26-Apr-00 | BDL | 1.38 | BDL | BDL | 1.38 | 1.11 | BDL |
| | 1-Aug-00 | 138 | 4.04 | BDL | 39.04 | 181.08 | 35.3 | 13.0 |
| | 13-Dec-00 | BDL | BDL | BDL | 2.13 | 2.13 | 129 | 2.33 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 11.1 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | 54.9 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 1.53 | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | 7 | 1 | 23 | - | 40 | 5 |
| MW-15 | 1-Dec-97 | 1.0 | 1.6 | BDL | 2.5 | 5 | BDL | BDL |
| | 5-Aug-99 | 3 | 6 | 1 | 6 | 16 | 27 | <5 |
| | 26-Apr-00 | 1.01 | 1.32 | BDL | BDL | 2.33 | 2.82 | 5.66 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 2.77 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| Destroyed | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 3 | 6 | 1 | 6 | - | 27 | <5 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-16 | 1-Dec-97 | BDL | 1.2 | BDL | 1.3 | 2.5 | BDL | BDL |
| | 5-Aug-99 | 2.2 | 8.8 | 1.6 | 7.1 | 19.7 | 4 | BDL |
| | 26-Apr-00 | 2.17 | 1.27 | BDL | BDL | 3.4 | 10.1 | BDL |
| | 1-Aug-00 | 5.02 | 3.01 | BDL | 3.5 | 11.5 | 16.1 | 1.35 |
| | 13-Dec-00 | 10.7 | BDL | BDL | 2.66 | 13.4 | 30.6 | 1.96 |
| | 6-Feb-01 | 6.25 | BDL | BDL | BDL | 6.25 | 32.7 | BDL |
| | 5-Jun-01 | 22.3 | BDL | BDL | 1.30 | 23.6 | 78.8 | BDL |
| | 13-Sep-01 | 18.9 | BDL | BDL | BDL | BDL | 35.6 | BDL |
| | 7-Dec-01 | 15.7 | BDL | BDL | 1.01 | 16.7 | 25.0 | BDL |
| | 5-Mar-02 | 15.1 | BDL | BDL | BDL | 15.1 | 104 | BDL |
| Destroyed | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| DMW-17 | 1-Dec-97 | 1.6 | 3.8 | 2.3 | 12.7 | 20.3 | BDL | BDL |
| | 5-Aug-99 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 26-Apr-00 | 1.06 | 1.24 | BDL | BDL | 2.3 | 8.97 | BDL |
| | 1-Aug-00 | BDL | 3.02 | BDL | BDL | 3.02 | 7.75 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 6.98 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 5.34 | BDL |
| | 5-Jun-01 | BDL | 2.0 | BDL | BDL | 2.0 | 23.8 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 3.42 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 6.82 | 1.1 |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | 10.1 | BDL |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |
| CP-WW | 1-Dec-97 | BDL | 1.2 | BDL | BDL | 1.2 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 2.96 | 1.09 | BDL | BDL | 4.1 | 315 | BDL |
| | 1-Aug-00 | 3.23 | 2.56 | BDL | 1.09 | 7 | 224 | BDL |
| | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| | 17-Sep-02 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| CLS-WW | 1-Dec-97 | 81.3 | 1.1 | BDL | 9.6 | 92 | 34.5 | BDL |
| | 5-Aug-99 | 81 | 1 | <1 | 10 | 92 | 35 | <5 |
| | 26-Apr-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | <1 | <1 | 10 | - | 35 | <5 |

**Notes:**

All results reported in parts per billion (ug/L) unless otherwise noted.

SSTL = Site specific target levels referenced in bid

FP = Free Product; NS = Not Sampled

BDL = Below detecatable Levels

Total BTEX = Summation of benzene, toluene, ethylbenzene and xylenes

MTBE = Methyl-tert-buytl-ether

# ATTACHMENT 3
# LABORATORY ANALYTICAL REPORT

# ACCESS ANALYTICAL, INC.

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063

Page 1
September 24, 2002
Report # 209000857
Order # 80300
South Carolina Cert ID# 96023

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-1
Collected: 09/17/02 00:00
Received: 09/19/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 10 | | | | |
| Methyl-Tert-Butyl-Ether | 30600 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 08:02 | CJO |
| Benzene | 2940 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 08:02 | CJO |
| Toluene | 25200 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 08:02 | CJO |
| Ethylbenzene | 1330 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 08:03 | CJO |
| m & p-Xylene | 6500 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 08:03 | CJO |
| o-Xylene | 3080 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 08:03 | CJO |
| Naphthalene | 620 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 08:03 | CJO |
| SURROGATE: Toluene-D8 | 109.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 100.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 107.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Ct.=#PH0217, La.=#9601, Md.=#271, Ma.=#M-FL535
OK.=#9523, SC.=#96023, Tn.=#TN02826,P.R.=FL-00535
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 24, 2002
Report # 209000857
Order # 80301
South Carolina Cert ID# 96023

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-3
Collected: 09/17/02 00:00
Received: 09/19/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 100 | | | | |
| Methyl-Tert-Butyl-Ether | 9540 | ug/L | 5030/8260B | 100.000 | 09/20/2002 | 09/20/2002 | 08:30 | CJO |
| Benzene | 8710 | ug/L | 5030/8260B | 100.000 | 09/20/2002 | 09/20/2002 | 08:30 | CJO |
| Toluene | 41300 | ug/L | 5030/8260B | 100.000 | 09/20/2002 | 09/20/2002 | 08:30 | CJO |
| Ethylbenzene | 2950 | ug/L | 5030/8260B | 100.000 | 09/20/2002 | 09/20/2002 | 08:30 | CJO |
| m & p-Xylene | 11700 | ug/L | 5030/8260B | 100.000 | 09/20/2002 | 09/20/2002 | 08:30 | CJO |
| o-Xylene | 5370 | ug/L | 5030/8260B | 100.000 | 09/20/2002 | 09/20/2002 | 08:30 | CJO |
| Naphthalene | 669 | ug/L | 5030/8260B | 100.000 | 09/20/2002 | 09/20/2002 | 08:30 | CJO |
| SURROGATE: Toluene-D8 | 105.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 103.20% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 114.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Ct.=#PH0217, La.=#9601, Md.=#271, Ma.=#M-FL535
OK.=#9523, SC.=#96023, Tn.=#TN02826,P.R.=FL-00535
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 24, 2002
Report # 209000857
Order # 80302
South Carolina Cert ID# 96023

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-4
Collected: 09/17/02 00:00
Received: 09/19/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 10 | | | | |
| Methyl-Tert-Butyl-Ether | 3140 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 07:57 | CJO |
| Benzene | 5750 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 07:57 | CJO |
| Toluene | 3480 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 07:57 | CJO |
| Ethylbenzene | 1480 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 07:57 | CJO |
| m & p-Xylene | 3220 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 07:58 | CJO |
| o-Xylene | 2950 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 07:58 | CJO |
| Naphthalene | 555 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 07:58 | CJO |
| SURROGATE: Toluene-D8 | 104.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 104.40% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 112.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Ct.=#PH0217, La.=#9601, Md.=#271, Ma.=#M-FL535
OK.=#9523, SC.=#96023, Tn.=#TN02826,P.R.=FL-00535
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 24, 2002
Report # 209000857
Order # 80304
South Carolina Cert ID# 96023

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-5
Collected: 09/17/02 00:00
Received: 09/19/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 117 | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 07:43 | CJO |
| Benzene | 4480 | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 07:43 | CJO |
| Toluene | 42800 | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 07:44 | CJO |
| Ethylbenzene | 2820 | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 07:44 | CJO |
| m & p-Xylene | 10300 | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 07:44 | CJO |
| o-Xylene | 4800 | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 07:44 | CJO |
| Naphthalene | 209 | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 07:44 | CJO |
| SURROGATE: Toluene-D8 | 102.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 104.80% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 110.50% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Ct.=#PH0217, La.=#9601, Md.=#271, Ma.=#M-FL535
OK.=#9523, SC.=#96023, Tn.=#TN02826,P.R.=FL-00535
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 24, 2002
Report # 209000857
Order # 80305
South Carolina Cert ID# 96023

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-6
Collected: 09/17/02 00:00
Received: 09/19/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 2.70 | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 07:35 | CJO |
| Benzene | 11.5 | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 07:35 | CJO |
| Toluene | 115 | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 07:35 | CJO |
| Ethylbenzene | 25.4 | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 07:35 | CJO |
| m & p-Xylene | 191 | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 07:35 | CJO |
| o-Xylene | 67.2 | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 07:35 | CJO |
| Naphthalene | 7.77 | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 07:36 | CJO |
| SURROGATE: Toluene-D8 | 105.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 104.80% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 111.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Ct.=#PH0217, La.=#9601, Md.=#271, Ma.=#M-FL535
OK.=#9523, SC.=#96023, Tn.=#TN02826,P.R.=FL-00535
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 24, 2002
Report # 209000857
Order # 80306
South Carolina Cert ID# 96023

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-7
Collected: 09/17/02 00:00
Received: 09/19/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:10 | CJO |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:10 | CJO |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:10 | CJO |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:10 | CJO |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:10 | CJO |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:10 | CJO |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:10 | CJO |
| SURROGATE: Toluene-D8 | 98.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 102.80% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 117.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Ct.=#PH0217, La.=#9601, Md.=#271, Ma.=#M-FL535
OK.=#9523, SC.=#96023, Tn.=#TN02826,P.R.=FL-00535
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 24, 2002
Report # 209000857
Order # 80307
South Carolina Cert ID# 96023

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-8
Collected: 09/17/02 00:00
Received: 09/19/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:12 | CJO |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:12 | CJO |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:12 | CJO |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:12 | CJO |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:12 | CJO |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:12 | CJO |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:12 | CJO |
| SURROGATE: Toluene-D8 | 103.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 101.20% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 117.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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OK.=#9523, SC.=#96023, Tn.=#TN02826,P.R.=FL-00535
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 24, 2002
Report # 209000857
Order # 80309
South Carolina Cert ID# 96023

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-9
Collected: 09/17/02 00:00
Received: 09/19/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 2.71 | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 07:38 | CJO |
| Benzene | 13.3 | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 07:38 | CJO |
| Toluene | 21.0 | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 07:39 | CJO |
| Ethylbenzene | 111 | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 07:39 | CJO |
| m & p-Xylene | 1230 | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 07:39 | CJO |
| o-Xylene | 302 | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 07:41 | CJO |
| Naphthalene | 41.5 | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 07:45 | CJO |
| SURROGATE: Toluene-D8 | 102.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 101.60% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 107.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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OK.=#9523, SC.=#96023, Tn.=#TN02826,P.R.=FL-00535
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 24, 2002
Report # 209000857
Order # 80310
South Carolina Cert ID# 96023

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-10
Collected: 09/17/02 00:00
Received: 09/19/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 10 | | | | |
| Methyl-Tert-Butyl-Ether | 6850 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 07:48 | CJO |
| Benzene | 36.3 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 07:50 | CJO |
| Toluene | 75.9 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 07:50 | CJO |
| Ethylbenzene | I-7.38 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 07:50 | CJO |
| m & p-Xylene | 123 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 07:50 | CJO |
| o-Xylene | 185 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 07:50 | CJO |
| Naphthalene | 11.4 | ug/L | 5030/8260B | 10.000 | 09/20/2002 | 09/20/2002 | 07:53 | CJO |
| SURROGATE: Toluene-D8 | 101.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 105.60% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 113.50% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Certs: Ct.=#PH0217, La.=#9601, Md.=#271, Ma.=#M-FL535
OK.=#9523, SC.=#96023, Tn.=#TN02826,P.R.=FL-00535
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 24, 2002
Report # 209000857
Order # 80312
South Carolina Cert ID# 96023

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-11
Collected: 09/17/02 00:00
Received: 09/19/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 3780 | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 13:02 | PMD |
| Benzene | 98.7 | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 13:02 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 13:02 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 13:02 | PMD |
| m & p-Xylene | 3.99 | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 13:02 | PMD |
| o-Xylene | 15.9 | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 13:02 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 13:02 | PMD |
| SURROGATE: Toluene-D8 | 104.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 100.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 98.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: Ct.=#PH0217, La.=#9601, Md.=#271, Ma.=#M-FL535
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 24, 2002
Report # 209000857
Order # 80313
South Carolina Cert ID# 96023

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-12
Collected: 09/17/02 00:00
Received: 09/19/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 09:59 | CJO |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 09:59 | CJO |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 09:59 | CJO |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 09:59 | CJO |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 09:59 | CJO |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 09:59 | CJO |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 09:59 | CJO |
| SURROGATE: Toluene-D8 | 102.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 96.40% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 104.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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OK.=#9523, SC.=#96023, Tn.=#TN02826,P.R.=FL-00535
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 24, 2002
Report # 209000857
Order # 80314
South Carolina Cert ID# 96023

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-13
Collected: 09/17/02 00:00
Received: 09/19/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 561 | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 08:56 | AA1 |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 08:56 | AA1 |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 08:56 | AA1 |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 08:56 | AA1 |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 08:56 | AA1 |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 08:56 | AA1 |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 09/19/2002 | 09/19/2002 | 08:56 | AA1 |
| SURROGATE: Toluene-D8 | 104.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 97.20% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 92.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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OK.=#9523, SC.=#96023, Tn.=#TN02826,P.R.=FL-00535
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 24, 2002
Report # 209000857
Order # 80315
South Carolina Cert ID# 96023

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-14
Collected: 09/17/02 00:00
Received: 09/19/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:59 | CJO |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:59 | CJO |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:59 | CJO |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:59 | CJO |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:59 | CJO |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:59 | CJO |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 09:59 | CJO |
| SURROGATE: Toluene-D8 | 103.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 90.80% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 102.50% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 24, 2002
Report # 209000857
Order # 80316
South Carolina Cert ID# 96023

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-17
Collected: 09/17/02 00:00
Received: 09/19/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 10.1 | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 10:00 | CJO |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 10:00 | CJO |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 10:00 | CJO |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 10:00 | CJO |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 10:00 | CJO |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 10:00 | CJO |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 10:00 | CJO |
| SURROGATE: Toluene-D8 | 102.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 96.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 92.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


September 24, 2002
Report # 209000857
Order # 80317
South Carolina Cert ID# 96023

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: CLS-WW
Collected: 09/17/02 00:00
Received: 09/19/02 10:00
Collected by: Client

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 10:01 | CJO |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 10:01 | CJO |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 10:01 | CJO |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 10:01 | CJO |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 10:01 | CJO |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 10:01 | CJO |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 09/20/2002 | 09/20/2002 | 10:01 | CJO |
| SURROGATE: Toluene-D8 | 106.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 98.40% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 98.50% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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OK.=#9523, SC.=#96023, Tn.=#TN02826,P.R.=FL-00535
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

# Access Analytical - Chain of Custody Record

Laboratory ID: _____

Project Submission #: 02/09-857;80300-80317 RUSH # _____ PO #: _____

Company Name: H2O

Address: 121 Centrum Dr

City: Irmo State: SC Zip: 29063

Project Name: DHEC-12335

Report To: R Gillespie

Sampled By (print): Burrell Cagle

REQUESTED LAB ANALYSIS: ↓

| Sample Label | Date Collected | Time Collected | Matrix | # of Cont | MTBE/BTEX/naphth | | | | | | | NOTES / COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mw-1 | 9-17 | | GW | 2 | X | | 80300 | | | | | |
| mw-2 * | | | | | X | | | | | | | * Did not receive sample |
| mw-3 | | | | | X | | 80301 | | | | | Informed Karen, 9/19/02 |
| mw-4 | | | | | X | | 80302 | | | | | - not sampled as per chrmpl. |
| mw-5 | | | | | X | | 80304 | | | | | |
| mw-6 | | | | | X | | 80305 | | | | | |
| mw-7 | | | | | X | | 80306 | | | | | |
| mw-8 | | | | | X | | 80307 | | | | | |
| mw-9 | | | | | X | | 80309 | | | | | |
| mw-10 | | | | | X | | 80310 | | | | | |

ACCESS ANALYTICAL, INC.

Phone: (803) 781-4243
1248 Lake Murray Blvd. Fax: 781-4303
Irmo, SC 29063 Toll Free (888) 315-4243
www.accessanalyticalinc.com

**Turnaround Time:**

Std. (5-7 Bus. days)
___RUSH*
*Date Required:_____
(For rush work, results faxed by end of business day on date required)

Samples Recd. on Ice?
✓ Yes
___ No

Project Location:
✓ SC
___ NC
___ Other_____(specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| Stephanie Cagle | 9/17/02 | 15:50 | Cheryl Barr |
| Cheryl Barr | 9/18/02 | 1700 | Fedex |
| Fedex | 9/19 | 10:00 | |

* **Preservative Codes** (*place corresponding # in block above analysis field*): 0=None, 1=HCl, 2=HNO3, 3=H2SO4, 4=NaOH, 5=Na2S2O3, 6=NaHSO4, Other=Specify



Access Analytical, Inc.
See Reverse for Terms and Conditions

Original Copy - Returned w/Report
Yellow Copy - Access File Copy
Pink Copy - Client Copy

# Access Analytical - Chain of Custody Record

Laboratory ID: _____

Project Submission #: 02/09-857; 80312-80317 RUSH # _____ PO #: _____

Company Name: H2O Environmental

Address: 121 Centrum Dr. Ste 2

City: Irmo State: SC Zip: 29063

Project Name: DHE-12335 Crawfords

Report To: Rick Gillespie

Sampled By (print): David Burritt

Preservative: (*see codes below) 1

REQUESTED LAB ANALYSIS: → BTEX, MTBE, NAPH

| Sample Label | Date Collected | Time Collected | Matrix | # of Cont | | | | | | | | NOTES / COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-11 | 9/17/02 | | GW | 2 | | X | | 80312 | | | | |
| MW-12 | | | | | | | | 80313 | | | | |
| MW-13 | | | | | | | | 80314 | | | | |
| MW-14 | | | | | | | | 80315 | | | | |
| MW-17 | | | | | | | | 80316 | | | | |
| CLS-WW | | | | | | | | 80317 | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

ACCESS ANALYTICAL, INC.

Phone: (803) 781-4243
1248 Lake Murray Blvd. Fax: 781-4303
Irmo, SC 29063 Toll Free (888) 315-4243
www.accessanalyticalinc.com

**Turnaround Time:**

✓ Std. (5-7 Bus. days)
___ RUSH*
*Date Required: _____
(For rush work, results faxed by end of business day on date required)

Samples Recd. on Ice?
✓ Yes
___ No

Project Location:
✓ SC
___ NC
___ Other _____ (specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| Stephanie Cogle | 9/18/02 | 15:50 | Cheryl Barr |
| Cheryl Barr | 9/18/02 | 1700 | Fedex |
| Fedex | 9/19 | 10:00 | |

* **Preservative Codes** (*place corresponding # in block above analysis field*): 0=None, 1=HCL, 2=HNO3, 3=H2SO4, 4=NaOH, 5=Na2S2O3, 6=NaHSO4, Other=Specify



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John A

RECEIVED

DEC 0 2 2002

UNDERGROUND STORAGE
TANK PROGRAM

# MONITORING WELL INSTALLATIONS

## CRAWFORD'S COUNTRY STORE
## 5870 HIGHWAY 28 NORTH
## ABBEVILLE, SOUTH CAROLINA

**SCDHEC SITE ID #12335**

UST
55HEC
DOCKETING

**Submitted to:**

**Bureau of Underground Storage Tank Management**
**South Carolina Department of Health and Environmental Control**
**2600 Bull Street**
**Columbia, South Carolina 29201**

**Prepared By:**

**FORCE & ASSOCIATES, INC.**
147 Vera Road, Suite A
Lexington, South Carolina 29072
(803) 359-3200 (803) 359-6682-Fax

**NOVEMBER 2002**

***Force & Associates, Inc.***
*147 Vera Road, Suite A, Lexington, South Carolina 29072 (803) 359-3200 (803) 359-6682 fax*

*November 18, 2002*

*Mr. John D. Abernathy, Hydrogeologist*
*Owner/Operator Assistance Section*
*Assessment & Corrective Action Division*
*UST Program*
*Bureau of Land and Waste Management*
*South Carolina Department of Health and Environmental Control*
*2600 Bull Street*
*Columbia, South Carolina 29201*

*ATTN: Mr. John D. Abernathy, Hydrogeologist*

*Re: Monitoring Well Installations*
*Crawford's Country Store, SCDHEC Site ID #12335*
*5870 Highway 28 North*
*Abbeville, South Carolina*

*Dear Mr. Abernathy:*

Force & Associates, Inc., is pleased to submit the attached water well records for monitoring wells MW-1R and MW-13R installed at the referenced facility on November 15, 2002.

The following measurements were recorded from field personnel on November 15, 2002:

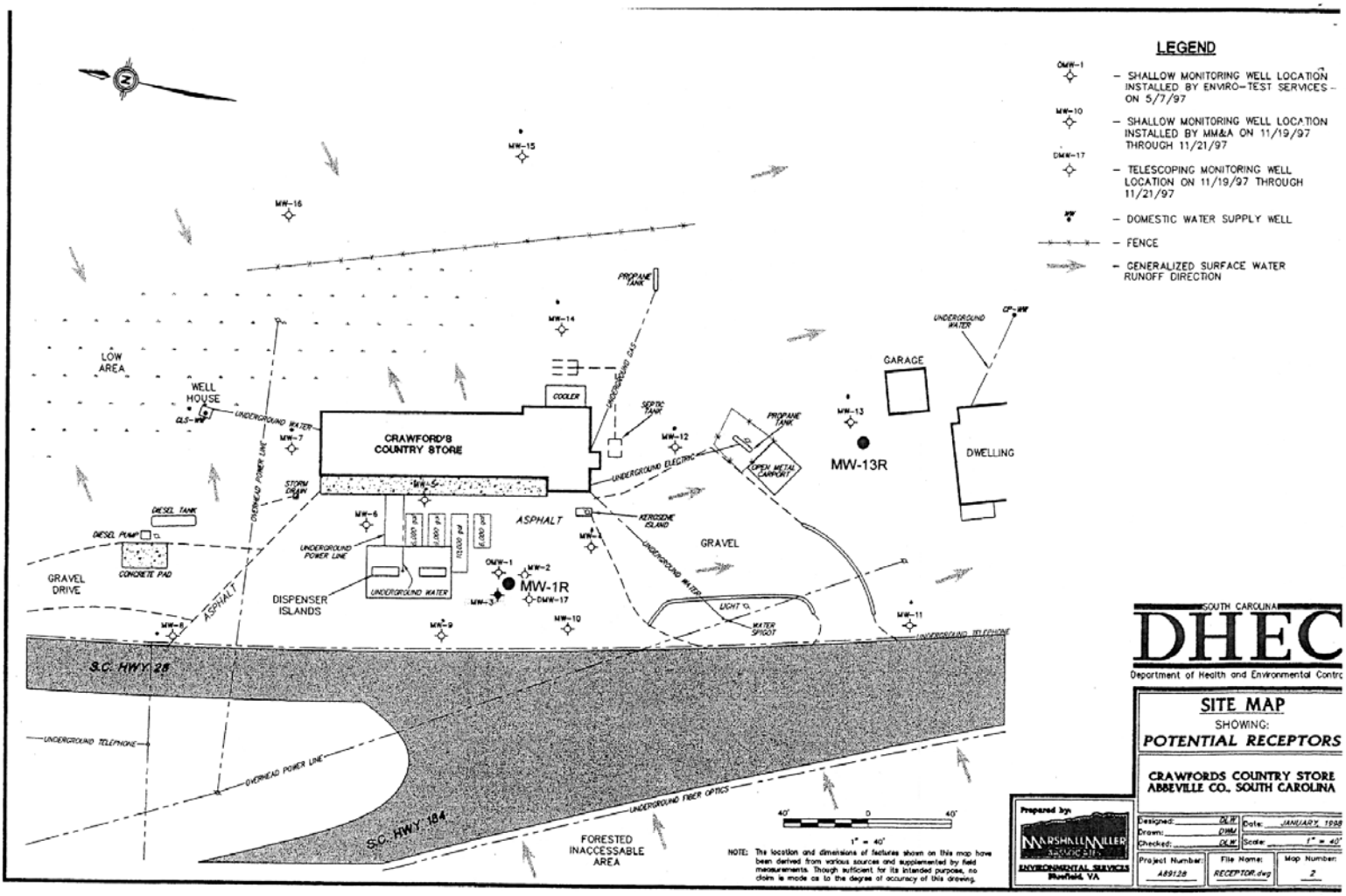
| MW # | TOC Elevation (ft) | Depth to Water (ft) | pH (s.u.) | Conductivity (umhos/cm) | Temperature (°C) |
|---|---|---|---|---|---|
| MW-1R | 99.82 | 19.13 | 5.2 | 180 | 23.1 |
| MW-13R | 100.80 | 23.27 | 5.2 | 44 | 17.9 |

The site map, field data sheets, well construction logs, and the disposal manifests are attached for your review.

Thank you for your assistance with this project. If you have any questions or require additional information, please contact my office at 803-359-3200.

*Sincerely,*
***FORCE & ASSOCIATES, INC.***

*Greg Force, P.G.*
*President*




SOUTH CAROLINA
# DHEC
Department of Health and Environmental Control

## SITE MAP
SHOWING:
**POTENTIAL RECEPTORS**

**CRAWFORDS COUNTRY STORE**
**ABBEVILLE CO., SOUTH CAROLINA**

Prepared by:
MARSHALL MILLER & ASSOCIATES
ENVIRONMENTAL SERVICES
Bluefield, VA

| | | | |
|---|---|---|---|
| Designed: DLW | | Date: JANUARY, 1998 | |
| Drawn: DMH | | Scale: 1" = 40' | |
| Checked: DLW | | | |
| Project Number: A89128 | File Name: RECEPTOR.dwg | Map Number: 2 | |

South Carolina Department of Health and Environmental Control
Bureau of Underground Storage Tank Management

Page _ of _

# Field Data Information Sheet for Ground Water Sampling

Date(mm/dd/yy) 11-15-02
Field Personnel OA
General Weather Conditions P. CLOUDY
Ambient Air Temperature 16 °C

Facility Name CRAWFORD'S COUNTRY STORE Site ID# 12335

Quality Assurance:

pH Meter: serial no. _____
pH=4.0 _____
pH=7.0 _____
pH=10.0 _____

Conductivity Meter serial no. _____
Standard _____
Standard _____
Standard _____

Chain of Custody

| Relinquished by | Date /Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

Well # MW-1R

Well Diameter(D) 2 inch or ___ feet
conversion factor(C): 3.143*(D/2)^2
for a 2 inch well C=0.163
4 inch well C=0.652
Total Well Depth(TWD) 25 ft.
Depth to GW (DGW) 19.13 ft.

Length of Water Column(LWC=TWD-DGW) 5.87 ft.

1 Csg. Volume(LWC * C) = 5.87 X .163 = 0.95 gals.
3 Csg. Volumes = 3 X 0.95 = 2.85 gals. (Std. Purge Volume)

Total Volume of Water Purged Before Sampling 2.0 gals.

| | Initial | 1st vol. | 2nd vol. | 3rd vol. | 4th vol. | 5th vol. | Post | Sampling |
|---|---|---|---|---|---|---|---|---|
| **Volume Purged** (gallons) | | 0.95 | 0.95 | | | | | |
| **Time** (military) | 1711 | 1715 | 1720 | | | | | |
| **pH** (s.u.) | 5.1 | 5.0 | 5.2 | | | | | |
| **Specific Cond.** (umhos/cm) | 98 | 101 | 180 | | | | | |
| **Water Temp** (°C) | 20.9 | 23.9 | 23.1 | | | | | |
| **Turbidity** (*) | CLEAR | CLOUDY | CLOUDY | | | | | |
| **PID Readings** | | | | | | | | |

* subjective (1) None (2) Faint (3) Moderate (4) Strong

Remarks BAILED DRY DURING 2ND VOL., RECHARGED CLEAR FOR REST OF 2ND VOL.

South Carolina Department of Health and Environmental Control

Page _ of _

Bureau of Underground Storage Tank Management

# Field Data Information Sheet for Ground Water Sampling

Date(mm/dd/yy) 11-15-02
Field Personnel OA
General Weather Conditions P. CLOUDY
Ambient Air Temperature 17 °C

Facility Name CRAWFORD'S COUNTRY STORE Site ID# 12335

Quality Assurance:

pH Meter: serial no.
pH=4.0
pH=7.0
pH=10.0

Conductivity Meter serial no.
Standard
Standard
Standard

Chain of Custody

| Relinquished by | Date /Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

Well # MW-13R

Well Diameter(D) 2 inch or ___ feet
conversion factor(C): 3.143*(D/2)^2
for a 2 inch well C=0.163
4 inch well C=0.652
Total Well Depth(TWD) 30.0 ft.
Depth to GW (DGW) 23.27 ft.

Length of Water Column(LWC=TWD-DGW) 6.73 ft.

1 Csg. Volume(LWC * C) = 6.73 X .163 = 1.10 gals.
3 Csg. Volumes = 3 X 1.10 = 3.30 gals. (Std. Purge Volume)

Total Volume of Water Purged Before Sampling 2.0 gals.

| | Initial | 1st vol. | 2nd vol. | 3rd vol. | 4th vol. | 5th vol. | Post | Sampling |
|---|---|---|---|---|---|---|---|---|
| **Volume Purged** (gallons) | | 1.10 | 1.10 | | | | | |
| **Time** (military) | 1527 | 1530 | 1532 | | | | | |
| **pH** (s.u.) | 5.4 | 5.2 | 5.2 | | | | | |
| **Specific Cond.** (umhos/cm) | 46 | 41 | 44 | | | | | |
| **Water Temp** (°C) | 17.7 | 18.6 | 17.9 | | | | | |
| **Turbidity** (*) | CLEAR | CLOUDY | CLOUDY | | | | | |
| **PID Readings** | | | | | | | | |

* subjective (1) None (2) Faint (3) Moderate (4) Strong

Remarks BAILED DRY DURING 2ND VOL. - RECHARGED CLEAR FOR REST OF 2ND

DHEC

# Water Well Record

2600 Bull Street, Columbia, SC 29201-1708; (803) 896-6240

**1. WELL OWNER INFORMATION:**

Harold Franklin Crawford
5870 Highway 28 North
Abbeville, SC 29620
864-348-7442

**6. PERMIT NUMBER:**

**7. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitoring Well ☐ Replacement

**8. WELL DEPTH (completed)** 25.0 ft. **Date Started:** 11/15/02 **Date Completed:** 11/15/02

**9.** ☐ Mud Rotary ☐ Cable tool ☐ Air Rotary ☑ Bored ☐ Dug ☐ Jetted ☐ Driven ☐ Other

**2. LOCATION OF WELL:**
Crawford's Country Store
5870 Highway 28 North
Abbeville, SC 29620
**County:** Abbeville
**Latitude:** **Longitude:**

**10. CASING:** ☑ Threaded ☐ Welded
**Diam.:** 2.0"
**Type:** ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 15.0 ft.
in. to ft.
**Height: Above/Below**
**Surface** ft.
**Weight** lb./ft.
**Drive Shoe?** ☐ Yes ☑ No

**3. SYSTEM NAME:** Crawford's Country Store **SYSTEM NUMBER:** #12335

**4. CUTTING SAMPLES:** ☑ Yes ☐ No

**Geophysical Logs:** ☐ Yes (please enclose) ☑ No

**11. SCREEN** **Type** PVC **Diam.:** 2.0"
**Slot/Gauge:** #10 **Length:** 10.0'
**Set Between:** 25.0 ft. and 15.0 ft. **NOTE: MULTIPLE SCREENS**
ft. and ft. **USE SECOND SHEET**
**Sieve Analysis** ☐ Yes (please enclose) ☑ No

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Concrete | 0.50 | 0.50 |
| Gravel, Fill | 1.50 | 2.0 |
| Orange/Red Slightly Sandy Micaceous Clay | 3.0 | 5.0 |
| Red/Orange Slightly Sandy Micaceous Clay | 5.0 | 10.0 |
| Brown Slightly Sandy Micaceous Clay | 5.0 | 15.0 |
| Light Brown Slightly Sandy Micaceous Clay | 5.0 | 20.0 |
| Brown Clayey Sand | 5.0 | 25.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**12. STATIC WATER LEVEL**
19.13 ft.

**13. PUMPING LEVEL Below Land Surface.**
ft. after hrs. Pumping G.P.M.
**Pumping Test:** ☐ Yes (please enclosed) ☑ No
**Yield:**

**14. WATER QUALITY**
**Chemical Analysis** ☑ Yes ☐ No **Bacterial Analysis** ☐ Yes ☑ No
Please enclose lab results.

**15. ARTIFICIAL FILTER (filter pack)** ☑ Yes ☐ No
Installed from 25.0 ft. to 13.0 ft.
Effective size "FX-50" Uniformity Coefficient

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Sand Cement ☐ Concrete ☑ Other Bentonite
Depth: From 13.0 ft. to ground surface

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ft in direction
Type well disinfected ☐ Yes Type:
upon completion ☐ No Amount:

**18. PUMP: Date installed:** **Not installed** ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Owen Astwood **Cert. No.:** 1647
Force & Associates, Inc.
147 Vera Road, Suite A, Lexington, SC 29072
803-359-3200

**20. WATER WELL CONTRACTOR'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: Owen Astwood Date: 11-18-02
Authorized Representative

**5. REMARKS:** MW-1R

DHEC

# Water Well Record

2600 Bull Street, Columbia, SC 29201-1708; (803) 896-6240

**1. WELL OWNER INFORMATION:**

Harold Franklin Crawford
5870 Highway 28 North
Abbeville, SC 29620
864-348-7442

**6. PERMIT NUMBER:**

**7. USE:** ☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitoring Well ☐ Replacement

**8. WELL DEPTH (completed)** 30.0 ft. **Date Started:** 11/15/02 **Date Completed:** 11/15/02

**9.** ☐ Mud Rotary ☐ Cable tool ☐ Air Rotary ☑ Bored ☐ Dug ☐ Jetted ☐ Driven ☐ Other

**2. LOCATION OF WELL:**
Crawford's Country Store
5870 Highway 28 North
Abbeville, SC 29620
**County:** Abbeville
**Latitude:** **Longitude:**

**10. CASING:** ☑ Threaded ☐ Welded
**Diam.:** 2.0"
**Type:** ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
0 in. to 20.0 ft.
in. to ft.
**Height: Above/Below**
**Surface** ft.
**Weight** lb./ft.
**Drive Shoe?** ☐ Yes ☑ No

**3. SYSTEM NAME:** Crawford's Country Store **SYSTEM NUMBER:** #12335

**4. CUTTING SAMPLES:** ☑ Yes ☐ No

**Geophysical Logs:** ☐ Yes (please enclose) ☑ No

**11. SCREEN** **Type** PVC **Diam.:** 2.0"
**Slot/Gauge:** #10 **Length:** 10.0'
**Set Between:** 30.0 ft. and 20.0 ft. **NOTE: MULTIPLE SCREENS**
ft. and ft. **USE SECOND SHEET**
**Sieve Analysis** ☐ Yes (please enclose) ☑ No

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| Topsoil, Gravel Fill | 1.0 | 1.0 |
| Orange/Red Slightly Sandy Micaceous Clay | 4.0 | 5.0 |
| Red/Orange Slightly Sandy Micaceous Clay | 5.0 | 10.0 |
| Brown Slightly Sandy Micaceous Clay | 10.0 | 20.0 |
| Light Brown Sandy Micaceous Clay | 5.0 | 25.0 |
| Saprolite Lens | 4.0 | 29.0 |
| Brown Clayey Sand | 1.0 | 30.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**12. STATIC WATER LEVEL**
23.27 ft.

**13. PUMPING LEVEL Below Land Surface.**
ft. after hrs. Pumping G.P.M.
**Pumping Test:** ☐ Yes (please enclosed) ☑ No
**Yield:**

**14. WATER QUALITY**
**Chemical Analysis** ☑ Yes ☐ No **Bacterial Analysis** ☐ Yes ☑ No
Please enclose lab results.

**15. ARTIFICIAL FILTER (filter pack)** ☑ Yes ☐ No
Installed from 30.0 ft. to 18.0 ft.
Effective size "FX-50" Uniformity Coefficient

**16. WELL GROUTED?** ☑ Yes ☐ No
☐ Neat Cement ☐ Sand Cement ☐ Concrete ☑ Other Bentonite
Depth: From 18.0 ft. to ground surface

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ft in direction
Type well disinfected ☐ Yes Type:
upon completion ☐ No Amount:

**18. PUMP: Date installed:** **Not installed** ☑
Mfr. Name: Model No.:
H.P. Volts Length of drop pipe ft. Capacity gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** Owen Astwood **Cert. No.:** 1647
Force & Associates, Inc.
147 Vera Road, Suite A, Lexington, SC 29072
803-359-3200

**20. WATER WELL CONTRACTOR'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

**5. REMARKS:** MW-13R

Signed: Owen Astwood Authorized Representative **Date:** 11-18-02

# SPECIAL WASTE MANIFEST

**WASTE ID # RC 0112022**

**EXPIRATION DATE: December 20, 2002**

**WASTE MANAGEMENT**

1047 Highway Church Rd.
Elgin, SC 29045
(803) 788-3054 Phone
(803) 736-0995 Fax

**GENERATOR OF WASTE:** FORCE AND ASSOCIATES

**CUSTOMER ACCOUNT:** FORCE AND ASSOCIATES 820-436

**LOCATION OF WASTE :** Shelton's Food Stores, Crawford's Country Store, Hot Spot 3005
2 DRUMS 1 DRUM 2 DRUMS

**PHONE #** 803-359-3200 **CONTACT:** SANDRA SEWARD

**FAX #** 803-359-6682

**GENERATOR'S SIGNATURE** _____ **DATE:** _____

**TRANSPORTER OF WASTE** _____

**DATE:** 11-22-02 **TRUCK NO.** 1

**DRIVER'S SIGNATURE** Barry P Sullivan

****** TO BE COMPLETED BY RICHLAND LANDFILL ******

**DISPOSAL SITE:** RICHLAND LANDFILL ELGIN, SC

**DESCRIPTION OF WASTE** Soil Boring for SCDHEC Assessment Program (Soil)
Analyticals to be submitted to Sara Adams for review prior to landfill delivery

**TICKET NO.#** 418450 **TONNAGE** 1.13

**RECEIVED BY** SB

# NON-HAZARDOUS WASTE MANIFEST

| 1. Generator's US EPA ID No. | Manifest Document No. | 2. Page 1 of 1 |
|---|---|---|
| C·E·S·O·G· . . . . . | 2·4·1·4·1 | |

**3. Generator's Name and Mailing Address**
Force & Associates
147 Vera Road
Lexington, SC 29072
**4. Generator's Phone** ( 803 ) 359-7847

| 5. Transporter 1 Company Name | 6. US EPA ID Number | A. Transporter's Phone |
|---|---|---|
| Force & Associates | . . . . . | (803) 359-7847 |
| **7. Transporter 2 Company Name** | **8. US EPA ID Number** | **B. Transporter's Phone** |
| Providence Environmental, Inc. | S.C.R.0.0.0.7.6.0.9.1.8 | (866) 754-1175 |
| **9. Designated Facility Name and Site Address** | **10. US EPA ID Number** | **C. Facility's Phone** |
| US Filter<br>2115 Speedrail Court<br>Concord, NC 28025 | N.C.R.0.0.0.0.0.3.3.1.9 | (704) 455-1397 |

| 11. Waste Shipping Name and Description | 12. Containers No. | Type | 13. Total Quantity | 14. Unit Wt/Vol |
|---|---|---|---|---|
| a. Non hazardous waste waters | 001 | D.M | 60 | P |
| b. | | | | |
| c. | | | | |
| d. | | | | |

| D. Additional Descriptions for Materials Listed Above | E. Handling Codes for Wastes Listed Above |
|---|---|
| | |

**15. Special Handling Instructions and Additional Information**
Emergency Response Contact: 866-754-1175
Hot Spot Shelton's Food
Crawfords
Don Bryant Prop.

**16. GENERATOR'S CERTIFICATION:** I certify the materials described above on this manifest are not subject to federal regulations for reporting proper disposal of Hazardous Waste.

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Gary Phillips | Gary Phillips | 11 | 22 | 02 |

**17. Transporter 1 Acknowledgement of Receipt of Materials**

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Gary Phillips | Gary Phillips | 11 | 22 | 02 |

**18. Transporter 2 Acknowledgement of Receipt of Materials**

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| Renee Hinson | Renee Hinson | 11 | 22 | 02 |

**19. Discrepancy Indication Space**

**20. Facility Owner or Operator: Certification of receipt of waste materials covered by this manifest except as noted in Item 19.**

| Printed/Typed Name | Signature | Month | Day | Year |
|---|---|---|---|---|
| | | . | . | . |

GENERATOR — TRANSPORTER — FACILITY

TRANSPORTER #1

***Force & Associates, Inc.***
*147 Vera Road, Suite A, Lexington, South Carolina 29072 (803) 359-3200 (803) 359-6682 fax*

*South Carolina Department of Health*
*and Environmental Control*
*Assessment and Corrective Action Division*
*Bureau of UST Management*
*2600 Bull Street*
*Columbia, South Carolina 29201*

*RE: Treatment of Purge Water*

*To SCDHEC Project Manager:*

Source:

Groundwater derived from development and purging of monitoring wells.

Conditions:

All purge water was contained in 55-gallon drums. Only water with hydrocarbon concentrations less than 20,000 ppb total BTEX and Benzene less than 5,000 ppb were treated using an activated carbon filter. Purge water with concentration exceeding 20,000 ppb were disposed of at licensed waste water treatment facility. The manifest is attached if applicable. No free product was treated using the filter. All specifications from the manufacturer and SCDHEC were strictly followed. All appropriate purge water was treated on-site. Records involving date, quantity, concentration, and location are attached.

**PURGE/DEVELOPMENT WATER TREATMENT**

| Date | Site Name/ID# | Worst Case Benzene Concentration (ppb) | Worst Case BTEX Concentration (ppb) | Quantity (# of drums) | Technician Initials |
|---|---|---|---|---|---|
| 11/15/02 | Crawford's Country Store SCDHEC Site ID #12335 | < 1.0 (MW-13) | < 1.0 (MW-13) | 1 | OA |

*All development water was treated based on previous analytical results.

February 6, 2003

RECEIVED
FEB 10 2003
UNDERGROUND STORAGE TANK PROGRAM

Mr. John Abernathy
Underground Storage Tank Program
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

UST DOCKETING 56td

RE: 10th Quarterly Report
Crawford's Country Store
5870 Hwy 28 North
Antreville, South Carolina
SCDHEC Site ID # 12335

Dear Mr. Abernathy:

On February 4, 2000, the South Carolina Department of Health and Environmental Control (SCDHEC) provided notice to proceed to $H_2O$ Environmental, Inc. ($H_2O$) to perform Corrective Action at Crawford's Country Store located at 5870 Highway 28 North, Antreville, South Carolina. See Figure 1, Attachment 1 for a layout of the site and remediation system. The objective of the project is to reduce the Chemicals of Concern (COC) in monitoring wells OMW-1, MW-2 through MW-5, MW-7 through MW-15, DMW-17, CP-WW and CLS-WW to the site specific target levels (SSTLs). A chronological summary of site activities is provided below:

| | |
|---|---|
| 2/4/00 | SCDHEC awarded Bid Number SB-9570-12/02/99-TC |
| 3/02/00 | Corrective Action Plan/Engineering Report submitted to SCDHEC |
| 4/18/00 | CAP/ER approved |
| 4/26/00 | Initial groundwater sampling event |
| 5/17/00 | Initial groundwater results submitted |
| 5/22/00-5/31/00 | System installed |
| 5/31/00 | System was inspected and approved Todd Adams of SCDHEC |
| 5/31/00 | Invoice submitted for payment of 40% of the contract amount |
| 6/14/00 | System start-up |
| 8/01/00 | 1st quarter sampling event |
| 8/28/99 | 1st quarter report submitted |
| 9/13/00 | Free product recovery from OMW-1, MW-2 and MW-3 |
| 12/13/00 | 2nd quarter sampling event |
| 2/16/01 | 2nd quarter report submitted |
| 2/6/01 | 3rd quarter sampling event |
| 3/15/01 | 3rd quarter report submitted |
| 6/5/01 | 4th quarter sampling event |

| | |
|---|---|
| 7/31/01 | 4th quarter report submitted |
| 9/13/01 | 5th quarter sampling event |
| 10/18/01 | 5th quarter report submitted |
| 12/7/01 | 6th quarter sampling event |
| 2/4/02 | 6th quarter report submitted |
| 3/5/02 | 7th quarter sampling event |
| 4/26/02 | 7th quarter report submitted |
| 6/6/02 | 8th quarter sampling event |
| 7/10/02 | 8th quarter report submitted |
| 9/17/02 | 9th quarter sampling event |
| 10/28/02 | 9th quarter report submitted |
| 12/12/02 | 10th quarter sampling event |

An air injection/vapor extraction system was installed in May 2000 and put in operation in June 2000. The system consists of ten air injection/vapor extraction wells SV-1 through SV-10. In order to target the source area, $H_2O$ is rotating air sparging in injection/vapor extraction wells SV-1 through SV-10 and extracting vapor from injection/vapor extraction wells SV-1 through SV-8. Refer to Figure 1, Attachment 1 for a map illustrating the system layout. The following table summarizes the general operating characteristics of the system.

**Summary of System Operating Characteristics**

| Well ID | Activity | PSI | CFM | IWG |
|---|---|---|---|---|
| SV-1 - SV-8 | Vapor Extraction | -- | -- | 55 |
| SV-1 - SV-10 | Air Sparging | 10 | 6 | -- |

An air sample was collected from the effluent of the vapor extraction system on August 1, 2000. Based on the review of the laboratory analysis, it is estimated that contaminant emissions will not exceed 1,000 pounds per month. An air sample was not collected this quarter because the OVA field screening results were below detection limits.

On December 12, 2002, $H_2O$ Environmental Inc. personnel gauged and collected groundwater samples from monitoring wells MW-1R, MW-2 through MW-17, and water well CLS-WW at the site. Water well CP-WW located at the Green residence was not operational at the time of the sampling event and a groundwater sample could not be collected. A new water well has been installed and is currently being used by the Green residence. The groundwater samples were analyzed for Benzene, Toluene, Ethylbenzene, total Xylenes (BTEX), Methyl-Tert-Butyl Ether (MTBE), and Naphthalene. Following groundwater sampling, a bacteria nutrient mixture was injected into the subsurface. An additional bioremediation event was conducted on January 14, 2003. The bioremediation technology was approved for use on August 12, 2002.

A review of the groundwater elevation data indicated a groundwater flow direction to the south-southeast. Table 1, Attachment 2, summarizes field data collected during monitoring well purging. The groundwater elevations are summarized on Table 2, Attachment 2, and illustrated on Figure 2, Attachment 1. The groundwater quality for Chemicals of Concern is summarized on Table 3, Attachment 2, and illustrated on Figure 3, Attachment 1. A copy of the laboratory analytical report is provided in Attachment 3. Groundwater generated during well purging was either placed in on-site 55-gallon drums or discharged on site as warranted by the data. Any disposal manifests will be forwarded to DHEC upon receipt.

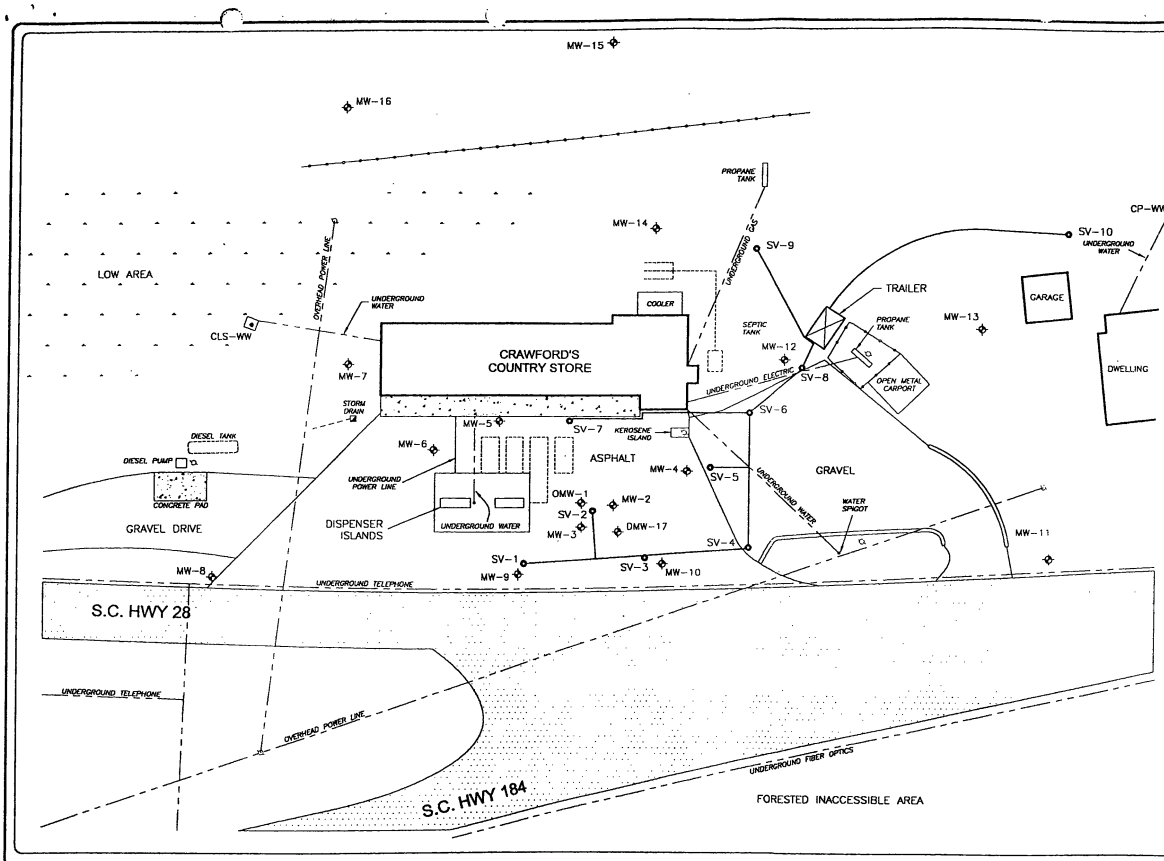
Based on the groundwater quality, $H_2O$ will continue to operate the remediation system. If you have any questions or comments please do not hesitate to contact me at (803) 749-4080.

Sincerely,

**$H_2O$ Environmental, Inc.**
Class I Site Rehabilitation Contractor No. 32

Richard D. Gillespie, P.G.
Senior Geologist 2-6-03
License Number 2199

# ATTACHMENT 1
# FIGURES




## LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

H2O ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

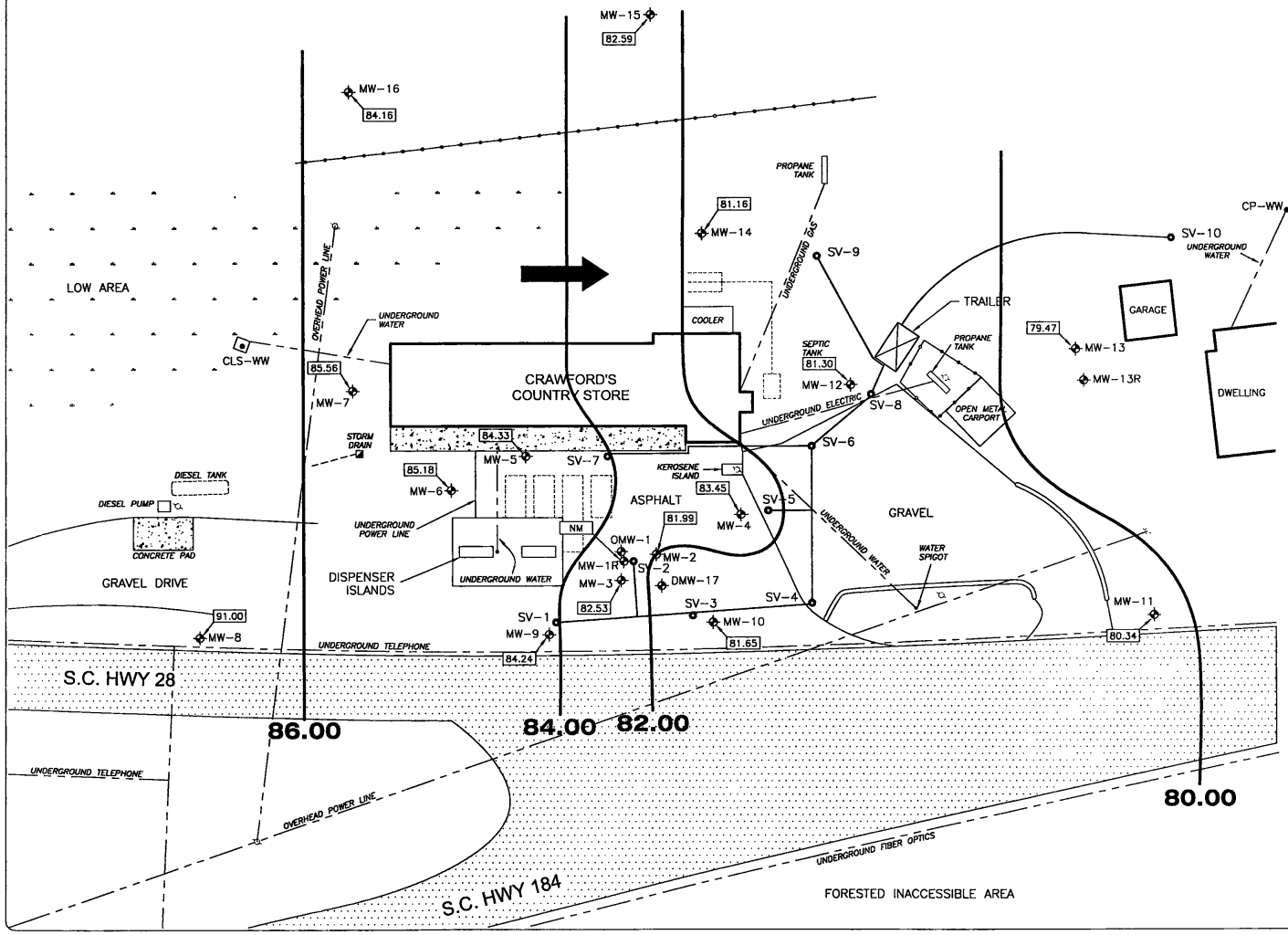
PROJECT NO: DHE-12335

DRAWING DATE: 08/24/2000

DRAWN BY: J.Driscoll

FIGURE NO: 1

FIGURE TITLE: REMEDIAL SYSTEM AS-BUILT




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |
| 0.00 | WATER TABLE ELEVATION (FEET) |
| | GROUNDWATER FLOW DIRECTION |
| 0.00 | GROUNDWATER ELEVATION CONTOUR |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

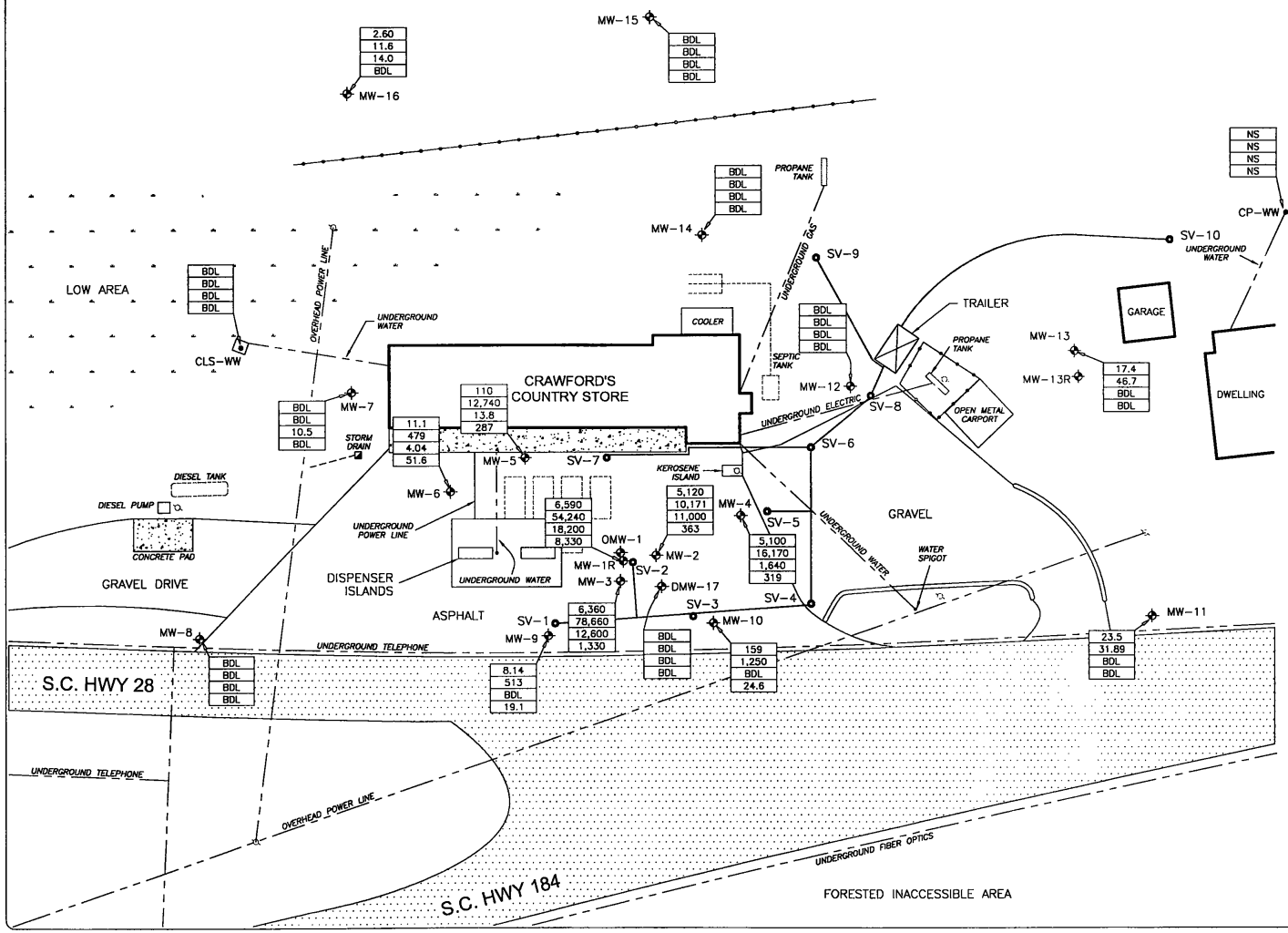
PROJECT NO: DHE-12335

DRAWING DATE: 1/15/2003

DRAWN BY: JJD

FIGURE NO: 2

FIGURE TITLE: GROUNDWATER FLOW MAP - 12/12/2002




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

| | |
|---|---|
| BDL | BENZENE |
| BDL | TOTAL BTEX |
| BDL | MTBE |
| BDL | NAPHTHALENE |

All results reported in parts per billion (ug/L)
FP = Free product.
BDL = Below detectable levels
NS = Not Sampled.

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

FIGURE TITLE: GROUNDWATER QUALITY MAP - 12/12/2002

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 1/15/2003

DRAWN BY: JJD

FIGURE NO: 3

# ATTACHMENT 2
# TABLES

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 8/5/1999 | 17.95 | 22' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.68 | 22' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 21.50 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 21.46 | 22' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 19.89 | 22' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.18 | 22' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 18.74 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21.75 | 22' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 19.77 | 22' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 16.59 | 22' | 2" | 2.6 | NM | NM | NM | NM |
| | 9/17/2002 | 19.97 | 22' | 2" | 1.0 | NM | NM | 0.93 | 25.1 |
| MW-1R | 12/12/2002 | 17.44 | 22' | 2" | 2.2 | NM | 0.82 | 3.87 | 18.7 |
| MW-2 | 8/5/1999 | 19.19 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 22.30 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 21.36 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 18.89 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.42 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 19.03 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21.98 | 25' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 19.90 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 16.88 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 20.44 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/12/2002 | 17.84 | 25' | 2" | 3.5 | NM | 0.92 | 1.53 | 19.2 |
| MW-3 | 8/5/1999 | 17.96 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.73 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 20.85 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 22.18 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 19.26 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.41 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 18.80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21.24 | 25' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 18.69 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 15.44 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 9/17/2002 | 20.11 | 25' | 2" | 2.4 | NM | NM | 1.21 | 24.3 |
| | 12/12/2002 | 17.45 | 25' | 2" | 3.7 | NM | 0.53 | 2.91 | 19.6 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-4 | 8/5/2000 | 17.59 | 25' | 2" | 3.7 | 4.3 | 75.7 | 2.06 | 21.0 |
| | 4/26/2000 | 16.51 | 25' | 2" | 4.2 | 6.0 | 0.78 | 1.82 | 20.2 |
| | 8/1/2000 | 20.63 | 25' | 2" | 2.1 | 5.4 | 0.52 | 3.91 | 21.9 |
| | 12/13/2000 | 20.81 | 25' | 2" | 2.0 | 5.5 | NM | 1.90 | 18.5 |
| | 2/6/2001 | 19.09 | 25' | 2" | 2.9 | NM | NM | NM | NM |
| | 6/5/2001 | 17.70 | 25' | 2" | 3.6 | 5.3 | NM | 1.80 | 21.8 |
| | 9/13/2001 | 19.16 | 25' | 2" | 2.9 | NM | NM | 2.29 | 22.2 |
| | 12/7/2001 | 21.86 | 25' | 2" | 1.5 | 7.1 | NM | 2.42 | 21.5 |
| | 3/5/2002 | 18.91 | 25' | 2" | 3.0 | 6.9 | NM | 5.40 | 15.3 |
| | 6/6/2002 | 16.93 | 25' | 2" | 3.9 | NM | NM | NM | NM |
| | 9/17/2002 | 20.63 | 25' | 2" | 2.1 | NM | NM | 3.20 | 24.1 |
| | 12/12/2002 | 16.14 | 25' | 2" | 4.3 | NM | 0.79 | 2.32 | 19.4 |
| MW-5 | 8/5/1999 | 15.95 | 25' | 2" | 4.4 | 4.5 | 111.8 | 1.65 | 21.0 |
| | 4/26/2000 | 14.35 | 25' | 2" | 5.2 | 6.2 | 0.92 | 2.73 | 19.4 |
| | 8/1/2000 | 19.18 | 25' | 2" | 2.8 | 5.1 | 0.5 | 1.25 | 20.8 |
| | 12/13/2000 | 19.68 | 25' | 2" | 2.6 | 5.3 | NM | 2.51 | 18.4 |
| | 2/6/2001 | 16.50 | 25' | 2" | 4.2 | NM | NM | NM | NM |
| | 6/5/2001 | 15.51 | 25' | 2" | 4.6 | 4.5 | NM | 1.88 | 21.5 |
| | 9/13/2001 | 17.48 | 25' | 2" | 3.7 | NM | NM | 1.94 | 22.2 |
| | 12/7/2001 | 20.09 | 25' | 2" | 2.4 | 6.9 | NM | 2.16 | 21.8 |
| | 3/5/2002 | 16.15 | 25' | 2" | 4.3 | 6.8 | NM | 3.90 | 18.4 |
| | 6/6/2002 | 15.11 | 25' | 2" | 4.8 | NM | NM | NM | NM |
| | 9/17/2002 | 18.31 | 25' | 2" | 3.3 | NM | NM | 1.72 | 22.9 |
| | 12/12/2002 | 15.09 | 25' | 2" | 4.8 | NM | 0.61 | 1.50 | 20.2 |
| MW-6 | 8/5/1999 | 15.44 | 25' | 2" | 4.7 | 4.6 | 96 | 2.35 | 22.0 |
| | 4/26/2000 | 13.65 | 25' | 2" | 5.6 | 6.1 | 0.92 | 1.72 | 18.6 |
| | 8/1/2000 | 18.75 | 25' | 2" | 3.1 | 4.95 | 0.48 | 2.23 | 20.4 |
| | 12/13/2000 | 18.23 | 25' | 2" | 3.3 | 5.14 | NM | 1.42 | 18.4 |
| | 2/6/2001 | 15.34 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 6/5/2001 | 14.84 | 25' | 2" | 5.0 | 5.57 | NM | 1.44 | 21.8 |
| | 9/13/2001 | 16.96 | 25' | 2" | 3.9 | NM | NM | 1.80 | 20.9 |
| | 12/7/2001 | 19.70 | 25' | 2" | 2.6 | 6.9 | NM | 2.05 | 20.4 |
| | 3/5/2002 | 15.20 | 25' | 2" | 4.8 | 6.7 | NM | 3.64 | 16.1 |
| | 6/6/2002 | 15.51 | 25' | 2" | 4.6 | NM | NM | NM | NM |
| | 9/17/2002 | 17.76 | 25' | 2" | 3.5 | NM | NM | 1.78 | 22.6 |
| | 12/12/2002 | 14.29 | 25' | 2" | 5.2 | NM | 1.32 | 0.51 | 19.1 |

# TABLE 1
## SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-7 | 8/5/1999 | 15.41 | 25' | 2" | 4.7 | 4.6 | 92.8 | 2.74 | 19.0 |
| | 4/26/2000 | 13.54 | 25' | 2" | 5.6 | 6.2 | 0.91 | 2.46 | 17.4 |
| | 8/1/2000 | 18.72 | 25' | 2" | 3.1 | 5.2 | 0.45 | 2.31 | 18.7 |
| | 12/13/2000 | 18.01 | 25' | 2" | 3.4 | 5.6 | NM | 1.96 | 16.5 |
| | 2/6/2001 | 15.41 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 6/5/2001 | 14.61 | 25' | 2" | 5.1 | 5.4 | NM | 2.25 | 19.9 |
| | 9/13/2001 | 16.91 | 25' | 2" | 4.0 | NM | NM | 2.50 | 20.9 |
| | 12/7/2001 | 19.64 | 25' | 2" | 2.6 | 7.1 | NM | 2.18 | 19.5 |
| | 3/5/2002 | 14.75 | 25' | 2" | 5.0 | 6.8 | NM | 7.83 | 14.6 |
| | 6/6/2002 | 14.43 | 25' | 2" | 5.2 | NM | NM | NM | NM |
| | 9/17/2002 | 17.34 | 25' | 2" | 3.7 | NM | NM | 1.29 | 21.5 |
| | 12/12/2002 | 13.91 | 25' | 2" | 5.4 | 6.9 | 0.72 | 3.69 | 16.4 |
| MW-8 | 8/5/2000 | 14.59 | 25' | 2" | 5.1 | 4.9 | 45.4 | 3.01 | 21.0 |
| | 4/26/2000 | 11.56 | 25' | 2" | 6.6 | 6.3 | 0.72 | 2.06 | 18.4 |
| | 8/1/2000 | 19.18 | 25' | 2" | 2.8 | 5.3 | 0.53 | 0.81 | 23.0 |
| | 12/13/2000 | 17.96 | 25' | 2" | 3.4 | 5.4 | NM | 1.93 | 18.7 |
| | 2/6/2001 | 13.34 | 25' | 2" | 5.7 | NM | NM | NM | NM |
| | 6/5/2001 | 13.15 | 25' | 2" | 5.8 | 5.4 | NM | 2.02 | 21.5 |
| | 9/13/2001 | 16.64 | 25' | 2" | 4.1 | NM | NM | 1.56 | 20.3 |
| | 12/7/2001 | 19.73 | 25' | 2" | 2.6 | 6.9 | NM | 1.40 | 20.4 |
| | 3/5/2002 | 11.41 | 25' | 2" | 6.6 | 6.7 | NM | 5.60 | 15.8 |
| | 6/6/2002 | 12.93 | 25' | 2" | 5.9 | NM | NM | NM | NM |
| | 9/17/2002 | 16.72 | 25' | 2" | 4.0 | NM | NM | 1.16 | 23.6 |
| | 12/12/2002 | 11.42 | 25' | 2" | 6.6 | 9.1 | 0.67 | 2.60 | 16.6 |
| MW-9 | 8/5/2000 | 16.74 | 25' | 2" | 4.0 | 4.9 | 57.2 | 1.47 | 22.0 |
| | 4/26/2000 | 15.09 | 25' | 2" | 4.8 | 5.9 | 0.72 | 1.45 | 20.4 |
| | 8/1/2000 | 21.2 | 25' | 2" | 1.9 | 5.7 | 0.59 | 2.62 | 23.9 |
| | 12/13/2000 | 19.73 | 25' | 2" | 2.6 | 5.4 | NM | 1.12 | 18.6 |
| | 2/6/2001 | 17.54 | 25' | 2" | 3.6 | NM | NM | NM | NM |
| | 6/5/2001 | 16.35 | 25' | 2" | 4.2 | NM | NM | NM | NM |
| | 9/13/2001 | 18.40 | 25' | 2" | 3.2 | 4.4 | NM | 2.91 | 23.5 |
| | 12/7/2001 | 21.00 | 25' | 2" | 2.0 | 6.9 | NM | 3.43 | 22.6 |
| | 3/5/2002 | 17.38 | 25' | 2" | 3.7 | 6.8 | NM | 1.83 | 19.4 |
| | 6/6/2002 | 16.80 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 19.64 | 25' | 2" | 2.6 | NM | NM | 0.97 | 23.7 |
| | 12/12/2002 | 16.29 | 25' | 2" | 4.3 | NM | 0.26 | 1.30 | 19.9 |

# TABLE 1
## SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-10 | 8/5/1999 | 18.06 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.75 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 20.50 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 19.40 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 18.84 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.38 | 25' | 2" | 3.7 | 5.6 | NM | 1.4 | 22.9 |
| | 9/13/2001 | 18.82 | 25' | 2" | 3.0 | 5.2 | NM | 3.20 | 23.2 |
| | 12/7/2001 | 23.90 | 25' | 2" | 0.5 | NM | NM | NM | NM |
| | 3/5/2002 | 19.09 | 25' | 2" | 2.9 | 6.9 | NM | 9.55 | 19.3 |
| | 6/6/2002 | 16.78 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 20.53 | 25' | 2" | 2.2 | NM | NM | 2.90 | 23.3 |
| | 12/12/2002 | 18.00 | 25' | 2" | 3.4 | NM | 0.87 | 4.25 | 18.1 |
| MW-11 | 8/5/1999 | 15.60 | 25' | 2" | 4.6 | 4.8 | 42.7 | 6.38 | 22.0 |
| | 4/26/2000 | 13.65 | 25' | 2" | 5.6 | 6.2 | 0.6 | 4.48 | 20.8 |
| | 8/1/2000 | 18.61 | 25' | 2" | 3.1 | 5.6 | 0.31 | 4.79 | 21.4 |
| | 12/13/2000 | 19.01 | 25' | 2" | 2.9 | 5.7 | NM | 5.15 | 19.8 |
| | 2/6/2001 | 17.43 | 25' | 2" | 3.7 | NM | NM | NM | NM |
| | 6/5/2001 | 15.96 | 25' | 2" | 4.4 | 5.8 | NM | 6.01 | 21.4 |
| | 9/13/2001 | 17.23 | 25' | 2" | 3.8 | 4.6 | NM | 5.82 | 22.4 |
| | 12/7/2001 | 19.74 | 25' | 2" | 2.6 | 6.8 | NM | 4.76 | 21.7 |
| | 3/5/2002 | 17.12 | 25' | 2" | 3.9 | 6.9 | NM | 7.56 | 15.2 |
| | 6/6/2002 | 15.03 | 25' | 2" | 4.9 | NM | NM | NM | NM |
| | 9/17/2002 | 18.88 | 25' | 2" | 3.0 | NM | NM | 1.68 | 23.2 |
| | 12/12/2002 | 16.13 | 25' | 2" | 4.3 | NM | 0.23 | 2.73 | 18.1 |
| MW-12 | 8/5/1999 | 17.33 | 25' | 2" | 3.8 | 4.6 | 129.2 | 2.09 | 19.0 |
| | 4/26/2000 | 16.06 | 25' | 2" | 4.4 | 6.3 | 1.03 | 2.9 | 18.5 |
| | 8/1/2000 | 20.15 | 25' | 2" | 2.4 | 4.5 | 0.67 | 5.01 | 19.6 |
| | 12/13/2000 | 23.7 | 25' | 2" | 0.6 | 5.4 | NM | 2.9 | 17.1 |
| | 2/6/2001 | 18.45 | 25' | 2" | 3.2 | NM | NM | NM | NM |
| | 6/5/2001 | 17.26 | 25' | 2" | 3.8 | 10.2 | NM | 2.07 | 19.3 |
| | 9/13/2001 | 18.63 | 25' | 2" | 3.1 | NM | NM | 2.71 | 20.5 |
| | 12/7/2001 | 21.37 | 25' | 2" | 1.8 | 7.2 | NM | 8.00 | 19.9 |
| | 3/5/2002 | 18.65 | 25' | 2" | 3.1 | 6.8 | NM | 8.53 | 15.7 |
| | 6/6/2002 | 16.90 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 19.97 | 25' | 2" | 2.5 | 8.0 | NM | 8.07 | 21.7 |
| | 12/12/2002 | 17.33 | 25' | 2" | 3.8 | NM | 0.59 | 7.73 | 15.3 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-13 | 8/5/1999 | 21.26 | 25' | 2" | 1.8 | 4.2 | 51.7 | 2.32 | 18.0 |
| | 4/26/2000 | 20.02 | 25' | 2" | 2.4 | 6.3 | 0.62 | 3.00 | 18.5 |
| | 8/1/2000 | 24.05 | 25' | 2" | 0.5 | 5.2 | 0.42 | 2.14 | 19.7 |
| | 12/13/2000 | 24.13 | 25' | 2" | 0.4 | 5.5 | NM | 1.04 | 15.9 |
| | 2/6/2001 | 22.43 | 25' | 2" | 1.3 | NM | NM | NM | NM |
| | 6/5/2001 | 21.34 | 25' | 2" | 1.8 | NM | 5.4 | 2.61 | 19.6 |
| | 9/13/2001 | 22.91 | 25' | 2" | 1.0 | NM | NM | NM | 20.3 |
| | 12/7/2001 | 25.22 | 25.22' | 2" | 0.0 | NM | NM | NM | NM |
| | 3/5/2002 | 22.21 | 25.22' | 2" | 1.5 | 6.9 | NM | 7.99 | 16.4 |
| | 6/6/2002 | 20.82 | 25.22' | 2" | 2.2 | NM | NM | NM | NM |
| | 9/17/2002 | 24.22 | 25.22' | 2" | 0.5 | NM | NM | 4.02 | 22.1 |
| | 12/12/2002 | 21.33 | 25.22' | 2" | 1.9 | NM | 0.31 | 2.85 | 15.9 |
| MW-14 | 8/5/1999 | 7.96 | 25' | 2" | 8.3 | 5.0 | 312 | 0.80 | 19.0 |
| | 4/26/2000 | 6.46 | 25' | 2" | 9.1 | 6.1 | 1.56 | 1.72 | 15.5 |
| | 8/1/2000 | 10.8 | 25' | 2" | 6.9 | 5.4 | 0.93 | 1.43 | 18.8 |
| | 12/13/2000 | 10.8 | 25' | 2" | 6.9 | 5.5 | NM | 1.72 | 14.7 |
| | 2/6/2001 | 8.72 | 25' | 2" | 8.0 | NM | NM | NM | NM |
| | 6/5/2001 | 7.32 | 25' | 2" | 8.6 | 5.8 | NM | 2.08 | 17.4 |
| | 9/13/2001 | 9.31 | 25' | 2" | 7.7 | NM | NM | 1.77 | 21.0 |
| | 12/7/2001 | 11.91 | 25' | 2" | 6.4 | 6.9 | NM | 1.84 | 20.5 |
| | 3/5/2002 | 8.51 | 25' | 2" | 8.1 | 6.9 | NM | 5.90 | 12.2 |
| | 6/6/2002 | 7.41 | 25' | 2" | 8.6 | NM | NM | NM | NM |
| | 9/17/2002 | 9.98 | 25' | 2" | 7.3 | NM | NM | 4.58 | 21.4 |
| | 12/12/2002 | 8.22 | 25' | 2" | 8.2 | NM | 0.48 | 5.50 | 14.6 |
| MW-15 | 8/5/1999 | 6.28 | 25' | 2" | 9.2 | 4.8 | 86.5 | 0.87 | 18.0 |
| | 4/26/2000 | 4.75 | 25' | 2" | 9.9 | 6.5 | 0.6 | 3.32 | 16.2 |
| | 8/1/2000 | 9.11 | 25' | 2" | 7.8 | 5.5 | 0.41 | 3.17 | 19.5 |
| | 12/13/2000 | 8.57 | 25' | 2" | 8.0 | 5.6 | NM | 1.93 | 15.1 |
| | 2/6/2001 | 6.36 | 25' | 2" | 9.1 | NM | NM | NM | NM |
| | 6/5/2001 | 5.68 | 25' | 2" | 9.4 | 6.1 | NM | 2.41 | 19.2 |
| | 9/13/2001 | 7.61 | 25' | 2" | 8.5 | NM | NM | 2.90 | 21.2 |
| | 12/7/2001 | 9.91 | 25' | 2" | 7.4 | 6.9 | NM | 3.66 | 20.3 |
| | 3/5/2002 | 5.86 | 25' | 2" | 9.4 | 6.6 | NM | 6.50 | 12.6 |
| | 6/6/2002 | NM | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/12/2002 | 4.74 | 25' | 2" | 9.9 | NM | 0.17 | 7.08 | 13.8 |

# TABLE 1
## SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-16 | 8/5/1999 | 11.22 | 25' | 2" | 6.7 | 4.9 | 49 | 0.79 | 18.0 |
| | 4/26/2000 | 9.50 | 25' | 2" | 7.6 | 6.5 | 0.61 | 1.66 | 15.5 |
| | 8/1/2000 | 14.35 | 25' | 2" | 5.2 | 6.0 | 0.95 | 1.64 | 19.3 |
| | 12/13/2000 | 13.45 | 25' | 2" | 5.6 | 5.8 | NM | 2.27 | 15.6 |
| | 2/6/2001 | 10.89 | 25' | 2" | 6.9 | NM | NM | NM | NM |
| | 6/5/2001 | 10.34 | 25' | 2" | 7.2 | 6.5 | NM | 2.02 | 18.3 |
| | 9/13/2001 | 12.58 | 25' | 2" | 6.1 | NM | NM | 1.87 | 21.5 |
| | 12/7/2001 | 13.41 | 25' | 2" | 5.7 | 6.9 | NM | 4.75 | 19.1 |
| | 3/5/2002 | 8.67 | 25' | 2" | 8.0 | 6.7 | NM | 5.20 | 12.4 |
| | 6/6/2002 | NM | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/12/2002 | 9.58 | 25' | 2" | 7.5 | NM | 0.25 | 3.53 | 14.6 |
| MW-17 | 8/5/1999 | 16.16 | 75' | 2" | 28.8 | 5.6 | 90.8 | 2.76 | 20.5 |
| | 4/26/2000 | 16.8 | 75' | 2" | 28.5 | 6.4 | 0.86 | 6.1 | 20.8 |
| | 8/1/2000 | 19.27 | 75' | 2" | 27.3 | 6.2 | 0.59 | 3.12 | 22.5 |
| | 12/13/2000 | 19.20 | 75' | 2" | 27.3 | NM | NM | NM | NM |
| | 2/6/2001 | 16.82 | 75' | 2" | 28.5 | NM | NM | NM | NM |
| | 6/5/2001 | 15.52 | 75' | 2" | 29.1 | 7.1 | NM | 2.67 | 21.8 |
| | 9/13/2001 | 17.42 | 75' | 2" | 28.2 | NM | NM | 3.60 | 22.5 |
| | 12/7/2001 | 19.54 | 75' | 2" | 27.1 | 7.1 | NM | 2.73 | 22.5 |
| | 3/5/2002 | NM | 75' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | NM | 75' | 2" | NM | NM | NM | NM | NM |
| | 9/17/2002 | 18.32 | 75' | 2" | 27.7 | NM | NM | 4.12 | 23.1 |
| | 12/12/2002 | 16.66 | 75' | 2" | 28.5 | NM | 0.43 | 3.20 | 19.3 |

NOTES:
NS - Not sampled
Temperature in Degrees Celcius
Dissolved Oxygen in mg/L
Depth to Water and Depth to bottom in units of feet
Well volumes (Gallons)
Specific Conductivity (umhos/cm)

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| OMW-1 | 01-Dec-97 | 99.82 | 17.13 | - | 82.69 |
| | 05-Aug-99 | | 17.95 | 1.05 | 81.87 |
| | 26-Apr-00 | | 15.68 | 0.99 | 84.14 |
| | 01-Aug-00 | | 21.50 | 1.40 | 78.32 |
| | 13-Dec-00 | | 21.46 | 1.70 | 78.36 |
| | 06-Feb-01 | | 19.89 | 1.78 | 79.93 |
| | 05-Jun-01 | | 17.18 | 0.19 | 82.64 |
| | 16-Aug-01 | | 18.10 | 0.13 | 81.72 |
| | 13-Sep-01 | | 18.74 | 0.02 | 81.08 |
| | 26-Sep-01 | | 19.31 | 0.07 | 80.51 |
| | 27-Sep-01 | | 19.32 | 0.01 | 80.50 |
| | 19-Oct-01 | | 19.93 | 0.02 | 79.89 |
| | 09-Nov-01 | | 21.00 | 0.39 | 78.82 |
| | 21-Nov-01 | | 21.63 | 1.28 | 78.19 |
| | 05-Dec-01 | | 21.65 | 0.96 | 78.17 |
| | 07-Dec-01 | | 21.75 | 0.76 | 78.07 |
| | 10-Dec-01 | | 21.65 | 0.01 | 78.17 |
| | 11-Dec-01 | | 21.65 | sheen | 78.17 |
| | | | 21.61 | 0.40 | 78.21 |
| | 07-Jan-02 | | 21.76 | 0.40 | 78.06 |
| | 04-Feb-02 | | 21.45 | 1.31 | 78.37 |
| | 05-Mar-02 | | 19.77 | 0.17 | 80.05 |
| | 19-Apr-02 | | 16.65 | 0.01 | 83.17 |
| | 17-May-02 | | 15.76 | 0.01 | 84.06 |
| | 24-May-02 | | 15.86 | sheen | 83.96 |
| | 28-May-02 | | 16.09 | sheen | 83.73 |
| | 30-May-02 | | 19.11 | sheen | 80.71 |
| | 06-Jun-02 | | 16.59 | - | 83.23 |
| | 17-Sep-02 | | 19.97 | - | 79.85 |
| MW-1R | 12-Dec-02 | - | 17.44 | - | NM |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-2 | 01-Dec-97 | 99.83 | 17.43 | - | 82.40 |
| | 05-Aug-99 | | 19.19 | 2.29 | 80.64 |
| | 26-Apr-00 | | 15.80 | 2.18 | 84.03 |
| | 01-Aug-00 | | 22.30 | 2.10 | 77.53 |
| | 13-Dec-00 | | 21.36 | 0.84 | 78.47 |
| | 06-Feb-01 | | 18.89 | sheen | 80.94 |
| | 05-Jun-01 | | 17.42 | sheen | 82.41 |
| | 16-Aug-01 | | 18.35 | - | 81.48 |
| | 13-Sep-01 | | 19.03 | - | 80.80 |
| | 26-Sep-01 | | 19.42 | sheen | 80.41 |
| | 27-Sep-01 | | 19.69 | 0.01 | 80.14 |
| | 19-Oct-01 | | 20.22 | - | 79.61 |
| | 09-Nov-01 | | 21.02 | 0.01 | 78.81 |
| | 21-Nov-01 | | 20.70 | sheen | 79.13 |
| | 05-Dec-01 | | 21.59 | 0.63 | 78.24 |
| | 07-Dec-01 | | 21.98 | 0.02 | 77.85 |
| | 10-Dec-01 | | 22.00 | 0.01 | 77.83 |
| | 11-Dec-01 | | 21.91 | sheen | 77.92 |
| | | | 21.73 | 0.02 | 78.10 |
| | 07-Jan-02 | | 22.34 | 0.22 | 77.49 |
| | 04-Feb-02 | | 20.50 | 0.15 | 79.33 |
| | 05-Mar-02 | | 19.90 | sheen | 79.93 |
| | 19-Apr-02 | | 17.03 | 0.01 | 82.80 |
| | 17-May-02 | | 16.25 | 0.01 | 83.58 |
| | 24-May-02 | | 16.28 | 0.01 | 83.55 |
| | 28-May-02 | | 16.49 | sheen | 83.34 |
| | 30-May-02 | | 19.50 | - | 80.33 |
| | 06-Jun-02 | | 16.88 | - | 82.95 |
| | 17-Sep-02 | | 20.44 | 0.05 | 79.39 |
| | 12-Dec-02 | | 17.84 | - | 81.99 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-3 | 01-Dec-97 | 99.98 | 17.00 | - | 82.98 |
| | 05-Aug-99 | | 17.96 | 1.01 | 82.02 |
| | 26-Apr-00 | | 15.73 | 0.68 | 84.25 |
| | 01-Aug-00 | | 20.85 | 0.78 | 79.13 |
| | 13-Dec-00 | | 22.18 | 2.22 | 77.80 |
| | 06-Feb-01 | | 19.26 | 0.96 | 80.72 |
| | 05-Jun-01 | | 17.41 | 0.40 | 82.57 |
| | 16-Aug-01 | | 18.19 | 0.09 | 81.79 |
| | 13-Sep-01 | | 18.80 | 0.02 | 81.18 |
| | 26-Sep-01 | | 19.25 | sheen | 80.73 |
| | 27-Sep-01 | | 19.32 | 0.04 | 80.66 |
| | 19-Oct-01 | | 20.04 | 0.06 | 79.94 |
| | 09-Nov-01 | | 20.86 | sheen | 79.12 |
| | 21-Nov-01 | | 20.59 | sheen | 79.39 |
| | 05-Dec-01 | | 21.10 | sheen | 78.88 |
| | 07-Dec-01 | | 21.24 | sheen | 78.74 |
| | 10-Dec-01 | | 21.62 | 0.01 | 78.36 |
| | 11-Dec-01 | | 21.65 | sheen | 78.33 |
| | | | 22.01 | 0.56 | 77.97 |
| | 07-Jan-02 | | 22.87 | 1.15 | 77.11 |
| | 04-Feb-02 | | 21.20 | 0.75 | 78.78 |
| | 05-Mar-02 | | 18.69 | 0.27 | 81.29 |
| | 19-Apr-02 | | 16.60 | sheen | 83.38 |
| | 17-May-02 | | 15.78 | 0.01 | 84.20 |
| | 24-May-02 | | 15.88 | sheen | 84.10 |
| | 28-May-02 | | 16.12 | sheen | 83.86 |
| | 30-May-02 | | 12.14 | - | 87.84 |
| | 06-Jun-02 | | 15.44 | - | 84.54 |
| | 17-Sep-02 | | 20.11 | - | 79.87 |
| | 12-Dec-02 | | 17.45 | - | 82.53 |
| MW-4 | 01-Dec-97 | 99.59 | 17.60 | - | 81.99 |
| | 05-Aug-99 | | 17.59 | - | 82.00 |
| | 26-Apr-00 | | 16.51 | - | 83.08 |
| | 01-Aug-00 | | 20.63 | - | 78.96 |
| | 13-Dec-00 | | 20.81 | - | 78.78 |
| | 06-Feb-01 | | 19.09 | - | 80.50 |
| | 05-Jun-01 | | 17.70 | - | 81.89 |
| | 13-Sep-01 | | 19.16 | - | 80.43 |
| | 07-Dec-01 | | 21.86 | - | 77.73 |
| | 05-Mar-02 | | 18.91 | - | 80.68 |
| | 06-Jun-02 | | 16.93 | - | 82.66 |
| | 17-Sep-02 | | 20.63 | - | 78.96 |
| | 12-Dec-02 | | 16.14 | - | 83.45 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-5 | 01-Dec-97 | 99.42 | 15.04 | - | 84.38 |
| | 05-Aug-99 | | 15.95 | - | 83.47 |
| | 26-Apr-00 | | 14.35 | - | 85.07 |
| | 01-Aug-00 | | 19.18 | - | 80.24 |
| | 13-Dec-00 | | 19.68 | - | 79.74 |
| | 06-Feb-01 | | 16.50 | - | 82.92 |
| | 05-Jun-01 | | 15.51 | - | 83.91 |
| | 13-Sep-01 | | 17.48 | - | 81.94 |
| | 07-Dec-01 | | 20.09 | - | 79.33 |
| | 05-Mar-02 | | 16.15 | - | 83.27 |
| | 06-Jun-02 | | 15.11 | - | 84.31 |
| | 17-Sep-02 | | 18.31 | - | 81.11 |
| | 12-Dec-02 | | 15.09 | - | 84.33 |
| MW-6 | 01-Dec-97 | 99.47 | 14.37 | - | 85.10 |
| | 05-Aug-99 | | 15.44 | - | 84.03 |
| | 26-Apr-00 | | 13.65 | - | 85.82 |
| | 01-Aug-00 | | 18.75 | - | 80.72 |
| | 13-Dec-00 | | 18.23 | - | 81.24 |
| | 06-Feb-01 | | 15.34 | - | 84.13 |
| | 05-Jun-01 | | 14.84 | - | 84.63 |
| | 13-Sep-01 | | 16.96 | - | 82.51 |
| | 07-Dec-01 | | 19.70 | - | 79.77 |
| | 05-Mar-02 | | 15.20 | - | 84.27 |
| | 06-Jun-02 | | 15.51 | - | 83.96 |
| | 17-Sep-02 | | 17.76 | - | 81.71 |
| | 12-Dec-02 | | 14.29 | - | 85.18 |
| MW-7 | 01-Dec-97 | 99.47 | 13.96 | - | 85.51 |
| | 05-Aug-99 | | 15.41 | - | 84.06 |
| | 26-Apr-00 | | 13.54 | - | 85.93 |
| | 01-Aug-00 | | 18.72 | - | 80.75 |
| | 13-Dec-00 | | 18.01 | - | 81.46 |
| | 06-Feb-01 | | 15.41 | - | 84.06 |
| | 05-Jun-01 | | 14.61 | - | 84.86 |
| | 13-Sep-01 | | 16.91 | - | 82.56 |
| | 07-Dec-01 | | 19.64 | - | 79.83 |
| | 05-Mar-02 | | 14.75 | - | 84.72 |
| | 06-Jun-02 | | 14.43 | - | 85.04 |
| | 17-Sep-02 | | 17.34 | - | 82.13 |
| | 12-Dec-02 | | 13.91 | - | 85.56 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-8 | 01-Dec-97 | 102.42 | 12.53 | - | 89.89 |
| | 05-Aug-99 | | 14.59 | - | 87.83 |
| | 26-Apr-00 | | 11.56 | - | 90.86 |
| | 01-Aug-00 | | 19.18 | - | 83.24 |
| | 13-Dec-00 | | 17.96 | - | 84.46 |
| | 06-Feb-01 | | 13.34 | - | 89.08 |
| | 05-Jun-01 | | 13.15 | - | 89.27 |
| | 13-Sep-01 | | 16.64 | - | 85.78 |
| | 07-Dec-01 | | 19.73 | - | 82.69 |
| | 05-Mar-02 | | 11.41 | - | 91.01 |
| | 06-Jun-02 | | 12.93 | - | 89.49 |
| | 17-Sep-02 | | 16.72 | - | 85.70 |
| | 12-Dec-02 | | 11.42 | - | 91.00 |
| MW-9 | 01-Dec-97 | 100.53 | 16.17 | - | 84.36 |
| | 05-Aug-99 | | 16.74 | - | 83.79 |
| | 26-Apr-00 | | 15.09 | - | 85.44 |
| | 01-Aug-00 | | 21.20 | - | 79.33 |
| | 13-Dec-00 | | 19.73 | - | 80.80 |
| | 06-Feb-01 | | 17.54 | - | 82.99 |
| | 05-Jun-01 | | 16.35 | - | 84.18 |
| | 13-Sep-01 | | 18.40 | - | 82.13 |
| | 07-Dec-01 | | 21.00 | - | 79.53 |
| | 05-Mar-02 | | 17.38 | - | 83.15 |
| | 06-Jun-02 | | 16.80 | - | 83.73 |
| | 17-Sep-02 | | 19.64 | - | 80.89 |
| | 12-Dec-02 | | 16.29 | - | 84.24 |
| MW-10 | 01-Dec-97 | 99.65 | 17.40 | - | 82.25 |
| | 05-Aug-99 | | 18.06 | 1.01 | 81.59 |
| | 26-Apr-00 | | 15.75 | 1.65 | 83.90 |
| | 01-Aug-00 | | 20.50 | 0.03 | 79.15 |
| | 13-Dec-00 | | 19.40 | 0.01 | 80.25 |
| | 06-Feb-01 | | 18.84 | sheen | 80.81 |
| | 05-Jun-01 | | 17.38 | - | 82.27 |
| | 16-Aug-01 | | 18.15 | - | 81.50 |
| | 13-Sep-01 | | 18.82 | - | 80.83 |
| | 07-Dec-01 | | 23.90 | - | 75.75 |
| | 11-Dec-01 | | 21.88 | - | 77.77 |
| | 04-Feb-02 | | 20.65 | - | 79.00 |
| | 05-Mar-02 | | 19.09 | - | 80.56 |
| | 06-Jun-02 | | 16.78 | - | 82.87 |
| | 17-Sep-02 | | 20.53 | - | 79.12 |
| | 12-Dec-02 | | 18.00 | - | 81.65 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-11 | 01-Dec-97 | 96.47 | 15.74 | - | 80.73 |
| | 05-Aug-99 | | 15.60 | - | 80.87 |
| | 26-Apr-00 | | 13.65 | - | 82.82 |
| | 01-Aug-00 | | 18.61 | - | 77.86 |
| | 13-Dec-00 | | 19.01 | - | 77.46 |
| | 06-Feb-01 | | 17.43 | - | 79.04 |
| | 05-Jun-01 | | 15.96 | - | 80.51 |
| | 13-Sep-01 | | 17.23 | - | 79.24 |
| | 07-Dec-01 | | 19.74 | - | 76.73 |
| | 05-Mar-02 | | 17.12 | - | 79.35 |
| | 06-Jun-02 | | 15.03 | - | 81.44 |
| | 17-Sep-02 | | 18.88 | - | 77.59 |
| | 12-Dec-02 | | 16.13 | - | 80.34 |
| MW-12 | 01-Dec-97 | 98.63 | 17.03 | - | 81.60 |
| | 05-Aug-99 | | 17.33 | - | 81.30 |
| | 26-Apr-00 | | 16.06 | - | 82.57 |
| | 01-Aug-00 | | 20.15 | - | 78.48 |
| | 13-Dec-00 | | 23.70 | - | 74.93 |
| | 06-Feb-01 | | 18.45 | - | 80.18 |
| | 05-Jun-01 | | 17.26 | - | 81.37 |
| | 13-Sep-01 | | 18.63 | - | 80.00 |
| | 07-Dec-01 | | 21.37 | - | 77.26 |
| | 05-Mar-02 | | 18.65 | - | 79.98 |
| | 06-Jun-02 | | 16.90 | - | 81.73 |
| | 17-Sep-02 | | 19.97 | - | 78.66 |
| | 12-Dec-02 | | 17.33 | - | 81.30 |
| MW-13 | 01-Dec-97 | 100.80 | 21.05 | - | 79.75 |
| | 05-Aug-99 | | 21.26 | - | 79.54 |
| | 26-Apr-00 | | 20.02 | - | 80.78 |
| | 01-Aug-00 | | 24.05 | - | 76.75 |
| | 13-Dec-00 | | 24.13 | - | 76.67 |
| | 06-Feb-01 | | 22.43 | - | 78.37 |
| | 05-Jun-01 | | 21.34 | - | 79.46 |
| | 13-Sep-01 | | 22.91 | - | 77.89 |
| | 07-Dec-01 | | 25.22 | - | 75.58 |
| | 05-Mar-02 | | 22.21 | - | 78.59 |
| | 06-Jun-02 | | 20.82 | - | 79.98 |
| | 17-Sep-02 | | 24.22 | - | 76.58 |
| | 12-Dec-02 | | 21.33 | - | 79.47 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-14 | 01-Dec-97 | 89.38 | 7.27 | - | 82.11 |
| | 05-Aug-99 | | 7.96 | - | 81.42 |
| | 26-Apr-00 | | 6.46 | - | 82.92 |
| | 11-Aug-00 | | 10.80 | - | 78.58 |
| | 13-Dec-00 | | 10.80 | - | 78.58 |
| | 06-Feb-01 | | 8.72 | - | 80.66 |
| | 05-Jun-01 | | 7.32 | - | 82.06 |
| | 13-Sep-01 | | 9.31 | - | 80.07 |
| | 07-Dec-01 | | 11.91 | - | 77.47 |
| | 05-Mar-02 | | 8.51 | - | 80.87 |
| | 06-Jun-02 | | 7.41 | - | 81.97 |
| | 17-Sep-02 | | 9.98 | - | 79.40 |
| | 12-Dec-02 | | 8.22 | - | 81.16 |
| MW-15 | 01-Dec-97 | 87.33 | 5.10 | - | 82.23 |
| | 05-Aug-99 | | 6.28 | - | 81.05 |
| | 26-Apr-00 | | 4.75 | - | 82.58 |
| | 01-Aug-00 | | 9.11 | - | 78.22 |
| | 13-Dec-00 | | 8.57 | - | 78.76 |
| | 06-Feb-01 | | 6.36 | - | 80.97 |
| | 05-Jun-01 | | 5.68 | - | 81.65 |
| | 13-Sep-01 | | 7.61 | - | 79.72 |
| | 07-Dec-01 | | 9.91 | - | 77.42 |
| | 05-Mar-02 | | 5.86 | - | 81.47 |
| | 06-Jun-02 | | NM | - | NM |
| | 12-Dec-02 | | 4.74 | - | 82.59 |
| MW-16 | 01-Dec-97 | 93.74 | 9.69 | - | 84.05 |
| | 05-Aug-99 | | 11.22 | - | 82.52 |
| | 26-Apr-00 | | 9.50 | - | 84.24 |
| | 01-Aug-00 | | 14.35 | - | 79.39 |
| | 13-Dec-00 | | 13.45 | - | 80.29 |
| | 06-Feb-01 | | 10.89 | - | 82.85 |
| | 05-Jun-01 | | 10.34 | - | 83.40 |
| | 13-Sep-01 | | 12.58 | - | 81.16 |
| | 07-Dec-01 | | 13.41 | - | 80.33 |
| | 05-Mar-02 | | 8.67 | - | 85.07 |
| | 06-Jun-02 | | NM | - | NM |
| | 12-Dec-02 | | 9.58 | - | 84.16 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| DMW-17 | 01-Dec-97 | 100.08 | 15.53 | - | 84.55 |
| | 05-Aug-99 | | 16.16 | - | 83.92 |
| | 26-Apr-00 | | 16.80 | - | 83.28 |
| | 01-Aug-00 | | 19.27 | - | 80.81 |
| | 13-Dec-00 | | 19.20 | - | 80.88 |
| | 06-Feb-01 | | 16.82 | - | 83.26 |
| | 05-Jun-01 | | 15.52 | - | 84.56 |
| | 13-Sep-01 | | 17.42 | - | 82.66 |
| | 07-Dec-01 | | 19.54 | - | 80.54 |
| | 05-Mar-02 | | NM | - | NM |
| | 06-Jun-02 | | NM | - | NM |
| | 17-Sep-02 | | 18.32 | - | 81.76 |
| | 12-Dec-02 | | 16.66 | - | 83.42 |

**Notes:**
TOC - Top-of-Casing elevation refrenced to common datum.
NM - Not measured.
All measurments in units of feet.
- = No Data

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| OMW-1 | 1-Dec-97 | 14.9 | 85.5 | 5.2 | 24.8 | 130 | 96 | BDL |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 1,570 | 19,000 | 474 | 4,050 | 25,094 | 33,900 | 1,440 |
| | 17-Sep-02 | 2,940 | 25,200 | 1,330 | 9,580 | 39,050 | 30,600 | 620 |
| MW-1R | 12-Dec-02 | 6,590 | 23,500 | 3,670 | 20,480 | 54,240 | 18,200 | 8,330 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-2 | 1-Dec-97 | 9,900 | 42,300 | 2,040 | 12,100 | 66,340 | 242,000 | 71.2 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 4,400 | 7,570 | 2,890 | 6,790 | 21,650 | 9,490 | 592 |
| | 13-Sep-01 | 2,280 | 9,780 | 1,630 | 7,650 | 21,340 | 1,750 | 399 |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 3,660 | 2,070 | 858 | 2,788 | 9,376 | 8,390 | 294 |
| | 17-Sep-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | 5,120 | 2,180 | 1,180 | 1,691 | 10,171 | 11,000 | 363 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-3 | 1-Dec-97 | 9,820 | 54,500 | 2,160 | 11,900 | 78,380 | 81,200 | 445 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 8,770 | 34,700 | 2,610 | 14,760 | 60,840 | 8,940 | 503 |
| | 17-Sep-02 | 8,710 | 41,300 | 2,950 | 17,070 | 70,030 | 9,540 | 669 |
| | 12-Dec-02 | 6,360 | 44,900 | 3,640 | 23,760 | 78,660 | 12,600 | 1330 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-4 | 1-Dec-97 | 8,140 | 21,000 | 1,510 | 11,500 | 42,150 | 215,000 | 813 |
| | 5-Aug-99 | 14,200 | 34,600 | 2,750 | 15,900 | 67,450 | 109,000 | <5 |
| | 26-Apr-00 | 13,400 | 33,200 | 3,420 | 13,270 | 63,290 | 102,000 | 1,060 |
| | 1-Aug-00 | 10,100 | 23,300 | 1,740 | 11,410 | 46,550 | 109,000 | 559 |
| | 13-Dec-00 | 6,730 | 16,300 | 635 | 4,170 | 27,835 | 32,300 | 742 |
| | 6-Feb-01 | 5,860 | 13,500 | 1,080 | 7,230 | 27,670 | 26,100 | 210 |
| | 5-Jun-01 | 3,570 | 10,900 | 965 | 9,510 | 24,945 | 5,730 | 302 |
| | 13-Sep-01 | 5,910 | 14,900 | 1,050 | 7,100 | 28,960 | 5,980 | 384 |
| | 7-Dec-01 | 10,000 | 19,200 | 2,210 | 11,600 | 43,010 | BDL | 682 |
| | 5-Mar-02 | 7,880 | 12,890 | 1,860 | 12,650 | 35,280 | 14,530 | 2,010 |
| | 6-Jun-02 | 2,520 | 2,700 | 483 | 3,620 | 9,323 | 3,850 | 497 |
| | 17-Sep-02 | 5,750 | 3,480 | 1,480 | 6,170 | 16,880 | 3,140 | 555 |
| | 12-Dec-02 | 5,100 | 2,300 | 1,690 | 7,080 | 16,170 | 1,640 | 319 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 5 |
| MW-5 | 1-Dec-97 | 5,930 | 47,600 | 2,100 | 12,600 | 68,230 | BDL | 125 |
| | 5-Aug-99 | 6,400 | 61,600 | 2,460 | 12,100 | 82,560 | 410 | 335 |
| | 26-Apr-00 | 6,680 | 48,300 | 2,390 | 9,610 | 66,980 | 681 | 609 |
| | 1-Aug-00 | 4,250 | 40,300 | 1,960 | 12,530 | 59,040 | 258 | 396 |
| | 13-Dec-00 | 4,530 | 38,100 | 2,520 | 14,640 | 59,790 | 381 | 4,770 |
| | 6-Feb-01 | 5,070 | 30,800 | 2,200 | 12,500 | 50,570 | 225 | 678 |
| | 5-Jun-01 | 6,070 | 52,000 | 2,900 | 13,720 | 74,690 | 228 | 342 |
| | 13-Sep-01 | 4,990 | 7,210 | 3,340 | 17,900 | 33,440 | 60.7 | 2,900 |
| | 7-Dec-01 | 3,520 | 38,600 | 1,700 | 11,490 | 55,310 | BDL | 408 |
| | 5-Mar-02 | 3,160 | 21,300 | 3,260 | 18,490 | 46,210 | 171 | 342 |
| | 6-Jun-02 | 3,820 | 26,700 | 2,570 | 14,620 | 47,710 | 199 | 397 |
| | 17-Sep-02 | 4,480 | 42,800 | 2,820 | 15,100 | 65,200 | 117 | 209 |
| | 12-Dec-02 | 110 | 5,390 | 1,340 | 5,900 | 12,740 | 13.8 | 287 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-6 | 1-Dec-97 | 5.5 | 137 | 6.0 | 149 | 297.5 | BDL | BDL |
| | 5-Aug-99 | 4.1 | 1.1 | 3.7 | 16.7 | 25.6 | 5 | BDL |
| | 26-Apr-00 | 13.0 | 19.2 | 15 | 48 | 95.2 | 27.2 | 6.44 |
| | 1-Aug-00 | 117 | 1820 | 128 | 877 | 2942 | 10.7 | 32.2 |
| | 13-Dec-00 | 47.9 | 460 | 35.4 | 332 | 875 | 14.8 | 7.2 |
| | 6-Feb-01 | 47.4 | 143 | 47.6 | 219.2 | 457 | 17.8 | 22.6 |
| | 5-Jun-01 | 9.3 | 44.5 | 23.5 | 141.3 | 219 | 7.5 | BDL |
| | 13-Sep-01 | 18.1 | 36.6 | 24.7 | 119.0 | 198 | 8.35 | 1.06 |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | 5.23 | BDL |
| | 5-Mar-02 | 79.8 | 765 | 114 | 1,242 | 2,201 | 35.1 | 75.8 |
| | 6-Jun-02 | 55.1 | 629 | 91.8 | 959 | 1,735 | 25.9 | 5.10 |
| | 17-Sep-02 | 11.5 | 115 | 25.4 | 258 | 410 | 2.70 | 7.77 |
| | 12-Dec-02 | 11.1 | 206 | 26.2 | 236 | 479 | 4.04 | 51.60 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-7 | 1-Dec-97 | 1.1 | 1.7 | BDL | 1.1 | 3.9 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 41 | <1 |
| | 26-Apr-00 | 2.13 | 13.5 | BDL | 1.59 | 17.2 | 68.9 | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 53.8 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 52.9 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 18.7 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | 10.6 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | 6.16 | BDL | BDL | 6.16 | 1.68 | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 10.0 | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | 10.5 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-8 | 1-Dec-97 | BDL | 2.4 | 1.2 | 5.4 | 9.0 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 1.58 | 8.53 | BDL | BDL | 10.1 | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | 2.95 | BDL | BDL | 2.95 | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-9 | 1-Dec-97 | 77 | 14,000 | 2,390 | 20,700 | 37,167 | 114 | 384 |
| | 5-Aug-99 | 110 | 4,280 | 2,450 | 17,000 | 23,840 | 150 | <500 |
| | 26-Apr-00 | 163 | 2,640 | 3,520 | 14,760 | 21,083 | BDL | 2,090 |
| | 1-Aug-00 | 187 | 18,400 | 1,010 | 16,070 | 35,667 | BDL | 909 |
| | 13-Dec-00 | 9.14 | 657 | 108 | 1,340 | 2,114 | 26.0 | 47 |
| | 6-Feb-01 | 10.6 | 254 | 181 | 2,907 | 3,353 | 16.9 | 179 |
| | 5-Jun-01 | 27.7 | 402 | 139 | 1,798 | 2,367 | 17.2 | 66.6 |
| | 13-Sep-01 | 15.0 | 133 | 710 | 7,690 | 8,548 | 13.0 | 186 |
| | 7-Dec-01 | 34.4 | 35.5 | 28.9 | 713 | 812 | BDL | 20.6 |
| | 5-Mar-02 | 25.5 | 29.8 | 157 | 2,144 | 2,356 | BDL | 49.0 |
| | 6-Jun-02 | 13.2 | 24.6 | 105 | 1,420 | 1,563 | 3.17 | 44.5 |
| | 17-Sep-02 | 13.3 | 21.0 | 111 | 1,532 | 1,677 | 2.71 | 41.5 |
| | 12-Dec-02 | 8.14 | BDL | 21.7 | 483 | 513 | BDL | 19.1 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-10 | 1-Dec-97 | 6,220 | 46,300 | 2,320 | 14,800 | 69,640 | 938 | 542 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 8,020 | 32,900 | 856 | 8,280 | 50,056 | 8,780 | 327 |
| | 13-Sep-01 | 9,870 | 47,700 | 1,190 | 20,400 | 79,160 | 12,500 | 356 |
| | 7-Dec-01 | 5,590 | 56,000 | 8,150 | 61,700 | 131,440 | 1,050 | 2,540 |
| | 5-Mar-02 | 2.06 | 72.2 | 5.80 | 190.1 | 270 | 1,110 | 13.7 |
| | 6-Jun-02 | BDL | 57.8 | BDL | 165.0 | 223 | 3,780 | 27.0 |
| | 17-Sep-02 | 36.3 | 75.9 | 7.38 | 308 | 428 | 6,850 | 11.4 |
| | 12-Dec-02 | 159 | 428 | 26.3 | 637 | 1,250 | BDL | 24.6 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-11 | 1-Dec-97 | 1.4 | 3.4 | BDL | 4.7 | 9.5 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 7 | <5 |
| | 26-Apr-00 | 1.18 | 3.96 | BDL | BDL | 5.1 | 4.69 | 9.98 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | 2.51 | 91.0 | 15.0 | 104.4 | 212.9 | 26.3 | 17.2 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 39.5 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | 4.88 | 9.52 | 14.4 | 266 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | 1.32 | 1.32 | 358 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 1070 | BDL |
| | 6-Jun-02 | 1.84 | BDL | BDL | 1.02 | 2.86 | 2,220 | BDL |
| | 17-Sep-02 | 98.7 | BDL | BDL | 19.89 | 118.59 | 3,780 | BDL |
| | 12-Dec-02 | 23.5 | BDL | BDL | 8.39 | 31.89 | BDL | BDL |
| SSTL | | <1 | <1 | <1 | <1 | - | 7 | <5 |
| MW-12 | 1-Dec-97 | 7,970 | 382 | 266 | 1,540 | 10,158 | 99,900 | 119 |
| | 5-Aug-99 | 5,000 | 260 | <200 | <200 | 5,260 | 41,200 | <1000 |
| | 26-Apr-00 | 135 | 4.51 | BDL | 11.0 | 151 | 6,800 | 18.2 |
| | 1-Aug-00 | 1670 | 17.1 | 4.33 | 114.9 | 1806 | 44,200 | BDL |
| | 13-Dec-00 | 119 | 9.1 | 2.11 | 26.7 | 157 | 4,230 | 31.7 |
| | 6-Feb-01 | 32.5 | 9.3 | 1.51 | 13.8 | 57 | 1,570 | 10.6 |
| | 5-Jun-01 | 61.0 | BDL | BDL | 2.1 | 63 | 1,960 | 17.2 |
| | 13-Sep-01 | 329 | 4.55 | 2.96 | 29.27 | 366 | 2,860 | 60.1 |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 906 | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 613 | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | 260 | <200 | <200 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-13 | 1-Dec-97 | BDL | 1.4 | BDL | 1.6 | 3 | 82.3 | BDL |
| | 5-Aug-99 | 3 | <1 | <1 | <1 | 3 | 604 | <5 |
| | 26-Apr-00 | 188 | 149 | BDL | BDL | 337 | 3,150 | BDL |
| | 1-Aug-00 | 207 | 5.74 | BDL | 32.8 | 245 | 3,641 | 24.3 |
| | 13-Dec-00 | 29.9 | 3.81 | 1.0 | 76.6 | 111 | 4,350 | 29.8 |
| | 6-Feb-01 | 377 | 12.10 | 2.8 | 105.2 | 497 | 5,200 | 54.9 |
| | 5-Jun-01 | 259 | 5.87 | 1.8 | 112.8 | 380 | 8,530 | 23.2 |
| | 13-Sep-01 | 374 | 7.44 | 4.52 | 127.5 | 513 | 7,150 | 24.7 |
| | 7-Dec-01 | 15.4 | BDL | BDL | 8.10 | 24 | 1,130 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 103 | BDL |
| | 6-Jun-02 | 3.24 | BDL | BDL | 6.25 | 9.49 | 6,360 | 1.42 |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | 561 | BDL |
| | 12-Dec-02 | 17.4 | BDL | BDL | 29.3 | 46.7 | BDL | BDL |
| SSTL | | 3 | 1 | 1 | 1 | -- | 40 | 5 |
| MW-14 | 1-Dec-97 | 1.1 | 1.4 | BDL | 2.7 | 5 | 76.5 | BDL |
| | 5-Aug-99 | 57 | 7 | 1 | 23 | 88 | 606 | 5 |
| | 26-Apr-00 | BDL | 1.38 | BDL | BDL | 1.38 | 1.11 | BDL |
| | 1-Aug-00 | 138 | 4.04 | BDL | 39.04 | 181.08 | 35.3 | 13.0 |
| | 13-Dec-00 | BDL | BDL | BDL | 2.13 | 2.13 | 129 | 2.33 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 11.1 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | 54.9 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 1.53 | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | 7 | 1 | 23 | - | 40 | 5 |
| MW-15 | 1-Dec-97 | 1.0 | 1.6 | BDL | 2.5 | 5 | BDL | BDL |
| | 5-Aug-99 | 3 | 6 | 1 | 6 | 16 | 27 | <5 |
| | 26-Apr-00 | 1.01 | 1.32 | BDL | BDL | 2.33 | 2.82 | 5.66 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 2.77 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 3 | 6 | 1 | 6 | - | 27 | <5 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-16 | 1-Dec-97 | BDL | 1.2 | BDL | 1.3 | 2.5 | BDL | BDL |
| | 5-Aug-99 | 2.2 | 8.8 | 1.6 | 7.1 | 19.7 | 4 | BDL |
| | 26-Apr-00 | 2.17 | 1.27 | BDL | BDL | 3.4 | 10.1 | BDL |
| | 1-Aug-00 | 5.02 | 3.01 | BDL | 3.5 | 11.5 | 16.1 | 1.35 |
| | 13-Dec-00 | 10.7 | BDL | BDL | 2.66 | 13.4 | 30.6 | 1.96 |
| | 6-Feb-01 | 6.25 | BDL | BDL | BDL | 6.25 | 32.7 | BDL |
| | 5-Jun-01 | 22.3 | BDL | BDL | 1.30 | 23.6 | 78.8 | BDL |
| | 13-Sep-01 | 18.9 | BDL | BDL | BDL | BDL | 35.6 | BDL |
| | 7-Dec-01 | 15.7 | BDL | BDL | 1.01 | 16.7 | 25.0 | BDL |
| | 5-Mar-02 | 15.1 | BDL | BDL | BDL | 15.1 | 104 | BDL |
| | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | 2.60 | BDL | 9.03 | BDL | 11.6 | 14.0 | BDL |
| DMW-17 | 1-Dec-97 | 1.6 | 3.8 | 2.3 | 12.7 | 20.3 | BDL | BDL |
| | 5-Aug-99 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 26-Apr-00 | 1.06 | 1.24 | BDL | BDL | 2.3 | 8.97 | BDL |
| | 1-Aug-00 | BDL | 3.02 | BDL | BDL | 3.02 | 7.75 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 6.98 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 5.34 | BDL |
| | 5-Jun-01 | BDL | 2.0 | BDL | BDL | 2.0 | 23.8 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 3.42 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 6.82 | 1.1 |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | 10.1 | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |
| CP-WW | 1-Dec-97 | BDL | 1.2 | BDL | BDL | 1.2 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 2.96 | 1.09 | BDL | BDL | 4.1 | 315 | BDL |
| | 1-Aug-00 | 3.23 | 2.56 | BDL | 1.09 | 7 | 224 | BDL |
| | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| | 17-Sep-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| CLS-WW | 1-Dec-97 | 81.3 | 1.1 | BDL | 9.6 | 92 | 34.5 | BDL |
| | 5-Aug-99 | 81 | 1 | <1 | 10 | 92 | 35 | <5 |
| | 26-Apr-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | <1 | <1 | 10 | - | 35 | <5 |

Notes:
All results reported in parts per billion (ug/L) unless otherwise noted.
SSTL = Site specific target levels referenced in bid
FP = Free Product; NS = Not Sampled
BDL = Below detecatable Levels
Total BTEX = Summation of benzene, toluene, ethylbenzene and xylenes
MTBE = Methyl-tert-buytl-ether

# ATTACHMENT 3
# LABORATORY ANALYTICAL REPORT

# ACCESS ANALYTICAL, INC.

RECEIVED JAN 0 2 2003

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


December 30, 2002
Report # 212000898
Order # 108005
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawfords DHE 12335

Sample I.D.: MW-1
Collected: 12/12/02 00:00
Received: 12/14/02 10:00
Collected by: Burritt/Cagle

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 100 | | | | |
| Methyl-Tert-Butyl-Ether | 18200 | ug/L | 5030/8260B | 100.000 | 12/16.2002 | 12/16/2002 | 14:06 | SKL |
| Benzene | 6590 | ug/L | 5030/8260B | 100.000 | 12/16.2002 | 12/16/2002 | 14:06 | SKL |
| Toluene | 23500 | ug/L | 5030/8260B | 100.000 | 12/16.2002 | 12/16/2002 | 14:06 | SKL |
| Ethylbenzene | 3670 | ug/L | 5030/8260B | 100.000 | 12/16.2002 | 12/16/2002 | 14:06 | SKL |
| m & p-Xylene | 14700 | ug/L | 5030/8260B | 100.000 | 12/16.2002 | 12/16/2002 | 14:06 | SKL |
| o-Xylene | 5780 | ug/L | 5030/8260B | 100.000 | 12/16.2002 | 12/16/2002 | 14:06 | SKL |
| Naphthalene | 8330 | ug/L | 5030/8260B | 100.000 | 12/16.2002 | 12/16/2002 | 14:06 | SKL |
| SURROGATE: Toluene-D8 | 95.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 114.40% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 115.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.
* UNABLE TO RUN LOWER DUE TO MATRIX.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


December 30, 2002
Report # 212000898
Order # 108006
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawfords DHE 12335

Sample I.D.: MW-2
Collected: 12/12/02 00:00
Received: 12/14/02 10:00
Collected by: Burritt/Cagle

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 100 | | | | |
| Methyl-Tert-Butyl-Ether | 11000 | ug/L | 5030/8260B | 100.000 | 12/17/2002 | 12/17/2002 | 14:01 | SKL |
| Benzene | 5120 | ug/L | 5030/8260B | 100.000 | 12/17/2002 | 12/17/2002 | 14:01 | SKL |
| Toluene | 2180 | ug/L | 5030/8260B | 100.000 | 12/17/2002 | 12/17/2002 | 14:01 | SKL |
| Ethylbenzene | 1180 | ug/L | 5030/8260B | 100.000 | 12/17/2002 | 12/17/2002 | 14:01 | SKL |
| m & p-Xylene | 1290 | ug/L | 5030/8260B | 100.000 | 12/17/2002 | 12/17/2002 | 14:01 | SKL |
| o-Xylene | 401 | ug/L | 5030/8260B | 100.000 | 12/17/2002 | 12/17/2002 | 14:01 | SKL |
| Naphthalene | 363 | ug/L | 5030/8260B | 100.000 | 12/17/2002 | 12/17/2002 | 14:01 | SKL |
| SURROGATE: Toluene-D8 | 95.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 113.20% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 111.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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* UNABLE TO RUN LOWER DUE TO MATRIX.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


December 30, 2002
Report # 212000898
Order # 108007
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawfords DHE 12335

Sample I.D.: MW-3
Collected: 12/12/02 00:00
Received: 12/14/02 10:00
Collected by: Burritt/Cagle

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1000 | | | | |
| Methyl-Tert-Butyl-Ether | 12600 | ug/L | 5030/8260B | 1000.000 | 12/17/2002 | 12/17/2002 | 14:02 | SKL |
| Benzene | 6360 | ug/L | 5030/8260B | 1000.000 | 12/17/2002 | 12/17/2002 | 14:02 | SKL |
| Toluene | 44900 | ug/L | 5030/8260B | 1000.000 | 12/17/2002 | 12/17/2002 | 14:02 | SKL |
| Ethylbenzene | 3640 | ug/L | 5030/8260B | 1000.000 | 12/17/2002 | 12/17/2002 | 14:02 | SKL |
| m & p-Xylene | 16800 | ug/L | 5030/8260B | 1000.000 | 12/17/2002 | 12/17/2002 | 14:02 | SKL |
| o-Xylene | 6960 | ug/L | 5030/8260B | 1000.000 | 12/17/2002 | 12/17/2002 | 14:02 | SKL |
| Naphthalene | 1330 | ug/L | 5030/8260B | 1000.000 | 12/17/2002 | 12/17/2002 | 14:02 | SKL |
| SURROGATE: Toluene-D8 | 109.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 103.60% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 107.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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SC.=#96023, TN.=#TN02826,P.R.=FL-00535
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* UNABLE TO RUN LOWER DUE TO MATRIX.

Company Representative

**Richard Gillespie**
**H2O Environmental Inc**
**121 Centrum Dr. Ste 2**

**Irmo, SC 29063**


**December 30, 2002**
**Report # 212000898**
**Order # 108008**
**STL Miami Cert ID# 96023**
**NELAP ID# E86349**

**Site Location/Project**
**South Carolina**
**Crawfords DHE 12335**

**Sample I.D.: MW-4**
**Collected: 12/12/02 00:00**
**Received: 12/14/02 10:00**
**Collected by: Burritt/Cagle**

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 100 | | | | |
| Methyl-Tert-Butyl-Ether | 1640 | ug/L | 5030/8260B | 100.000 | 12/17/2002 | 12/17/2002 | 14:00 | SKL |
| Benzene | 5100 | ug/L | 5030/8260B | 100.000 | 12/17/2002 | 12/17/2002 | 14:00 | SKL |
| Toluene | 2300 | ug/L | 5030/8260B | 100.000 | 12/17/2002 | 12/17/2002 | 14:00 | SKL |
| Ethylbenzene | 1690 | ug/L | 5030/8260B | 100.000 | 12/17/2002 | 12/17/2002 | 14:00 | SKL |
| m & p-Xylene | 3160 | ug/L | 5030/8260B | 100.000 | 12/17/2002 | 12/17/2002 | 14:00 | SKL |
| o-Xylene | 3920 | ug/L | 5030/8260B | 100.000 | 12/17/2002 | 12/17/2002 | 14:00 | SKL |
| Naphthalene | 319 | ug/L | 5030/8260B | 100.000 | 12/17/2002 | 12/17/2002 | 14:00 | SKL |
| SURROGATE: Toluene-D8 | 110.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 118.40% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 101.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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SC.=#96023, TN.=#TN02826,P.R.=FL-00535
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.
* UNABLE TO RUN LOWER DUE TO MATRIX.

**Company Representative**

**Richard Gillespie**
**H2O Environmental Inc**
**121 Centrum Dr. Ste 2**

**Irmo, SC 29063**


**December 30, 2002**
**Report # 212000898**
**Order # 108009**
**STL Miami Cert ID# 96023**
**NELAP ID# E86349**

**Site Location/Project**
**South Carolina**
**Crawfords DHE 12335**

**Sample I.D.: MW-5**
**Collected: 12/12/02 00:00**
**Received: 12/14/02 10:00**
**Collected by: Burritt/Cagle**

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 13.8 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:56 | SKL |
| Benzene | 110 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:56 | SKL |
| Toluene | 5390 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:56 | SKL |
| Ethylbenzene | 1340 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:56 | SKL |
| m & p-Xylene | 4030 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:56 | SKL |
| o-Xylene | 1870 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:56 | SKL |
| Naphthalene | 287 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:56 | SKL |
| SURROGATE: Toluene-D8 | 111.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 97.20% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 87.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

**Company Representative**

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


December 30, 2002
Report # 212000898
Order # 108010
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawfords DHE 12335

Sample I.D.: MW-6
Collected: 12/12/02 00:00
Received: 12/14/02 10:00
Collected by: Burritt/Cagle

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 4.04 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:56 | PMD |
| Benzene | 11.1 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:56 | PMD |
| Toluene | 206 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:56 | PMD |
| Ethylbenzene | 26.2 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:56 | PMD |
| m & p-Xylene | 175 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:56 | PMD |
| o-Xylene | 60.7 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:56 | PMD |
| Naphthalene | 51.6 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:56 | PMD |
| SURROGATE: Toluene-D8 | 93.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 98.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 103.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


December 30, 2002
Report # 212000898
Order # 108011
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawfords DHE 12335

Sample I.D.: MW-7
Collected: 12/12/02 00:00
Received: 12/14/02 10:00
Collected by: Burritt/Cagle

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 10.5 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 12:21 | AA1 |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 12:21 | AA1 |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 12:21 | AA1 |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 12:21 | AA1 |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 12:21 | AA1 |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 12:21 | AA1 |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 12:21 | AA1 |
| SURROGATE: Toluene-D8 | 104.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 113.60% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 99.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


December 30, 2002
Report # 212000898
Order # 108012
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawfords DHE 12335

Sample I.D.: MW-8
Collected: 12/12/02 00:00
Received: 12/14/02 10:00
Collected by: Burritt/Cagle

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 12:22 | AA1 |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 12:22 | AA1 |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 12:22 | AA1 |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 12:22 | AA1 |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 12:22 | AA1 |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 12:22 | AA1 |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 12:22 | AA1 |
| SURROGATE: Toluene-D8 | 97.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 121.20% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 109.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


December 30, 2002
Report # 212000898
Order # 108013
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawfords DHE 12335

Sample I.D.: MW-9
Collected: 12/12/02 00:00
Received: 12/14/02 10:00
Collected by: Burritt/Cagle

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 16:32 | PMD |
| Benzene | 8.14 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 16:32 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 16:32 | PMD |
| Ethylbenzene | 21.7 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 16:32 | PMD |
| m & p-Xylene | 356 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 16:32 | PMD |
| o-Xylene | 127 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 16:32 | PMD |
| Naphthalene | 19.1 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 16:32 | PMD |
| SURROGATE: Toluene-D8 | 93.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 118.80% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 103.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


December 30, 2002
Report # 212000898
Order # 108014
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawfords DHE 12335

Sample I.D.: MW-10
Collected: 12/12/02 00:00
Received: 12/14/02 10:00
Collected by: Burritt/Cagle

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:58 | SKL |
| Benzene | 159 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:58 | SKL |
| Toluene | 428 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:58 | SKL |
| Ethylbenzene | 26.3 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:58 | SKL |
| m & p-Xylene | 371 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:58 | SKL |
| o-Xylene | 266 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:58 | SKL |
| Naphthalene | 24.6 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:58 | SKL |
| SURROGATE: Toluene-D8 | 103.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 108.80% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 110.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

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H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


December 30, 2002
Report # 212000898
Order # 108015
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawfords DHE 12335

Sample I.D.: MW-11
Collected: 12/12/02 00:00
Received: 12/14/02 10:00
Collected by: Burritt/Cagle

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:36 | SKL |
| Benzene | 23.5 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:36 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:36 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:36 | SKL |
| m & p-Xylene | 2.83 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:36 | SKL |
| o-Xylene | 5.56 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:36 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 13:36 | SKL |
| SURROGATE: Toluene-D8 | 92.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 120.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 81.25% | | | | | | | |

REPORT COMMENTS:
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


December 30, 2002
Report # 212000898
Order # 108016
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawfords DHE 12335

Sample I.D.: MW-12
Collected: 12/12/02 00:00
Received: 12/14/02 10:00
Collected by: Burritt/Cagle

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:12 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:12 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:12 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:12 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:12 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:12 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:12 | SKL |
| SURROGATE: Toluene-D8 | 93.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 115.20% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 85.50% | | | | | | | |

REPORT COMMENTS:
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SC.=#96023, TN.=#TN02826,P.R.=FL-00535
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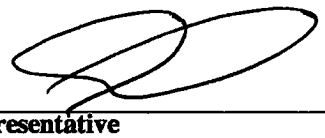

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


December 30, 2002
Report # 212000898
Order # 108017
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawfords DHE 12335

Sample I.D.: MW-13
Collected: 12/12/02 00:00
Received: 12/14/02 10:00
Collected by: Burritt/Cagle

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:13 | SKL |
| Benzene | 17.4 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:13 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:13 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:13 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:13 | SKL |
| o-Xylene | 29.3 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:13 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:13 | SKL |
| SURROGATE: Toluene-D8 | 107.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 117.20% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 106.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


December 30, 2002
Report # 212000898
Order # 108018
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawfords DHE 12335

Sample I.D.: MW-14
Collected: 12/12/02 00:00
Received: 12/14/02 10:00
Collected by: Burritt/Cagle

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:14 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:14 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:14 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:14 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:14 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:14 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:14 | SKL |
| SURROGATE: Toluene-D8 | 105.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 114.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 108.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


December 30, 2002
Report # 212000898
Order # 108019
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawfords DHE 12335

Sample I.D.: MW-15
Collected: 12/12/02 00:00
Received: 12/14/02 10:00
Collected by: Burritt/Cagle

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:15 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:15 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:15 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:15 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:15 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:15 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:15 | SKL |
| SURROGATE: Toluene-D8 | 59.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 113.60% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 106.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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SC.=#96023, TN.=#TN02826,P.R.=FL-00535
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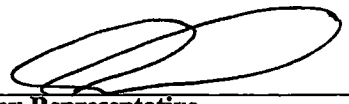

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


December 30, 2002
Report # 212000898
Order # 108020
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawfords DHE 12335

Sample I.D.: MW-16
Collected: 12/12/02 00:00
Received: 12/14/02 10:00
Collected by: Burritt/Cagle

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 14.0 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:16 | SKL |
| Benzene | 2.60 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:16 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 06:59 | SKL |
| Ethylbenzene | 9.03 | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:16 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 06:59 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 06:59 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 06:59 | SKL |
| SURROGATE: Toluene-D8 | 83.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 114.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 86.00% | | | | | | | |

REPORT COMMENTS:
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Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

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H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


December 30, 2002
Report # 212000898
Order # 108021
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawfords DHE 12335

Sample I.D.: MW-17
Collected: 12/12/02 00:00
Received: 12/14/02 10:00
Collected by: Burritt/Cagle

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:17 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:17 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:17 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:17 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:17 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:17 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:17 | SKL |
| SURROGATE: Toluene-D8 | 92.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 108.80% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 100.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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SC.=#96023, TN.=#TN02826,P.R.=FL-00535
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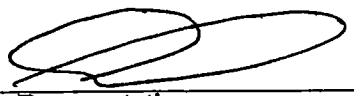

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


December 30, 2002
Report # 212000898
Order # 108022
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawfords DHE 12335

Sample I.D.: CLS-WW
Collected: 12/12/02 00:00
Received: 12/14/02 10:00
Collected by: Burritt/Cagle

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:18 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:18 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:18 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:18 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:18 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:18 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 12/17/2002 | 12/17/2002 | 09:18 | SKL |
| SURROGATE: Toluene-D8 | 90.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 113.20% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 92.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

# Access Analytical - Chain of Custody Record

Laboratory ID: 52-m

Project Submission #: _____ RUSH # _____ PO #: _____

Company Name: H2O Environmental

Address: 121 Centrum Dr. #2

City: Irmo State: SC Zip: 29063

Project Name: Crawfords DHE-12335

Report To: Bick Gillespie

Sampled By (print): D. Burritt / S. Cagle

Preservative: (*see codes below) 1

REQUESTED LAB ANALYSIS: BTEX/MTBE/NAPH

| Sample Label | Date Collected | Time Collected | Matrix | # of Cont |
|---|---|---|---|---|
| MW-1 | | | GW | |
| MW-2 | | | | |
| MW-3 | | | | |
| MW-4 | | | | |
| MW-5 | | | | |
| MW-6 | | | | |
| MW-7 | | | | |
| MW-8 | | | | |
| MW-9 | | | | |
| MW-10 | | | | |

ACCESS ANALYTICAL, INC.

1248 Lake Murray Blvd.
Irmo, SC 29063

Phone: (803) 781-4243
Fax: 781-4303
Toll Free (888) 315-4243
www.accessanalyticalinc.com

NOTES / COMMENTS

**Turnaround Time:**

✓ Std. (5-7 Bus. days)

___ RUSH*

*Date Required: _____

(For rush work, results faxed by end of business day on date required)

Samples Recd. on Ice?

___ Yes

___ No

Project Location:

✓ SC

___ NC

___ Other _____ (specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| Stephanie Cagle | 12/13/02 | 1630 | |
| | 12/13/02 | 1650 | FEDEX |
| FEDEX | | | |

* Preservative Codes (place corresponding # in block above analysis field): 0=None, 1=HCL, 2=$HNO_3$, 3=$H_2SO_4$, 4=NaOH, 5=$Na_2S_2O_3$, 6=$NaHSO_4$, Other=Specify



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Pink Copy - Client Copy

001 ACCESS ANALYTICAL 01/06/2003 09:46 FAX 8037814303

# Access Analytical - Chain of Custody Record

Laboratory ID: [illegible]

PO #:

Project Submission #: RUSH #

Company Name: H2O Environmental

Address: 121 Centrum Dr. # 2

City: Irmo State: SC Zip: 29063

Project Name: Crawfords DHE-12335

Report To: Rick Gillespie

Sampled By (print): D. Burritt / S. Cayle

Preservative: (*see codes below): 1

REQUESTED LAB ANALYSIS: BTEX/MTBE/NAPH

| Sample Label | Date Collected | Time Collected | Matrix | # of Cont | BTEX/MTBE/NAPH |
|---|---|---|---|---|---|
| MW-11 | | | GW | | |
| MW-12 | | | ↓ | | |
| MW-13 | | | ↓ | | |
| MW-14 | | | ↓ | | |
| MW-15 | | | ↓ | | |
| MW-16 | | | ↓ | | |
| MW-17 | | | ↓ | | |
| CLS-WW | | | ↓ | | |
| CP-WW | | | ↓ | | |

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Irmo, SC 29063
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Toll Free (888) 315-4243
www.accessanalyticalinc.com

NOTES / COMMENTS

**Turnaround Time:**
✓ Std. (5-7 Bus. days)
___ RUSH*
*Date Required:______
(For rush work, results faxed by end of business day on date required)

Samples Recd. on Ice?
___ Yes
___ No

Project Location:
✓ SC
___ NC
___ Other ______ (specify)

| Relinquished By | Date | Time | Received By |
|---|---|---|---|
| Stephanie Cayle | 12/13/02 | 1635 | [signature] |
| [signature] | 12/13/02 | 1650 | FEDEX |
| FEDEX | | | |

* Preservative Codes (place corresponding # in block above analysis field): 0=None, 1=HCL, 2=$HNO_3$, 3=$H_2SO_4$, 4=NaOH, 5=$Na_2S_2O_3$, 6=$NaHSO_4$; Other=Specify



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Tech. File -# 12335

May 14, 2003

RECEIVED
MAY 16 2003
UNDERGROUND STORAGE TANK PROGRAM

Mr. John Abernathy
Underground Storage Tank Program
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

UST 57 Tech DOCKETING

RE: 11th Quarterly Report
Crawford's Country Store
5870 Hwy 28 North
Antreville, South Carolina
SCDHEC Site ID # 12335

Dear Mr. Abernathy:

On February 4, 2000, the South Carolina Department of Health and Environmental Control (SCDHEC) provided notice to proceed to $H_2O$ Environmental, Inc. ($H_2O$) to perform Corrective Action at Crawford's Country Store located at 5870 Highway 28 North, Antreville, South Carolina. See Figure 1, Attachment 1 for a layout of the site and remediation system. The objective of the project is to reduce the Chemicals of Concern (COC) in monitoring wells OMW-1, MW-2 through MW-5, MW-7 through MW-15, DMW-17, CP-WW and CLS-WW to the site specific target levels (SSTLs). A chronological summary of site activities is provided below:

| | |
|---|---|
| 2/4/00 | SCDHEC awarded Bid Number SB-9570-12/02/99-TC |
| 3/02/00 | Corrective Action Plan/Engineering Report submitted to SCDHEC |
| 4/18/00 | CAP/ER approved |
| 4/26/00 | Initial groundwater sampling event |
| 5/17/00 | Initial groundwater results submitted |
| 5/22/00-5/31/00 | System installed |
| 5/31/00 | System was inspected and approved Todd Adams of SCDHEC |
| 5/31/00 | Invoice submitted for payment of 40% of the contract amount |
| 6/14/00 | System start-up |
| 8/01/00 | 1st quarter sampling event |
| 8/28/99 | 1st quarter report submitted |
| 9/13/00 | Free product recovery from OMW-1, MW-2 and MW-3 |
| 12/13/00 | 2nd quarter sampling event |
| 2/16/01 | 2nd quarter report submitted |
| 2/6/01 | 3rd quarter sampling event |
| 3/15/01 | 3rd quarter report submitted |
| 6/5/01 | 4th quarter sampling event |

$H_2O$ ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS
130 Centrum Drive, Suite 3B • Irmo, South Carolina 29063 • 803•749•4080 • Fax 803•749•9911

| | |
|---|---|
| 7/31/01 | 4th quarter report submitted |
| 9/13/01 | 5th quarter sampling event |
| 10/18/01 | 5th quarter report submitted |
| 12/7/01 | 6th quarter sampling event |
| 2/4/02 | 6th quarter report submitted |
| 3/5/02 | 7th quarter sampling event |
| 4/26/02 | 7th quarter report submitted |
| 6/6/02 | 8th quarter sampling event |
| 7/10/02 | 8th quarter report submitted |
| 9/17/02 | 9th quarter sampling event |
| 10/28/02 | 9th quarter report submitted |
| 12/12/02 | 10th quarter sampling event |
| 2/6/03 | 10th quarter report submitted |
| 3/31/03 | 11th quarter report submitted |

An air injection/vapor extraction system was installed in May 2000 and put in operation in June 2000. The system consists of ten air injection/vapor extraction wells SV-1 through SV-10. In order to target the source area, $H_2O$ is rotating air sparging in injection/vapor extraction wells SV-1 through SV-10 and extracting vapor from injection/vapor extraction wells SV-1 through SV-8. Refer to Figure 1, Attachment 1 for a map illustrating the system layout. The following table summarizes the general operating characteristics of the system.

**Summary of System Operating Characteristics**

| Well ID | Activity | PSI | CFM | IWG |
|---|---|---|---|---|
| SV-1 - SV-8 | Vapor Extraction | -- | -- | 55 |
| SV-1 - SV-10 | Air Sparging | 10 | 6 | -- |

An air sample was collected from the effluent of the vapor extraction system on August 1, 2000. Based on the review of the laboratory analysis, it is estimated that contaminant emissions will not exceed 1,000 pounds per month. An air sample was not collected this quarter because the OVA field screening results were below detection limits.

On March 31, 2003, $H_2O$ Environmental Inc. personnel gauged and collected groundwater samples from monitoring wells MW-1R, MW-2 through MW-12, MW-13R, MW-14 through MW-17, and water well CLS-WW at the site. Water well CP-WW located at the Green residence was not operational at the time of the sampling event and a groundwater sample could not be collected. A new water well has been installed and is currently being used by the Green residence. The groundwater samples were analyzed for Benzene, Toluene, Ethylbenzene, total Xylenes (BTEX), Methyl-Tert-Butyl Ether (MTBE), and Naphthalene. Following groundwater sampling, a bacteria nutrient mixture was injected into the subsurface. The bioremediation technology was approved for use on August 12, 2002.

A review of the groundwater elevation data indicated a groundwater flow direction to the south-southeast. Table 1, Attachment 2, summarizes field data collected during monitoring well purging. The groundwater elevations are summarized on Table 2, Attachment 2, and illustrated on Figure 2, Attachment 1. The groundwater quality for Chemicals of Concern is summarized on Table 3, Attachment 2, and illustrated on Figure 3, Attachment 1. A copy of the laboratory analytical report is provided in Attachment 3. Groundwater generated during well purging was either placed in on-site 55-gallon drums or discharged on site as warranted by the data. Any disposal manifests will be forwarded to DHEC upon receipt.

Based on the groundwater quality, $H_2O$ will continue to operate the remediation system. If you have any questions or comments please do not hesitate to contact me at (803) 749-4080.

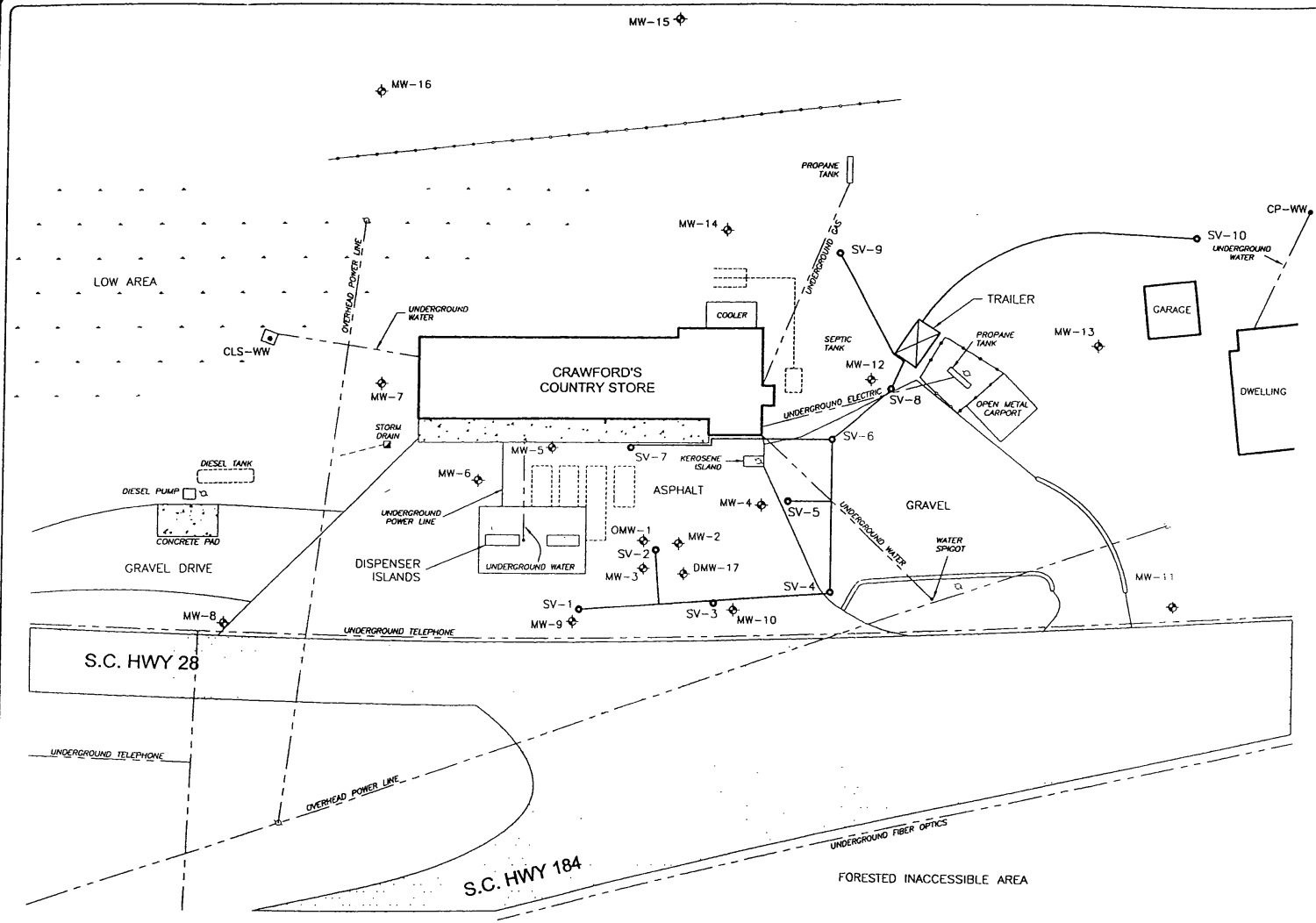
Sincerely,

**$H_2O$ Environmental, Inc.**
Class I Site Rehabilitation Contractor No. 32

Richard Gillespie

Richard D. Gillespie, P.G.
Senior Geologist 5-14-03
License Number 2199

# ATTACHMENT 1
# FIGURES




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

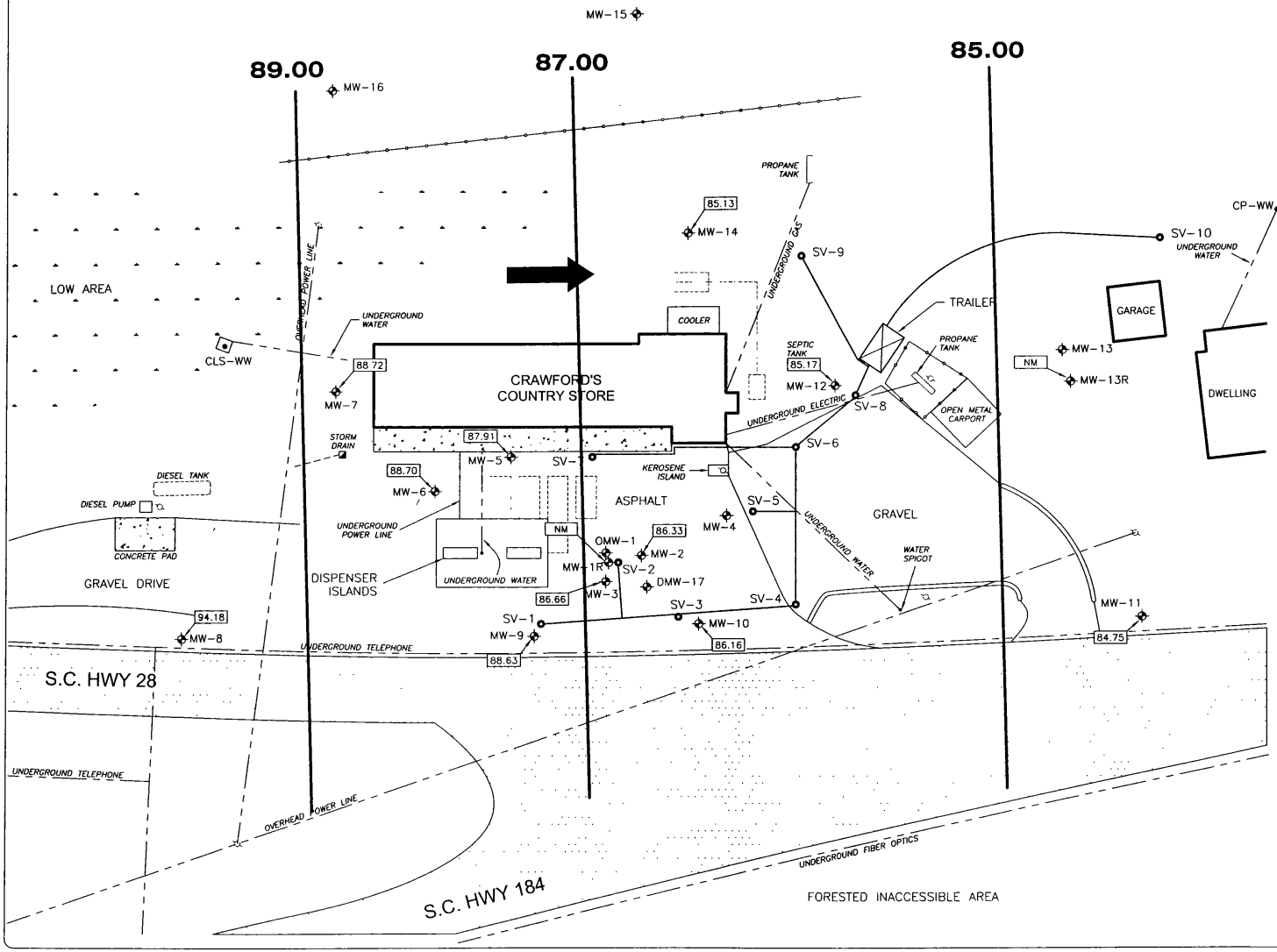
PROJECT NO: DHE-12335

DRAWING DATE: 08/24/2000

DRAWN BY: J.Driscoll

FIGURE NO: 1

FIGURE TITLE: REMEDIAL SYSTEM AS-BUILT




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |
| 0.00 | WATER TABLE ELEVATION (FEET) |
| | GROUNDWATER FLOW DIRECTION |
| 0.00 | GROUNDWATER ELEVATION CONTOUR |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

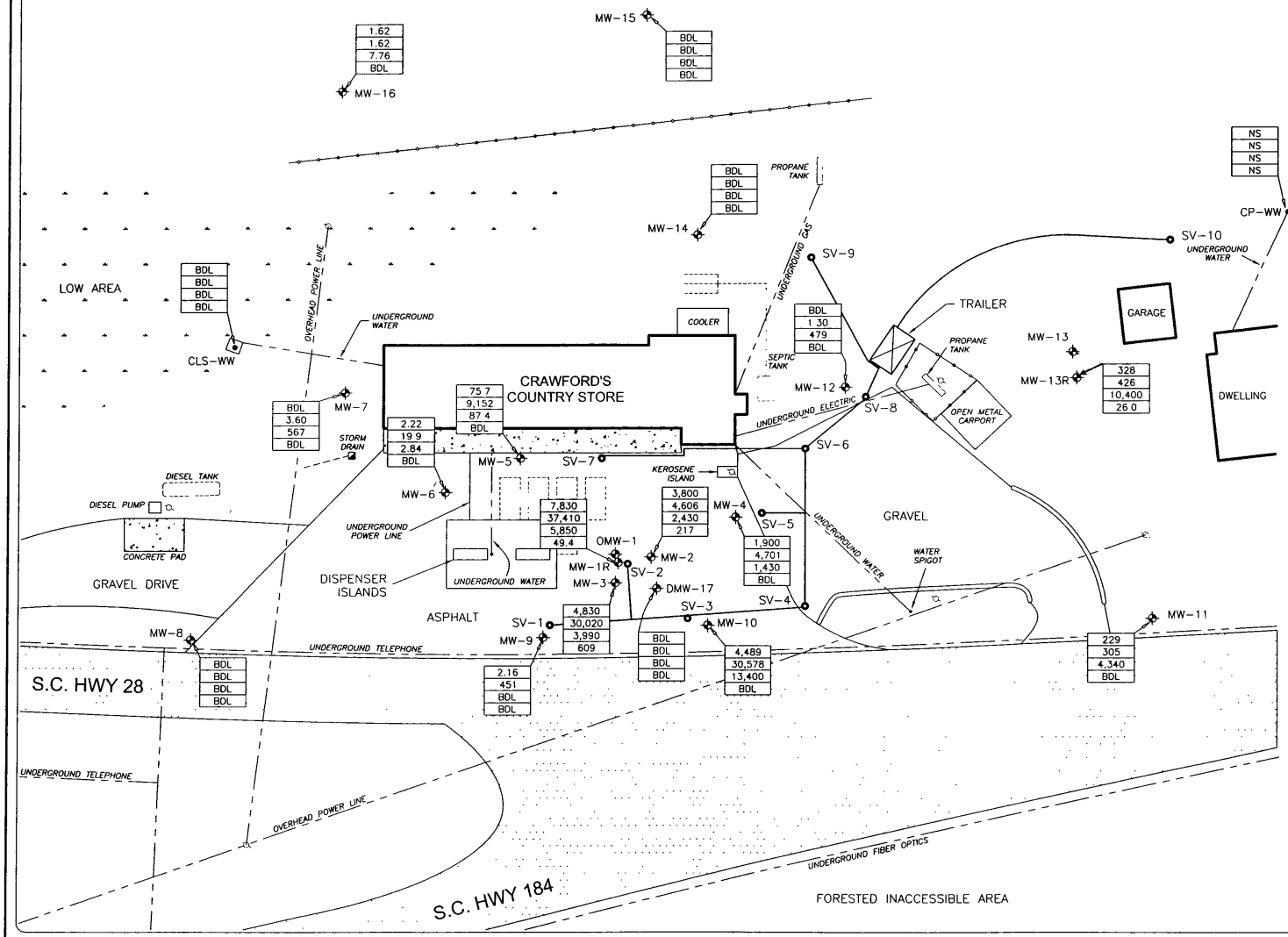
DRAWING DATE: 5/3/2003

DRAWN BY: JJD

FIGURE NO.: 2

FIGURE TITLE:

# GROUNDWATER FLOW MAP - 3/31/2003




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

| | |
|---|---|
| BDL | BENZENE |
| BDL | TOTAL BTEX |
| BDL | MTBE |
| BDL | NAPHTHALENE |

All results reported in parts per billion (ug/L)
FP = Free product
BDL = Below detectable levels
NS = Not Sampled

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 5/3/2003

DRAWN BY: JJD

FIGURE NO: 3

FIGURE TITLE: GROUNDWATER QUALITY MAP - 3/31/2003

# ATTACHMENT 2
# TABLES

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 8/5/1999 | 17.95 | 22' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.68 | 22' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 21.50 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 21.46 | 22' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 19.89 | 22' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.18 | 22' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 18.74 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21 75 | 22' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 19 77 | 22' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 16 59 | 22' | 2" | 2.6 | NM | NM | NM | NM |
| | 9/17/2002 | 19.97 | 22' | 2" | 1.0 | NM | NM | 0.93 | 25 1 |
| MW-1R | 12/12/2002 | 17.44 | 22' | 2" | 2.2 | NM | 0.82 | 3.87 | 18.7 |
| | 3/31/2003 | 14.02 | 22' | 2" | 3.9 | 6.5 | NM | 2.68 | 20 0 |
| MW-2 | 8/5/1999 | 19.19 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 22.30 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 21.36 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 18.89 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.42 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 19.03 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21.98 | 25' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 19.90 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 16.88 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 20.44 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/12/2002 | 17.84 | 25' | 2" | 3.5 | NM | 0.92 | 1.53 | 19.2 |
| | 3/31/2003 | 13.50 | 25' | 2" | 5.6 | 6.3 | NM | 2.30 | 19.2 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-3 | 8/5/1999 | 17.96 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.73 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 20.85 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 22 18 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 19.26 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.41 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 18 80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21.24 | 25' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 18.69 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 15.44 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 9/17/2002 | 20.11 | 25' | 2" | 2.4 | NM | NM | 1.21 | 24.3 |
| | 12/12/2002 | 17 45 | 25' | 2" | 3.7 | NM | 0.53 | 2.91 | 19.6 |
| | 3/31/2003 | 13.32 | 25' | 2" | 5.7 | 6 | NM | 2.09 | 19.4 |
| MW-4 | 8/5/2000 | 17.59 | 25' | 2" | 3.7 | 4.3 | 75.7 | 2.06 | 21.0 |
| | 4/26/2000 | 16.51 | 25' | 2" | 4.2 | 6.0 | 0.78 | 1.82 | 20.2 |
| | 8/1/2000 | 20.63 | 25' | 2" | 2.1 | 5.4 | 0.52 | 3.91 | 21.9 |
| | 12/13/2000 | 20.81 | 25' | 2" | 2.0 | 5.5 | NM | 1.90 | 18 5 |
| | 2/6/2001 | 19.09 | 25' | 2" | 2.9 | NM | NM | NM | NM |
| | 6/5/2001 | 17.70 | 25' | 2" | 3.6 | 5.3 | NM | 1.80 | 21.8 |
| | 9/13/2001 | 19.16 | 25' | 2" | 2.9 | NM | NM | 2.29 | 22.2 |
| | 12/7/2001 | 21.86 | 25' | 2" | 1.5 | 7.1 | NM | 2.42 | 21.5 |
| | 3/5/2002 | 18.91 | 25' | 2" | 3.0 | 6.9 | NM | 5.40 | 15.3 |
| | 6/6/2002 | 16.93 | 25' | 2" | 3.9 | NM | NM | NM | NM |
| | 9/17/2002 | 20.63 | 25' | 2" | 2.1 | NM | NM | 3.20 | 24.1 |
| | 12/12/2002 | 16.14 | 25' | 2" | 4.3 | NM | 0.79 | 2.32 | 19.4 |
| | 3/31/2003 | 18.91 | 25' | 2" | 3.0 | 6.0 | NM | 2.65 | 17.9 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-5 | 8/5/1999 | 15.95 | 25' | 2" | 4.4 | 4.5 | 111.8 | 1.65 | 21.0 |
| | 4/26/2000 | 14.35 | 25' | 2" | 5.2 | 6.2 | 0.92 | 2.73 | 19.4 |
| | 8/1/2000 | 19.18 | 25' | 2" | 2 8 | 5.1 | 0.5 | 1.25 | 20.8 |
| | 12/13/2000 | 19.68 | 25' | 2" | 2.6 | 5.3 | NM | 2.51 | 18.4 |
| | 2/6/2001 | 16.50 | 25' | 2" | 4.2 | NM | NM | NM | NM |
| | 6/5/2001 | 15.51 | 25' | 2" | 4.6 | 4 5 | NM | 1 88 | 21.5 |
| | 9/13/2001 | 17.48 | 25' | 2" | 3.7 | NM | NM | 1.94 | 22.2 |
| | 12/7/2001 | 20.09 | 25' | 2" | 2.4 | 6.9 | NM | 2.16 | 21.8 |
| | 3/5/2002 | 16.15 | 25' | 2" | 4.3 | 6.8 | NM | 3.90 | 18.4 |
| | 6/6/2002 | 15.11 | 25' | 2" | 4.8 | NM | NM | NM | NM |
| | 9/17/2002 | 18.31 | 25' | 2" | 3.3 | NM | NM | 1.72 | 22.9 |
| | 12/12/2002 | 15.09 | 25' | 2" | 4.8 | NM | 0.61 | 1.50 | 20.2 |
| | 3/31/2003 | 11.51 | 25' | 2" | 6 6 | 6.2 | NM | 2.79 | 15.7 |
| MW-6 | 8/5/1999 | 15.44 | 25' | 2" | 4.7 | 4.6 | 96 | 2.35 | 22.0 |
| | 4/26/2000 | 13.65 | 25' | 2" | 5.6 | 6.1 | 0.92 | 1.72 | 18.6 |
| | 8/1/2000 | 18.75 | 25' | 2" | 3.1 | 4.95 | 0.48 | 2.23 | 20.4 |
| | 12/13/2000 | 18.23 | 25' | 2" | 3.3 | 5.14 | NM | 1.42 | 18.4 |
| | 2/6/2001 | 15.34 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 6/5/2001 | 14.84 | 25' | 2" | 5.0 | 5.57 | NM | 1.44 | 21.8 |
| | 9/13/2001 | 16.96 | 25' | 2" | 3.9 | NM | NM | 1.80 | 20.9 |
| | 12/7/2001 | 19.70 | 25' | 2" | 2.6 | 6.9 | NM | 2.05 | 20.4 |
| | 3/5/2002 | 15.20 | 25' | 2" | 4.8 | 6.7 | NM | 3.64 | 16.1 |
| | 6/6/2002 | 15.51 | 25' | 2" | 4.6 | NM | NM | NM | NM |
| | 9/17/2002 | 17.76 | 25' | 2" | 3.5 | NM | NM | 1.78 | 22.6 |
| | 12/12/2002 | 14.29 | 25' | 2" | 5.2 | NM | 1.32 | 0.51 | 19.1 |
| | 3/31/2003 | 10.77 | 25' | 2" | 7.0 | 6.2 | NM | 5.93 | 15.2 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-7 | 8/5/1999 | 15.41 | 25' | 2" | 4.7 | 4 6 | 92.8 | 2.74 | 19.0 |
| | 4/26/2000 | 13.54 | 25' | 2" | 5.6 | 6.2 | 0.91 | 2.46 | 17.4 |
| | 8/1/2000 | 18.72 | 25' | 2" | 3.1 | 5.2 | 0.45 | 2.31 | 18.7 |
| | 12/13/2000 | 18.01 | 25' | 2" | 3.4 | 5 6 | NM | 1.96 | 16.5 |
| | 2/6/2001 | 15.41 | 25' | 2" | 4 7 | NM | NM | NM | NM |
| | 6/5/2001 | 14.61 | 25' | 2" | 5 1 | 5.4 | NM | 2 25 | 19.9 |
| | 9/13/2001 | 16.91 | 25' | 2" | 4 0 | NM | NM | 2.50 | 20.9 |
| | 12/7/2001 | 19.64 | 25' | 2" | 2.6 | 7.1 | NM | 2.18 | 19.5 |
| | 3/5/2002 | 14.75 | 25' | 2" | 5.0 | 6.8 | NM | 7.83 | 14.6 |
| | 6/6/2002 | 14.43 | 25' | 2" | 5.2 | NM | NM | NM | NM |
| | 9/17/2002 | 17.34 | 25' | 2" | 3.7 | NM | NM | 1.29 | 21.5 |
| | 12/12/2002 | 13.91 | 25' | 2" | 5 4 | 6 9 | 0 72 | 3.69 | 16.4 |
| | 3/31/2003 | 10.75 | 25' | 2" | 7.0 | 6 6 | NM | 3.45 | 11.7 |
| MW-8 | 8/5/2000 | 14.59 | 25' | 2" | 5 1 | 4.9 | 45.4 | 3.01 | 21.0 |
| | 4/26/2000 | 11.56 | 25' | 2" | 6.6 | 6.3 | 0.72 | 2.06 | 18.4 |
| | 8/1/2000 | 19.18 | 25' | 2" | 2.8 | 5.3 | 0.53 | 0.81 | 23.0 |
| | 12/13/2000 | 17.96 | 25' | 2" | 3 4 | 5.4 | NM | 1.93 | 18.7 |
| | 2/6/2001 | 13.34 | 25' | 2" | 5.7 | NM | NM | NM | NM |
| | 6/5/2001 | 13.15 | 25' | 2" | 5.8 | 5.4 | NM | 2.02 | 21.5 |
| | 9/13/2001 | 16.64 | 25' | 2" | 4.1 | NM | NM | 1.56 | 20.3 |
| | 12/7/2001 | 19.73 | 25' | 2" | 2.6 | 6.9 | NM | 1.40 | 20.4 |
| | 3/5/2002 | 11.41 | 25' | 2" | 6.6 | 6.7 | NM | 5.60 | 15.8 |
| | 6/6/2002 | 12.93 | 25' | 2" | 5.9 | NM | NM | NM | NM |
| | 9/17/2002 | 16.72 | 25' | 2" | 4.0 | NM | NM | 1.16 | 23.6 |
| | 12/12/2002 | 11.42 | 25' | 2" | 6.6 | 9.1 | 0.67 | 2.60 | 16.6 |
| | 3/31/2003 | 8.24 | 25' | 2" | 8.2 | 5.3 | NM | 2.81 | 15.3 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-9 | 8/5/2000 | 16.74 | 25' | 2" | 4.0 | 4.9 | 57.2 | 1.47 | 22.0 |
| | 4/26/2000 | 15.09 | 25' | 2" | 4.8 | 5.9 | 0.72 | 1.45 | 20.4 |
| | 8/1/2000 | 21.2 | 25' | 2" | 1.9 | 5.7 | 0.59 | 2.62 | 23.9 |
| | 12/13/2000 | 19.73 | 25' | 2" | 2.6 | 5.4 | NM | 1.12 | 18.6 |
| | 2/6/2001 | 17.54 | 25' | 2" | 3.6 | NM | NM | NM | NM |
| | 6/5/2001 | 16.35 | 25' | 2" | 4.2 | NM | NM | NM | NM |
| | 9/13/2001 | 18.40 | 25' | 2" | 3.2 | 4.4 | NM | 2.91 | 23.5 |
| | 12/7/2001 | 21.00 | 25' | 2" | 2.0 | 6.9 | NM | 3 43 | 22.6 |
| | 3/5/2002 | 17.38 | 25' | 2" | 3.7 | 6.8 | NM | 1.83 | 19.4 |
| | 6/6/2002 | 16.80 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 19.64 | 25' | 2" | 2.6 | NM | NM | 0.97 | 23.7 |
| | 12/12/2002 | 16.29 | 25' | 2" | 4.3 | NM | 0.26 | 1.30 | 19.9 |
| | 3/31/2003 | 11.90 | 25' | 2" | 6.4 | 5.4 | NM | 2.88 | 16.6 |
| MW-10 | 8/5/1999 | 18.06 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.75 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 20.50 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 19.40 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 18.84 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.38 | 25' | 2" | 3.7 | 5.6 | NM | 1.4 | 22.9 |
| | 9/13/2001 | 18.82 | 25' | 2" | 3.0 | 5.2 | NM | 3.20 | 23.2 |
| | 12/7/2001 | 23.90 | 25' | 2" | 0.5 | NM | NM | NM | NM |
| | 3/5/2002 | 19.09 | 25' | 2" | 2.9 | 6.9 | NM | 9.55 | 19.3 |
| | 6/6/2002 | 16.78 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 20.53 | 25' | 2" | 2.2 | NM | NM | 2.90 | 23.3 |
| | 12/12/2002 | 18.00 | 25' | 2" | 3.4 | NM | 0.87 | 4.25 | 18.1 |
| | 3/31/2003 | 13.49 | 25' | 2" | 5.6 | 6.3 | NM | 2.70 | 19.0 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp C |
|---|---|---|---|---|---|---|---|---|---|
| MW-11 | 8/5/1999 | 15.60 | 25' | 2" | 4.6 | 4.8 | 42.7 | 6.38 | 22.0 |
| | 4/26/2000 | 13.65 | 25' | 2" | 5.6 | 6.2 | 0.6 | 4.48 | 20.8 |
| | 8/1/2000 | 18.61 | 25' | 2" | 3.1 | 5.6 | 0.31 | 4.79 | 21.4 |
| | 12/13/2000 | 19.01 | 25' | 2" | 2.9 | 5.7 | NM | 5.15 | 19.8 |
| | 2/6/2001 | 17.43 | 25' | 2" | 3.7 | NM | NM | NM | NM |
| | 6/5/2001 | 15.96 | 25' | 2" | 4.4 | 5.8 | NM | 6 01 | 21.4 |
| | 9/13/2001 | 17 23 | 25' | 2" | 3.8 | 4.6 | NM | 5 82 | 22 4 |
| | 12/7/2001 | 19 74 | 25' | 2" | 2.6 | 6.8 | NM | 4 76 | 21 7 |
| | 3/5/2002 | 17.12 | 25' | 2" | 3.9 | 6.9 | NM | 7.56 | 15 2 |
| | 6/6/2002 | 15.03 | 25' | 2" | 4.9 | NM | NM | NM | NM |
| | 9/17/2002 | 18.88 | 25' | 2" | 3.0 | NM | NM | 1.68 | 23.2 |
| | 12/12/2002 | 16.13 | 25' | 2" | 4.3 | NM | 0.23 | 2.73 | 18.1 |
| | 3/31/2003 | 11.72 | 25' | 2" | 6.5 | 6.1 | NM | 2 18 | 16 6 |
| MW-12 | 8/5/1999 | 17.33 | 25' | 2" | 3.8 | 4.6 | 129.2 | 2.09 | 19.0 |
| | 4/26/2000 | 16.06 | 25' | 2" | 4.4 | 6.3 | 1.03 | 2.9 | 18.5 |
| | 8/1/2000 | 20.15 | 25' | 2" | 2.4 | 4.5 | 0.67 | 5 01 | 19 3 |
| | 12/13/2000 | 23.7 | 25' | 2" | 0.6 | 5 4 | NM | 2.9 | 17 1 |
| | 2/6/2001 | 18.45 | 25' | 2" | 3.2 | NM | NM | NM | NM |
| | 6/5/2001 | 17.26 | 25' | 2" | 3.8 | 10.2 | NM | 2 07 | 19 3 |
| | 9/13/2001 | 18.63 | 25' | 2" | 3.1 | NM | NM | 2.71 | 20.5 |
| | 12/7/2001 | 21.37 | 25' | 2" | 1.8 | 7.2 | NM | 8.00 | 19.9 |
| | 3/5/2002 | 18.65 | 25' | 2" | 3.1 | 6.8 | NM | 8.53 | 15.7 |
| | 6/6/2002 | 16.90 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 19.97 | 25' | 2" | 2.5 | 8.0 | NM | 8.07 | 21.7 |
| | 12/12/2002 | 17.33 | 25' | 2" | 3.8 | NM | 0.59 | 7.73 | 15.3 |
| | 3/31/2003 | 13.46 | 25' | 2" | 5.6 | 5.4 | NM | 3.75 | 15.9 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-13 | 8/5/1999 | 21.26 | 25' | 2" | 1.8 | 4.2 | 51.7 | 2.32 | 18.0 |
| | 4/26/2000 | 20.02 | 25' | 2" | 2.4 | 6.3 | 0.62 | 3.00 | 18.5 |
| | 8/1/2000 | 24.05 | 25' | 2" | 0 5 | 5.2 | 0.42 | 2.14 | 19.7 |
| | 12/13/2000 | 24.13 | 25' | 2" | 0.4 | 5.5 | NM | 1.04 | 15.9 |
| | 2/6/2001 | 22.43 | 25' | 2" | 1 3 | NM | NM | NM | NM |
| | 6/5/2001 | 21.34 | 25' | 2" | 1.8 | NM | 5.4 | 2.61 | 19.6 |
| | 9/13/2001 | 22.91 | 25' | 2" | 1.0 | NM | NM | NM | 20.3 |
| | 12/7/2001 | 25.22 | 25.22' | 2" | 0.0 | NM | NM | NM | NM |
| | 3/5/2002 | 22.21 | 25.22' | 2" | 1.5 | 6.9 | NM | 7.99 | 16.4 |
| | 6/6/2002 | 20.82 | 25.22' | 2" | 2.2 | NM | NM | NM | NM |
| | 9/17/2002 | 24.22 | 25.22' | 2" | 0.5 | NM | NM | 4.02 | 22.1 |
| | 12/12/2002 | 21.33 | 25.22' | 2" | 1.9 | NM | 0.31 | 2.85 | 15.9 |
| MW-13R | 3/31/2003 | 17.71 | 25.22' | 2" | 3 7 | 5.5 | NM | 2.19 | 16.6 |
| MW-14 | 8/5/1999 | 7.96 | 25' | 2" | 8.3 | 5.0 | 312 | 0.80 | 19.0 |
| | 4/26/2000 | 6.46 | 25' | 2" | 9.1 | 6.1 | 1.56 | 1.72 | 15.5 |
| | 8/1/2000 | 10.8 | 25' | 2" | 6.9 | 5.4 | 0.93 | 1.43 | 18.8 |
| | 12/13/2000 | 10.8 | 25' | 2" | 6.9 | 5.5 | NM | 1.72 | 14.7 |
| | 2/6/2001 | 8.72 | 25' | 2" | 8.0 | NM | NM | NM | NM |
| | 6/5/2001 | 7.32 | 25' | 2" | 8.6 | 5.8 | NM | 2.08 | 17.4 |
| | 9/13/2001 | 9.31 | 25' | 2" | 7.7 | NM | NM | 1.77 | 21.0 |
| | 12/7/2001 | 11.91 | 25' | 2" | 6.4 | 6.9 | NM | 1.84 | 20.5 |
| | 3/5/2002 | 8.51 | 25' | 2" | 8.1 | 6.9 | NM | 5.90 | 12.2 |
| | 6/6/2002 | 7.41 | 25' | 2" | 8.6 | NM | NM | NM | NM |
| | 9/17/2002 | 9.98 | 25' | 2" | 7.3 | NM | NM | 4.58 | 21.4 |
| | 12/12/2002 | 8.22 | 25' | 2" | 8.2 | NM | 0.48 | 5.50 | 14.6 |
| | 3/31/2003 | 4.25 | 25' | 2" | 10.1 | 5.8 | NM | 1.63 | 13.6 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp C |
|---|---|---|---|---|---|---|---|---|---|
| MW-15 | 8/5/1999 | 6.28 | 25' | 2" | 9.2 | 4.8 | 86.5 | 0.87 | 18.0 |
| | 4/26/2000 | 4.75 | 25' | 2" | 9.9 | 6.5 | 0.6 | 3.32 | 16.2 |
| | 8/1/2000 | 9.11 | 25' | 2" | 7.8 | 5.5 | 0.41 | 3.17 | 19.5 |
| | 12/13/2000 | 8.57 | 25' | 2" | 8.0 | 5.6 | NM | 1.93 | 15.1 |
| | 2/6/2001 | 6.36 | 25' | 2" | 9.1 | NM | NM | NM | NM |
| | 6/5/2001 | 5.68 | 25' | 2" | 9.4 | 6.1 | NM | 2.41 | 19.2 |
| | 9/13/2001 | 7.61 | 25' | 2" | 8.5 | NM | NM | 2.90 | 21.2 |
| | 12/7/2001 | 9.91 | 25' | 2" | 7.4 | 6 9 | NM | 3 66 | 20.3 |
| | 3/5/2002 | 5.86 | 25' | 2" | 9.4 | 6.6 | NM | 6.50 | 12.6 |
| | 6/6/2002 | NM | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/12/2002 | 4.74 | 25' | 2" | 9.9 | NM | 0.17 | 7.08 | 13.8 |
| | 3/31/2003 | 2.69 | 25' | 2" | 10.9 | 5.9 | NM | 5.45 | 12.6 |
| MW-16 | 8/5/1999 | 11.22 | 25' | 2" | 6.7 | 4 9 | 49 | 0.79 | 18.0 |
| | 4/26/2000 | 9.50 | 25' | 2" | 7.6 | 6.5 | 0.61 | 1.66 | 15.5 |
| | 8/1/2000 | 14.35 | 25' | 2" | 5 2 | 6 0 | 0 95 | 1.64 | 19 3 |
| | 12/13/2000 | 13.45 | 25' | 2" | 5 6 | 5 8 | NM | 2.27 | 15 6 |
| | 2/6/2001 | 10.89 | 25' | 2" | 6 9 | NM | NM | NM | NM |
| | 6/5/2001 | 10.34 | 25' | 2" | 7 2 | 6 5 | NM | 2 02 | 18.3 |
| | 9/13/2001 | 12.58 | 25' | 2" | 6.1 | NM | NM | 1.87 | 21 5 |
| | 12/7/2001 | 13.41 | 25' | 2" | 5.7 | 6.9 | NM | 4.75 | 19.1 |
| | 3/5/2002 | 8.67 | 25' | 2" | 8.0 | 6.7 | NM | 5.20 | 12.4 |
| | 6/6/2002 | NM | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/12/2002 | 9.58 | 25' | 2" | 7.5 | NM | 0.25 | 3.53 | 14.6 |
| | 3/31/2003 | 7.29 | 25' | 2" | 8.7 | 5.5 | NM | 1.85 | 12.8 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I D | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Conductivity | Dissolved Oxygen | Temp °C |
|---|---|---|---|---|---|---|---|---|---|
| MW-17 | 8/5/1999 | 16.16 | 75' | 2" | 28.8 | 5.6 | 90.8 | 2.76 | 20.5 |
| | 4/26/2000 | 16.8 | 75' | 2" | 28.5 | 6.4 | 0.86 | 6.1 | 20.8 |
| | 8/1/2000 | 19.27 | 75' | 2" | 27.3 | 6.2 | 0.59 | 3.12 | 22.5 |
| | 12/13/2000 | 19.20 | 75' | 2" | 27.3 | NM | NM | NM | NM |
| | 2/6/2001 | 16.82 | 75' | 2" | 28.5 | NM | NM | NM | NM |
| | 6/5/2001 | 15.52 | 75' | 2" | 29.1 | 7.1 | NM | 2 67 | 21.8 |
| | 9/13/2001 | 17.42 | 75' | 2" | 28.2 | NM | NM | 3.60 | 22.5 |
| | 12/7/2001 | 19 54 | 75' | 2" | 27.1 | 7.1 | NM | 2.73 | 22.5 |
| | 3/5/2002 | NM | 75' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | NM | 75' | 2" | NM | NM | NM | NM | NM |
| | 9/17/2002 | 18.32 | 75' | 2" | 27.7 | NM | NM | 4.12 | 23.1 |
| | 12/12/2002 | 16.66 | 75' | 2" | 28.5 | NM | 0.43 | 3.2 | 19.3 |
| | 3/31/2003 | 13.32 | 75' | 2" | 30.2 | 6.8 | NM | 5.23 | 21.1 |

NOTES:
NS - Not sampled
Temperature in Degrees Celcius
Dissolved Oxygen in mg/L
Depth to Water and Depth to bottom in units of feet
Well volumes (Gallons)
Specific Conductivity (umhos/cm)

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| OMW-1 | 01-Dec-97 | 99.82 | 17.13 | - | 82.69 |
| | 05-Aug-99 | | 17.95 | 1.05 | 81.87 |
| | 26-Apr-00 | | 15.68 | 0.99 | 84.14 |
| | 01-Aug-00 | | 21.50 | 1.40 | 78 32 |
| | 13-Dec-00 | | 21.46 | 1.70 | 78.36 |
| | 06-Feb-01 | | 19.89 | 1 78 | 79.93 |
| | 05-Jun-01 | | 17.18 | 0.19 | 82 64 |
| | 16-Aug-01 | | 18.10 | 0.13 | 81 72 |
| | 13-Sep-01 | | 18.74 | 0.02 | 81 08 |
| | 26-Sep-01 | | 19.31 | 0.07 | 80 51 |
| | 27-Sep-01 | | 19.32 | 0.01 | 80 50 |
| | 19-Oct-01 | | 19.93 | 0 02 | 79 89 |
| | 09-Nov-01 | | 21.00 | 0 39 | 78 82 |
| | 21-Nov-01 | | 21.63 | 1.28 | 78 19 |
| | 05-Dec-01 | | 21.65 | 0.96 | 78 17 |
| | 07-Dec-01 | | 21.75 | 0.76 | 78 07 |
| | 10-Dec-01 | | 21.65 | 0 01 | 78.17 |
| | 11-Dec-01 | | 21.65 | sheen | 78 17 |
| | | | 21.61 | 0.40 | 78 21 |
| | 07-Jan-02 | | 21.76 | 0 40 | 78 06 |
| | 04-Feb-02 | | 21.45 | 1.31 | 78 37 |
| | 05-Mar-02 | | 19.77 | 0.17 | 80.05 |
| | 19-Apr-02 | | 16.65 | 0.01 | 83 17 |
| | 17-May-02 | | 15.76 | 0.01 | 84.06 |
| | 24-May-02 | | 15.86 | sheen | 83.96 |
| | 28-May-02 | | 16.09 | sheen | 83 73 |
| | 30-May-02 | | 19.11 | sheen | 80.71 |
| | 06-Jun-02 | | 16.59 | - | 83.23 |
| | 17-Sep-02 | | 19.97 | - | 79.85 |
| MW-1R | 12-Dec-02 | - | 17.44 | - | NM |
| | 31-Mar-03 | - | 14.02 | - | NM |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-2 | 01-Dec-97 | 99.83 | 17.43 | - | 82.40 |
| | 05-Aug-99 | | 19.19 | 2.29 | 80.64 |
| | 26-Apr-00 | | 15.80 | 2.18 | 84.03 |
| | 01-Aug-00 | | 22.30 | 2.10 | 77.53 |
| | 13-Dec-00 | | 21.36 | 0.84 | 78.47 |
| | 06-Feb-01 | | 18.89 | sheen | 80.94 |
| | 05-Jun-01 | | 17.42 | sheen | 82.41 |
| | 16-Aug-01 | | 18 35 | - | 81 48 |
| | 13-Sep-01 | | 19.03 | - | 80.80 |
| | 26-Sep-01 | | 19.42 | sheen | 80.41 |
| | 27-Sep-01 | | 19.69 | 0.01 | 80.14 |
| | 19-Oct-01 | | 20.22 | - | 79.61 |
| | 09-Nov-01 | | 21.02 | 0 01 | 78.81 |
| | 21-Nov-01 | | 20.70 | sheen | 79 13 |
| | 05-Dec-01 | | 21.59 | 0.63 | 78.24 |
| | 07-Dec-01 | | 21 98 | 0.02 | 77.85 |
| | 10-Dec-01 | | 22.00 | 0.01 | 77.83 |
| | 11-Dec-01 | | 21 91 | sheen | 77.92 |
| | | | 21.73 | 0.02 | 78.10 |
| | 07-Jan-02 | | 22.34 | 0.22 | 77.49 |
| | 04-Feb-02 | | 20.50 | 0.15 | 79 33 |
| | 05-Mar-02 | | 19.90 | sheen | 79.93 |
| | 19-Apr-02 | | 17.03 | 0.01 | 82.80 |
| | 17-May-02 | | 16.25 | 0.01 | 83 58 |
| | 24-May-02 | | 16.28 | 0.01 | 83.55 |
| | 28-May-02 | | 16.49 | sheen | 83.34 |
| | 30-May-02 | | 19.50 | - | 80 33 |
| | 06-Jun-02 | | 16.88 | - | 82.95 |
| | 17-Sep-02 | | 20.44 | 0.05 | 79.39 |
| | 12-Dec-02 | | 17.84 | - | 81.99 |
| | 31-Mar-03 | | 13.50 | - | 86.33 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-3 | 01-Dec-97 | 99.98 | 17.00 | - | 82.98 |
| | 05-Aug-99 | | 17.96 | 1.01 | 82.02 |
| | 26-Apr-00 | | 15.73 | 0.68 | 84.25 |
| | 01-Aug-00 | | 20.85 | 0.78 | 79.13 |
| | 13-Dec-00 | | 22.18 | 2.22 | 77.80 |
| | 06-Feb-01 | | 19.26 | 0.96 | 80.72 |
| | 05-Jun-01 | | 17 41 | 0 40 | 82.57 |
| | 16-Aug-01 | | 18 19 | 0 09 | 81.79 |
| | 13-Sep-01 | | 18.80 | 0 02 | 81.18 |
| | 26-Sep-01 | | 19 25 | sheen | 80 73 |
| | 27-Sep-01 | | 19.32 | 0.04 | 80.66 |
| | 19-Oct-01 | | 20 04 | 0.06 | 79.94 |
| | 09-Nov-01 | | 20.86 | sheen | 79.12 |
| | 21-Nov-01 | | 20.59 | sheen | 79.39 |
| | 05-Dec-01 | | 21.10 | sheen | 78.88 |
| | 07-Dec-01 | | 21.24 | sheen | 78.74 |
| | 10-Dec-01 | | 21.62 | 0.01 | 78.36 |
| | 11-Dec-01 | | 21.65 | sheen | 78.33 |
| | | | 22.01 | 0.56 | 77.97 |
| | 07-Jan-02 | | 22 87 | 1.15 | 77 11 |
| | 04-Feb-02 | | 21 20 | 0 75 | 78.78 |
| | 05-Mar-02 | | 18.69 | 0 27 | 81.29 |
| | 19-Apr-02 | | 16 60 | sheen | 83.38 |
| | 17-May-02 | | 15.78 | 0 01 | 84.20 |
| | 24-May-02 | | 15.88 | sheen | 84.10 |
| | 28-May-02 | | 16.12 | sheen | 83.86 |
| | 30-May-02 | | 12.14 | - | 87.84 |
| | 06-Jun-02 | | 15.44 | - | 84.54 |
| | 17-Sep-02 | | 20.11 | - | 79.87 |
| | 12-Dec-02 | | 17.45 | - | 82.53 |
| | 31-Mar-03 | | 13.32 | - | 86.66 |
| MW-4 | 01-Dec-97 | 99.59 | 17.60 | - | 81.99 |
| | 05-Aug-99 | | 17.59 | - | 82.00 |
| | 26-Apr-00 | | 16.51 | - | 83.08 |
| | 01-Aug-00 | | 20.63 | - | 78.96 |
| | 13-Dec-00 | | 20.81 | - | 78.78 |
| | 06-Feb-01 | | 19.09 | - | 80.50 |
| | 05-Jun-01 | | 17.70 | - | 81.89 |
| | 13-Sep-01 | | 19.16 | - | 80.43 |
| | 07-Dec-01 | | 21.86 | - | 77.73 |
| | 05-Mar-02 | | 18.91 | - | 80.68 |
| | 06-Jun-02 | | 16.93 | - | 82.66 |
| | 17-Sep-02 | | 20.63 | - | 78.96 |
| | 12-Dec-02 | | 16.14 | - | 83.45 |
| | 31-Mar-03 | | 18.91 | - | 80.68 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-5 | 01-Dec-97 | 99.42 | 15.04 | - | 84.38 |
| | 05-Aug-99 | | 15.95 | - | 83.47 |
| | 26-Apr-00 | | 14.35 | - | 85.07 |
| | 01-Aug-00 | | 19.18 | - | 80.24 |
| | 13-Dec-00 | | 19.68 | - | 79.74 |
| | 06-Feb-01 | | 16.50 | - | 82.92 |
| | 05-Jun-01 | | 15 51 | - | 83 91 |
| | 13-Sep-01 | | 17.48 | - | 81.94 |
| | 07-Dec-01 | | 20.09 | - | 79 33 |
| | 05-Mar-02 | | 16.15 | - | 83.27 |
| | 06-Jun-02 | | 15.11 | - | 84.31 |
| | 17-Sep-02 | | 18 31 | - | 81 11 |
| | 12-Dec-02 | | 15.09 | - | 84 33 |
| | 31-Mar-03 | | 11.51 | - | 87.91 |
| MW-6 | 01-Dec-97 | 99.47 | 14.37 | - | 85 10 |
| | 05-Aug-99 | | 15.44 | - | 84.03 |
| | 26-Apr-00 | | 13.65 | - | 85.82 |
| | 01-Aug-00 | | 18.75 | - | 80.72 |
| | 13-Dec-00 | | 18.23 | - | 81.24 |
| | 06-Feb-01 | | 15.34 | - | 84 13 |
| | 05-Jun-01 | | 14.84 | - | 84.63 |
| | 13-Sep-01 | | 16.96 | - | 82.51 |
| | 07-Dec-01 | | 19.70 | - | 79.77 |
| | 05-Mar-02 | | 15.20 | - | 84.27 |
| | 06-Jun-02 | | 15.51 | - | 83.96 |
| | 17-Sep-02 | | 17.76 | - | 81.71 |
| | 12-Dec-02 | | 14.29 | - | 85.18 |
| | 31-Mar-03 | | 10.77 | - | 88 70 |
| MW-7 | 01-Dec-97 | 99.47 | 13.96 | - | 85.51 |
| | 05-Aug-99 | | 15.41 | - | 84.06 |
| | 26-Apr-00 | | 13.54 | - | 85.93 |
| | 01-Aug-00 | | 18.72 | - | 80.75 |
| | 13-Dec-00 | | 18.01 | - | 81.46 |
| | 06-Feb-01 | | 15.41 | - | 84.06 |
| | 05-Jun-01 | | 14.61 | - | 84.86 |
| | 13-Sep-01 | | 16.91 | - | 82.56 |
| | 07-Dec-01 | | 19.64 | - | 79.83 |
| | 05-Mar-02 | | 14.75 | - | 84.72 |
| | 06-Jun-02 | | 14.43 | - | 85.04 |
| | 17-Sep-02 | | 17.34 | - | 82.13 |
| | 12-Dec-02 | | 13.91 | - | 85.56 |
| | 31-Mar-03 | | 10.75 | - | 88.72 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-8 | 01-Dec-97 | 102.42 | 12.53 | - | 89.89 |
| | 05-Aug-99 | | 14.59 | - | 87.83 |
| | 26-Apr-00 | | 11.56 | - | 90.86 |
| | 01-Aug-00 | | 19.18 | - | 83.24 |
| | 13-Dec-00 | | 17.96 | - | 84.46 |
| | 06-Feb-01 | | 13.34 | - | 89.08 |
| | 05-Jun-01 | | 13.15 | - | 89 27 |
| | 13-Sep-01 | | 16.64 | - | 85 78 |
| | 07-Dec-01 | | 19.73 | - | 82.69 |
| | 05-Mar-02 | | 11 41 | - | 91.01 |
| | 06-Jun-02 | | 12.93 | - | 89.49 |
| | 17-Sep-02 | | 16.72 | - | 85.70 |
| | 12-Dec-02 | | 11.42 | - | 91 00 |
| | 31-Mar-03 | | 8.24 | - | 94.18 |
| MW-9 | 01-Dec-97 | 100.53 | 16.17 | - | 84.36 |
| | 05-Aug-99 | | 16.74 | - | 83 79 |
| | 26-Apr-00 | | 15.09 | - | 85 44 |
| | 01-Aug-00 | | 21.20 | - | 79 33 |
| | 13-Dec-00 | | 19.73 | - | 80 80 |
| | 06-Feb-01 | | 17.54 | - | 82.99 |
| | 05-Jun-01 | | 16.35 | - | 84.18 |
| | 13-Sep-01 | | 18.40 | - | 82 13 |
| | 07-Dec-01 | | 21.00 | - | 79 53 |
| | 05-Mar-02 | | 17 38 | - | 83.15 |
| | 06-Jun-02 | | 16.80 | - | 83.73 |
| | 17-Sep-02 | | 19.64 | - | 80.89 |
| | 12-Dec-02 | | 16.29 | - | 84.24 |
| | 31-Mar-03 | | 11.90 | - | 88 63 |
| MW-10 | 01-Dec-97 | 99.65 | 17.40 | - | 82.25 |
| | 05-Aug-99 | | 18.06 | 1.01 | 81.59 |
| | 26-Apr-00 | | 15.75 | 1.65 | 83.90 |
| | 01-Aug-00 | | 20.50 | 0.03 | 79.15 |
| | 13-Dec-00 | | 19.40 | 0.01 | 80.25 |
| | 06-Feb-01 | | 18.84 | sheen | 80.81 |
| | 05-Jun-01 | | 17.38 | - | 82.27 |
| | 16-Aug-01 | | 18.15 | - | 81.50 |
| | 13-Sep-01 | | 18.82 | - | 80.83 |
| | 07-Dec-01 | | 23.90 | - | 75.75 |
| | 11-Dec-01 | | 21.88 | - | 77.77 |
| | 04-Feb-02 | | 20.65 | - | 79.00 |
| | 05-Mar-02 | | 19.09 | - | 80.56 |
| | 06-Jun-02 | | 16.78 | - | 82.87 |
| | 17-Sep-02 | | 20.53 | - | 79.12 |
| | 12-Dec-02 | | 18.00 | - | 81.65 |
| | 31-Mar-03 | | 13.49 | - | 86.16 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-11 | 01-Dec-97 | 96.47 | 15.74 | - | 80.73 |
| | 05-Aug-99 | | 15.60 | - | 80.87 |
| | 26-Apr-00 | | 13.65 | - | 82.82 |
| | 01-Aug-00 | | 18.61 | - | 77.86 |
| | 13-Dec-00 | | 19.01 | - | 77.46 |
| | 06-Feb-01 | | 17.43 | - | 79.04 |
| | 05-Jun-01 | | 15.96 | - | 80 51 |
| | 13-Sep-01 | | 17 23 | - | 79.24 |
| | 07-Dec-01 | | 19.74 | - | 76.73 |
| | 05-Mar-02 | | 17.12 | - | 79.35 |
| | 06-Jun-02 | | 15 03 | - | 81.44 |
| | 17-Sep-02 | | 18.88 | - | 77 59 |
| | 12-Dec-02 | | 16.13 | - | 80.34 |
| | 31-Mar-03 | | 11.72 | - | 84 75 |
| MW-12 | 01-Dec-97 | 98 63 | 17.03 | - | 81.60 |
| | 05-Aug-99 | | 17.33 | - | 81.30 |
| | 26-Apr-00 | | 16.06 | - | 82.57 |
| | 01-Aug-00 | | 20.15 | - | 78.48 |
| | 13-Dec-00 | | 23.70 | - | 74.93 |
| | 06-Feb-01 | | 18.45 | - | 80.18 |
| | 05-Jun-01 | | 17.26 | - | 81.37 |
| | 13-Sep-01 | | 18.63 | - | 80.00 |
| | 07-Dec-01 | | 21.37 | - | 77.26 |
| | 05-Mar-02 | | 18.65 | - | 79.98 |
| | 06-Jun-02 | | 16.90 | - | 81.73 |
| | 17-Sep-02 | | 19.97 | - | 78.66 |
| | 12-Dec-02 | | 17.33 | - | 81.30 |
| | 31-Mar-03 | | 13.46 | - | 85.17 |
| MW-13 | 01-Dec-97 | 100.80 | 21.05 | - | 79.75 |
| | 05-Aug-99 | | 21.26 | - | 79.54 |
| | 26-Apr-00 | | 20.02 | - | 80.78 |
| | 01-Aug-00 | | 24.05 | - | 76.75 |
| | 13-Dec-00 | | 24.13 | - | 76.67 |
| | 06-Feb-01 | | 22.43 | - | 78.37 |
| | 05-Jun-01 | | 21.34 | - | 79.46 |
| | 13-Sep-01 | | 22.91 | - | 77.89 |
| | 07-Dec-01 | | 25.22 | - | 75.58 |
| | 05-Mar-02 | | 22.21 | - | 78.59 |
| | 06-Jun-02 | | 20.82 | - | 79.98 |
| | 17-Sep-02 | | 24.22 | - | 76.58 |
| | 12-Dec-02 | | 21.33 | - | 79.47 |
| MW-13R | 31-Mar-03 | NM | 17.71 | - | NM |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-14 | 01-Dec-97 | 89.38 | 7.27 | - | 82.11 |
| | 05-Aug-99 | | 7.96 | - | 81.42 |
| | 26-Apr-00 | | 6.46 | - | 82.92 |
| | 11-Aug-00 | | 10.80 | - | 78.58 |
| | 13-Dec-00 | | 10 80 | - | 78.58 |
| | 06-Feb-01 | | 8.72 | - | 80.66 |
| | 05-Jun-01 | | 7.32 | - | 82.06 |
| | 13-Sep-01 | | 9.31 | - | 80.07 |
| | 07-Dec-01 | | 11.91 | - | 77.47 |
| | 05-Mar-02 | | 8.51 | - | 80.87 |
| | 06-Jun-02 | | 7.41 | - | 81.97 |
| | 17-Sep-02 | | 9.98 | - | 79.40 |
| | 12-Dec-02 | | 8 22 | - | 81.16 |
| | 31-Mar-03 | | 4 25 | - | 85.13 |
| MW-15 | 01-Dec-97 | 87.33 | 5 10 | - | 82.23 |
| | 05-Aug-99 | | 6 28 | - | 81.05 |
| | 26-Apr-00 | | 4.75 | - | 82.58 |
| | 01-Aug-00 | | 9 11 | - | 78.22 |
| | 13-Dec-00 | | 8 57 | - | 78.76 |
| | 06-Feb-01 | | 6.36 | - | 80.97 |
| | 05-Jun-01 | | 5.68 | - | 81.65 |
| | 13-Sep-01 | | 7.61 | - | 79.72 |
| | 07-Dec-01 | | 9.91 | - | 77.42 |
| | 05-Mar-02 | | 5 86 | - | 81.47 |
| | 06-Jun-02 | | NM | - | NM |
| | 12-Dec-02 | | 4.74 | - | 82.59 |
| | 31-Mar-03 | | 2.69 | - | 84.64 |
| MW-16 | 01-Dec-97 | 93.74 | 9.69 | - | 84.05 |
| | 05-Aug-99 | | 11.22 | - | 82.52 |
| | 26-Apr-00 | | 9.50 | - | 84.24 |
| | 01-Aug-00 | | 14.35 | - | 79.39 |
| | 13-Dec-00 | | 13.45 | - | 80.29 |
| | 06-Feb-01 | | 10.89 | - | 82.85 |
| | 05-Jun-01 | | 10.34 | - | 83.40 |
| | 13-Sep-01 | | 12.58 | - | 81.16 |
| | 07-Dec-01 | | 13.41 | - | 80.33 |
| | 05-Mar-02 | | 8.67 | - | 85.07 |
| | 06-Jun-02 | | NM | - | NM |
| | 12-Dec-02 | | 9.58 | - | 84.16 |
| | 31-Mar-03 | | 7.29 | - | 86.45 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| DMW-17 | 01-Dec-97 | 100.08 | 15.53 | - | 84.55 |
| | 05-Aug-99 | | 16.16 | - | 83.92 |
| | 26-Apr-00 | | 16.80 | - | 83.28 |
| | 01-Aug-00 | | 19.27 | - | 80.81 |
| | 13-Dec-00 | | 19 20 | - | 80.88 |
| | 06-Feb-01 | | 16.82 | - | 83.26 |
| | 05-Jun-01 | | 15.52 | - | 84.56 |
| | 13-Sep-01 | | 17.42 | - | 82.66 |
| | 07-Dec-01 | | 19.54 | - | 80.54 |
| | 05-Mar-02 | | NM | - | NM |
| | 06-Jun-02 | | NM | - | NM |
| | 17-Sep-02 | | 18.32 | - | 81 76 |
| | 12-Dec-02 | | 16.66 | - | 83.42 |
| | 31-Mar-03 | | 13.32 | - | 86 76 |

**Notes:**
TOC - Top-of-Casing elevation refrenced to common datum.
NM - Not measured
All measurments in units of feet
- = No Data

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| OMW-1 | 1-Dec-97 | 14.9 | 85.5 | 5.2 | 24.8 | 130 | 96 | BDL |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 1,570 | 19,000 | 474 | 4,050 | 25,094 | 33,900 | 1,440 |
| | 17-Sep-02 | 2,940 | 25,200 | 1,330 | 9,580 | 39,050 | 30,600 | 620 |
| MW-1R | 12-Dec-02 | 6,590 | 23,500 | 3,670 | 20,480 | 54,240 | 18,200 | 8,330 |
| | 31-Mar-03 | 7,830 | 19,300 | 1,680 | 8,600 | 37,410 | 5,850 | 49.4 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-2 | 1-Dec-97 | 9,900 | 42,300 | 2,040 | 12,100 | 66,340 | 242,000 | 71.2 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 4,400 | 7,570 | 2,890 | 6,790 | 21,650 | 9,490 | 592 |
| | 13-Sep-01 | 2,280 | 9,780 | 1,630 | 7,650 | 21,340 | 1,750 | 399 |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 3,660 | 2,070 | 858 | 2,788 | 9,376 | 8,390 | 294 |
| | 17-Sep-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | 5,120 | 2,180 | 1,180 | 1,691 | 10,171 | 11,000 | 363 |
| | 31-Mar-03 | 3,800 | 288 | 427 | 90.7 | 4,606 | 2,430 | 217 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-3 | 1-Dec-97 | 9,820 | 54,500 | 2,160 | 11,900 | 78,380 | 81,200 | 445 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 8,770 | 34,700 | 2,610 | 14,760 | 60,840 | 8,940 | 503 |
| | 17-Sep-02 | 8,710 | 41,300 | 2,950 | 17,070 | 70,030 | 9,540 | 669 |
| | 12-Dec-02 | 6,360 | 44,900 | 3,640 | 23,760 | 78,660 | 12,600 | 1,330 |
| | 31-Mar-03 | 4,830 | 16,600 | 1,160 | 7,430 | 30,020 | 3,990 | 609 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-4 | 1-Dec-97 | 8,140 | 21,000 | 1,510 | 11,500 | 42,150 | 215,000 | 813 |
| | 5-Aug-99 | 14,200 | 34,600 | 2,750 | 15,900 | 67,450 | 109,000 | <5 |
| | 26-Apr-00 | 13,400 | 33,200 | 3,420 | 13,270 | 63,290 | 102,000 | 1,060 |
| | 1-Aug-00 | 10,100 | 23,300 | 1,740 | 11,410 | 46,550 | 109,000 | 559 |
| | 13-Dec-00 | 6,730 | 16,300 | 635 | 4,170 | 27,835 | 32,300 | 742 |
| | 6-Feb-01 | 5,860 | 13,500 | 1,080 | 7,230 | 27,670 | 26,100 | 210 |
| | 5-Jun-01 | 3,570 | 10,900 | 965 | 9,510 | 24,945 | 5,730 | 302 |
| | 13-Sep-01 | 5,910 | 14,900 | 1,050 | 7,100 | 28,960 | 5,980 | 384 |
| | 7-Dec-01 | 10,000 | 19,200 | 2,210 | 11,600 | 43,010 | BDL | 682 |
| | 5-Mar-02 | 7,880 | 12,890 | 1,860 | 12,650 | 35,280 | 14,530 | 2,010 |
| | 6-Jun-02 | 2,520 | 2,700 | 483 | 3,620 | 9,323 | 3,850 | 497 |
| | 17-Sep-02 | 5,750 | 3,480 | 1,480 | 6,170 | 16,880 | 3,140 | 555 |
| | 12-Dec-02 | 5,100 | 2,300 | 1,690 | 7,080 | 16,170 | 1,640 | 319 |
| | 31-Mar-03 | 1,900 | BDL | 406 | 2,395 | 4,701 | 1,430 | BDL |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 5 |
| MW-5 | 1-Dec-97 | 5,930 | 47,600 | 2,100 | 12,600 | 68,230 | BDL | 125 |
| | 5-Aug-99 | 6,400 | 61,600 | 2,460 | 12,100 | 82,560 | 410 | 335 |
| | 26-Apr-00 | 6,680 | 48,300 | 2,390 | 9,610 | 66,980 | 681 | 609 |
| | 1-Aug-00 | 4,250 | 40,300 | 1,960 | 12,530 | 59,040 | 258 | 396 |
| | 13-Dec-00 | 4,530 | 38,100 | 2,520 | 14,640 | 59,790 | 381 | 4,770 |
| | 6-Feb-01 | 5,070 | 30,800 | 2,200 | 12,500 | 50,570 | 225 | 678 |
| | 5-Jun-01 | 6,070 | 52,000 | 2,900 | 13,720 | 74,690 | 228 | 342 |
| | 13-Sep-01 | 4,990 | 7,210 | 3,340 | 17,900 | 33,440 | 60.7 | 2,900 |
| | 7-Dec-01 | 3,520 | 38,600 | 1,700 | 11,490 | 55,310 | BDL | 408 |
| | 5-Mar-02 | 3,160 | 21,300 | 3,260 | 18,490 | 46,210 | 171 | 342 |
| | 6-Jun-02 | 3,820 | 26,700 | 2,570 | 14,620 | 47,710 | 199 | 397 |
| | 17-Sep-02 | 4,480 | 42,800 | 2,820 | 15,100 | 65,200 | 117 | 209 |
| | 12-Dec-02 | 110 | 5,390 | 1,340 | 5,900 | 12,740 | 13.8 | 287 |
| | 31-Mar-03 | 75.7 | 3,760 | 796 | 4,520 | 9,152 | 87 4 | BDL |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-6 | 1-Dec-97 | 5.5 | 137 | 6.0 | 149 | 297.5 | BDL | BDL |
| | 5-Aug-99 | 4.1 | 1.1 | 3.7 | 16.7 | 25.6 | 5 | BDL |
| | 26-Apr-00 | 13.0 | 19.2 | 15 | 48 | 95.2 | 27.2 | 6.44 |
| | 1-Aug-00 | 117 | 1820 | 128 | 877 | 2942 | 10.7 | 32.2 |
| | 13-Dec-00 | 47.9 | 460 | 35.4 | 332 | 875 | 14.8 | 7.2 |
| | 6-Feb-01 | 47.4 | 143 | 47.6 | 219.2 | 457 | 17.8 | 22.6 |
| | 5-Jun-01 | 9.3 | 44.5 | 23.5 | 141.3 | 219 | 7.5 | BDL |
| | 13-Sep-01 | 18.1 | 36.6 | 24.7 | 119.0 | 198 | 8.35 | 1.06 |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | 5.23 | BDL |
| | 5-Mar-02 | 79.8 | 765 | 114 | 1,242 | 2,201 | 35.1 | 75.8 |
| | 6-Jun-02 | 55.1 | 629 | 91.8 | 959 | 1,735 | 25.9 | 5.10 |
| | 17-Sep-02 | 11.5 | 115 | 25.4 | 258 | 410 | 2.70 | 7.77 |
| | 12-Dec-02 | 11.1 | 206 | 26.2 | 236 | 479 | 4.04 | 51.6 |
| | 31-Mar-03 | 2.22 | BDL | 1.50 | 16.2 | 19.9 | 2.84 | BDL |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-7 | 1-Dec-97 | 1.1 | 1 7 | BDL | 1.1 | 3.9 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 41 | <1 |
| | 26-Apr-00 | 2.13 | 13.5 | BDL | 1 59 | 17.2 | 68.9 | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 53.8 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 52.9 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 18.7 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | 10.6 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | 6.16 | BDL | BDL | 6.16 | 1.68 | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 10.0 | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | 10 5 | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | 3.60 | 3.60 | 567 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-8 | 1-Dec-97 | BDL | 2.4 | 1.2 | 5.4 | 9.0 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 1.58 | 8 53 | BDL | BDL | 10.1 | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | 2.95 | BDL | BDL | 2 95 | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-9 | 1-Dec-97 | 77 | 14,000 | 2,390 | 20,700 | 37,167 | 114 | 384 |
| | 5-Aug-99 | 110 | 4,280 | 2,450 | 17,000 | 23,840 | 150 | <500 |
| | 26-Apr-00 | 163 | 2,640 | 3,520 | 14,760 | 21,083 | BDL | 2,090 |
| | 1-Aug-00 | 187 | 18,400 | 1,010 | 16,070 | 35,667 | BDL | 909 |
| | 13-Dec-00 | 9.14 | 657 | 108 | 1,340 | 2,114 | 26.0 | 47 |
| | 6-Feb-01 | 10.6 | 254 | 181 | 2,907 | 3,353 | 16.9 | 179 |
| | 5-Jun-01 | 27.7 | 402 | 139 | 1,798 | 2,367 | 17.2 | 66.6 |
| | 13-Sep-01 | 15.0 | 133 | 710 | 7,690 | 8,548 | 13.0 | 186 |
| | 7-Dec-01 | 34.4 | 35.5 | 28.9 | 713 | 812 | BDL | 20.6 |
| | 5-Mar-02 | 25.5 | 29.8 | 157 | 2,144 | 2,356 | BDL | 49.0 |
| | 6-Jun-02 | 13.2 | 24.6 | 105 | 1,420 | 1,563 | 3.17 | 44.5 |
| | 17-Sep-02 | 13.3 | 21 0 | 111 | 1,532 | 1,677 | 2.71 | 41.5 |
| | 12-Dec-02 | 8.14 | BDL | 21.7 | 483 | 513 | BDL | 19.1 |
| | 31-Mar-03 | 2.16 | 4.80 | 23.7 | 421 | 451 | BDL | BDL |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-10 | 1-Dec-97 | 6,220 | 46,300 | 2,320 | 14,800 | 69,640 | 938 | 542 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 8,020 | 32,900 | 856 | 8,280 | 50,056 | 8,780 | 327 |
| | 13-Sep-01 | 9,870 | 47,700 | 1,190 | 20,400 | 79,160 | 12,500 | 356 |
| | 7-Dec-01 | 5,590 | 56,000 | 8,150 | 61,700 | 131,440 | 1,050 | 2,540 |
| | 5-Mar-02 | 2 06 | 72.2 | 5.80 | 190.1 | 270 | 1,110 | 13 7 |
| | 6-Jun-02 | BDL | 57.8 | BDL | 165.0 | 223 | 3,780 | 27 0 |
| | 17-Sep-02 | 36.3 | 75.9 | 7.38 | 308 | 428 | 6,850 | 11 4 |
| | 12-Dec-02 | 159 | 428 | 26.3 | 637 | 1,250 | BDL | 24 6 |
| | 31-Mar-03 | 4,489 | 19,300 | 769 | 6,020 | 30,578 | 13,400 | BDL |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-11 | 1-Dec-97 | 1.4 | 3.4 | BDL | 4.7 | 9.5 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 7 | <5 |
| | 26-Apr-00 | 1.18 | 3.96 | BDL | BDL | 5 1 | 4 69 | 9.98 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | 2.51 | 91.0 | 15.0 | 104 | 212 9 | 26.3 | 17.2 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 39 5 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | 4.88 | 9.52 | 14.4 | 266 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | 1.32 | 1.32 | 358 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 1070 | BDL |
| | 6-Jun-02 | 1.84 | BDL | BDL | 1.02 | 2.86 | 2,220 | BDL |
| | 17-Sep-02 | 98 7 | BDL | BDL | 19.9 | 118.59 | 3,780 | BDL |
| | 12-Dec-02 | 23.5 | BDL | BDL | 8.39 | 31.89 | BDL | BDL |
| | 31-Mar-03 | 229 | 26.0 | 2.00 | 48.1 | 305 | 4,340 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | - | 7 | <5 |
| MW-12 | 1-Dec-97 | 7,970 | 382 | 266 | 1,540 | 10,158 | 99,900 | 119 |
| | 5-Aug-99 | 5,000 | 260 | <200 | <200 | 5,260 | 41,200 | <1000 |
| | 26-Apr-00 | 135 | 4.51 | BDL | 11.0 | 151 | 6,800 | 18.2 |
| | 1-Aug-00 | 1670 | 17.1 | 4.33 | 114.9 | 1806 | 44,200 | BDL |
| | 13-Dec-00 | 119 | 9.1 | 2.11 | 26.7 | 157 | 4,230 | 31.7 |
| | 6-Feb-01 | 32.5 | 9.3 | 1.51 | 13.8 | 57 | 1,570 | 10.6 |
| | 5-Jun-01 | 61.0 | BDL | BDL | 2.1 | 63 | 1,960 | 17.2 |
| | 13-Sep-01 | 329 | 4.55 | 2.96 | 29.27 | 366 | 2,860 | 60.1 |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 906 | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 613 | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | 1.30 | 1.30 | 479 | BDL |
| SSTL | | 5 | 260 | <200 | <200 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-13 | 1-Dec-97 | BDL | 1.4 | BDL | 1.6 | 3 | 82.3 | BDL |
| | 5-Aug-99 | 3 | <1 | <1 | <1 | 3 | 604 | <5 |
| | 26-Apr-00 | 188 | 149 | BDL | BDL | 337 | 3,150 | BDL |
| | 1-Aug-00 | 207 | 5.74 | BDL | 32.8 | 245 | 3,641 | 24.3 |
| | 13-Dec-00 | 29.9 | 3.81 | 1 0 | 76.6 | 111 | 4,350 | 29.8 |
| | 6-Feb-01 | 377 | 12.10 | 2 8 | 105.2 | 497 | 5,200 | 54 9 |
| | 5-Jun-01 | 259 | 5.87 | 1.8 | 112.8 | 380 | 8,530 | 23 2 |
| | 13-Sep-01 | 374 | 7.44 | 4.52 | 127.5 | 513 | 7,150 | 24 7 |
| | 7-Dec-01 | 15.4 | BDL | BDL | 8.10 | 24 | 1,130 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 103 | BDL |
| | 6-Jun-02 | 3.24 | BDL | BDL | 6 25 | 9.49 | 6,360 | 1 42 |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | 561 | BDL |
| | 12-Dec-02 | 17 4 | BDL | BDL | 29 3 | 46 7 | BDL | BDL |
| MW-13R | 31-Mar-03 | 328 | 9.18 | BDL | 89 1 | 426 | 10,400 | 26 0 |
| SSTL | | 3 | 1 | 1 | 1 | -- | 40 | 5 |
| MW-14 | 1-Dec-97 | 1.1 | 1.4 | BDL | 2.7 | 5 | 76 5 | BDL |
| | 5-Aug-99 | 57 | 7 | 1 | 23 | 88 | 606 | 5 |
| | 26-Apr-00 | BDL | 1.38 | BDL | BDL | 1.38 | 1 11 | BDL |
| | 1-Aug-00 | 138 | 4.04 | BDL | 39.04 | 181 08 | 35.3 | 13 0 |
| | 13-Dec-00 | BDL | BDL | BDL | 2.13 | 2.13 | 129 | 2.33 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 11 1 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | 54 9 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 1 53 | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | 7 | 1 | 23 | - | 40 | 5 |
| MW-15 | 1-Dec-97 | 1.0 | 1.6 | BDL | 2.5 | 5 | BDL | BDL |
| | 5-Aug-99 | 3 | 6 | 1 | 6 | 16 | 27 | <5 |
| | 26-Apr-00 | 1.01 | 1.32 | BDL | BDL | 2 33 | 2 82 | 5 66 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 2.77 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 3 | 6 | 1 | 6 | - | 27 | <5 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-16 | 1-Dec-97 | BDL | 1.2 | BDL | 1.3 | 2.5 | BDL | BDL |
| | 5-Aug-99 | 2.2 | 8 8 | 1.6 | 7.1 | 19.7 | 4 | BDL |
| | 26-Apr-00 | 2 17 | 1.27 | BDL | BDL | 3.4 | 10.1 | BDL |
| | 1-Aug-00 | 5 02 | 3 01 | BDL | 3 5 | 11 5 | 16.1 | 1.35 |
| | 13-Dec-00 | 10.7 | BDL | BDL | 2 66 | 13 4 | 30.6 | 1.96 |
| | 6-Feb-01 | 6 25 | BDL | BDL | BDL | 6.25 | 32 7 | BDL |
| | 5-Jun-01 | 22 3 | BDL | BDL | 1.30 | 23 6 | 78 8 | BDL |
| | 13-Sep-01 | 18.9 | BDL | BDL | BDL | BDL | 35 6 | BDL |
| | 7-Dec-01 | 15 7 | BDL | BDL | 1.01 | 16 7 | 25 0 | BDL |
| | 5-Mar-02 | 15 1 | BDL | BDL | BDL | 15 1 | 104 | BDL |
| | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | 2 60 | BDL | 9 03 | BDL | 11 6 | 14 0 | BDL |
| | 31-Mar-03 | 1 62 | BDL | BDL | BDL | 1 62 | 7 76 | BDL |
| DMW-17 | 1-Dec-97 | 1 6 | 3 8 | 2 3 | 12 7 | 20 3 | BDL | BDL |
| | 5-Aug-99 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 26-Apr-00 | 1 06 | 1.24 | BDL | BDL | 2.3 | 8.97 | BDL |
| | 1-Aug-00 | BDL | 3 02 | BDL | BDL | 3.02 | 7.75 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 6 98 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 5.34 | BDL |
| | 5-Jun-01 | BDL | 2 0 | BDL | BDL | 2 0 | 23.8 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 3.42 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 6.82 | 1.1 |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | 10.1 | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |
| CP-WW | 1-Dec-97 | BDL | 1.2 | BDL | BDL | 1.2 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 2.96 | 1.09 | BDL | BDL | 4.1 | 315 | BDL |
| | 1-Aug-00 | 3.23 | 2.56 | BDL | 1.09 | 7 | 224 | BDL |
| | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| | 17-Sep-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| CLS-WW | 1-Dec-97 | 81.3 | 1.1 | BDL | 9.6 | 92 | 34.5 | BDL |
| | 5-Aug-99 | 81 | 1 | <1 | 10 | 92 | 35 | <5 |
| | 26-Apr-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | <1 | <1 | 10 | - | 35 | <5 |

Notes:
All results reported in parts per billion (ug/L) unless otherwise noted
SSTL = Site specific target levels referenced in bid
FP = Free Product; NS = Not Sampled
BDL = Below detecatable Levels
Total BTEX = Summation of benzene, toluene, ethylbenzene and xylenes
MTBE = Methyl-tert-buytl-ether

# ATTACHMENT 3
# LABORATORY ANALYTICAL REPORT

# ACCESS ANALYTICAL, INC.

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


April 8, 2003
Report # 304000211
Order # 28539
STL Miami Cert ID# 96023
NELAP ID# E86349

RECEIVED APR 17 2003

Site Location/Project
South Carolina
Crawford DHE-12335

Sample I.D.: MW-1
Collected: 03/31/03 00:00
Received: 04/03/03 10:00
Collected by: Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 10 | | | | |
| Methyl-Tert-Butyl-Ether | 5850 | ug/L | 5030/8260B | 10.000 | 04/05/2003 | 04/05/2003 | 12:54 | AA1 |
| Benzene | 7830 | ug/L | 5030/8260B | 10.000 | 04/05/2003 | 04/05/2003 | 12:54 | AA1 |
| Toluene | 19300 | ug/L | 5030/8260B | 10.000 | 04/05/2003 | 04/05/2003 | 12:54 | AA1 |
| Ethylbenzene | 1680 | ug/L | 5030/8260B | 10.000 | 04/05/2003 | 04/05/2003 | 12:55 | AA1 |
| m & p-Xylene | 5640 | ug/L | 5030/8260B | 10.000 | 04/05/2003 | 04/05/2003 | 12:55 | AA1 |
| o-Xylene | 2960 | ug/L | 5030/8260B | 10.000 | 04/05/2003 | 04/05/2003 | 12:55 | AA1 |
| Total Xylene | 8600 | ug/L | 5030/8260B | 10.000 | 04/05/2003 | 04/05/2003 | 12:55 | AA1 |
| Naphthalene | 49 4 | ug/L | 5030/8260B | 10.000 | 04/05/2003 | 04/05/2003 | 12:55 | AA1 |
| SURROGATE: Toluene-D8 | 109.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 108.80% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 91.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063

April 8, 2003
Report # 304000211
Order # 28541
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawford DHE-12335

Sample I.D.: MW-2
Collected: 03/31/03 00:00
Received: 04/03/03 10:00
Collected by: Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 10 | | | | |
| Methyl-Tert-Butyl-Ether | 2430 | ug/L | 5030/8260B | 10.000 | 04/03/2003 | 04/03/2003 | 11:30 | SKL |
| Benzene | 3800 | ug/L | 5030/8260B | 10.000 | 04/03/2003 | 04/03/2003 | 11:30 | SKL |
| Toluene | 288 | ug/L | 5030/8260B | 10.000 | 04/03/2003 | 04/03/2003 | 11:30 | SKL |
| Ethylbenzene | 427 | ug/L | 5030/8260B | 10.000 | 04/03/2003 | 04/03/2003 | 11:30 | SKL |
| m & p-Xylene | 59.5 | ug/L | 5030/8260B | 10.000 | 04/03/2003 | 04/03/2003 | 11:30 | SKL |
| o-Xylene | 31.2 | ug/L | 5030/8260B | 10.000 | 04/03/2003 | 04/03/2003 | 11:30 | SKL |
| Total Xylene | 90.7 | ug/L | 5030/8260B | 10.000 | 04/03/2003 | 04/03/2003 | 11:30 | SKL |
| Naphthalene | 217 | ug/L | 5030/8260B | 10.000 | 04/03/2003 | 04/03/2003 | 11:30 | SKL |
| SURROGATE: Toluene-D8 | 93.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 87.60% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 105.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


April 8, 2003
Report # 304000211
Order # 28542
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawford DHE-12335

Sample I.D.: MW-3
Collected: 03/31/03 00:00
Received: 04/03/03 10:00
Collected by: Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 10 | | | | |
| Methyl-Tert-Butyl-Ether | 3990 | ug/L | 5030/8260B | 10.000 | 04/03/2003 | 04/03/2003 | 08:13 | SKL |
| Benzene | 4830 | ug/L | 5030/8260B | 10.000 | 04/03/2003 | 04/03/2003 | 08:13 | SKL |
| Toluene | 16600 | ug/L | 5030/8260B | 10.000 | 04/03/2003 | 04/03/2003 | 08:13 | SKL |
| Ethylbenzene | 1160 | ug/L | 5030/8260B | 10.000 | 04/03/2003 | 04/03/2003 | 08:13 | SKL |
| m & p-Xylene | 4590 | ug/L | 5030/8260B | 10.000 | 04/03/2003 | 04/03/2003 | 08:13 | SKL |
| o-Xylene | 2840 | ug/L | 5030/8260B | 10.000 | 04/03/2003 | 04/03/2003 | 08:13 | SKL |
| Total Xylene | 7430 | ug/L | 5030/8260B | 10.000 | 04/03/2003 | 04/03/2003 | 08:13 | SKL |
| Naphthalene | 609 | ug/L | 5030/8260B | 10.000 | 04/03/2003 | 04/03/2003 | 08:13 | SKL |
| SURROGATE: Toluene-D8 | 118.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 100.40% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 97.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


April 8, 2003
Report # 304000211
Order # 28543
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawford DHE-12335

Sample I.D.: MW-4
Collected: 03/31/03 00:00
Received: 04/03/03 10:00
Collected by: Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 1430 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:42 | SKL |
| Benzene | 1900 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:42 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:42 | SKL |
| Ethylbenzene | 406 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:42 | SKL |
| m & p-Xylene | 855 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:42 | SKL |
| o-Xylene | 1540 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:42 | SKL |
| Total Xylene | 2395 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:42 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:42 | SKL |
| SURROGATE: Toluene-D8 | 94.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 105.20% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 102.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


April 8, 2003
Report # 304000211
Order # 28544
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawford DHE-12335

Sample I.D.: MW-5
Collected: 03/31/03 00:00
Received: 04/03/03 10:00
Collected by: Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 87.4 | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:40 | SKL |
| Benzene | 75 7 | ug/L | 5030/8260B | 1 000 | 04/05/2003 | 04/05/2003 | 11:40 | SKL |
| Toluene | 3760 | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:18 | SKL |
| Ethylbenzene | 796 | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:18 | SKL |
| m & p-Xylene | 3460 | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:18 | SKL |
| o-Xylene | 1060 | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:18 | SKL |
| Total Xylene | 4520 | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:40 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11.40 | SKL |
| SURROGATE: Toluene-D8 | 122.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 88.00% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 99.50% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


April 8, 2003
Report # 304000211
Order # 28545
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawford DHE-12335

Sample I.D.: MW-6
Collected: 03/31/03 00:00
Received: 04/03/03 10:00
Collected by: Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 2.84 | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:26 | SKL |
| Benzene | 2.22 | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:26 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:26 | SKL |
| Ethylbenzene | 1.50 | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:26 | SKL |
| m & p-Xylene | 11.4 | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:26 | SKL |
| o-Xylene | 4.84 | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:26 | SKL |
| Total Xylene | 16.2 | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:26 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:26 | SKL |
| SURROGATE: Toluene-D8 | 101.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 112.80% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 102.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


April 8, 2003
Report # 304000211
Order # 28546
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawford DHE-12335

Sample I.D.: MW-7
Collected: 03/31/03 00:00
Received: 04/03/03 10:00
Collected by: Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 567 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:34 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1 000 | 04/03/2003 | 04/03/2003 | 11:34 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:34 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:34 | SKL |
| m & p-Xylene | 1.85 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:34 | SKL |
| o-Xylene | 1.76 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:34 | SKL |
| Total Xylene | 3.6 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:34 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:34 | SKL |
| SURROGATE: Toluene-D8 | 111.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 111.60% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 106.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


April 8, 2003
Report # 304000211
Order # 28547
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawford DHE-12335

Sample I.D.: MW-8
Collected: 03/31/03 00:00
Received: 04/03/03 10:00
Collected by: Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08 30 | AR |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08.30 | AR |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:30 | AR |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:30 | AR |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:30 | AR |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:30 | AR |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:30 | AR |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:30 | AR |
| SURROGATE: Toluene-D8 | 104.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 107.20% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 104.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


April 8, 2003
Report # 304000211
Order # 28548
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawford DHE-12335

Sample I.D.: MW-9
Collected: 03/31/03 00:00
Received: 04/03/03 10:00
Collected by: Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:20 | AR |
| Benzene | 2.16 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08 20 | AR |
| Toluene | 4 80 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:20 | AR |
| Ethylbenzene | 23.7 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:20 | AR |
| m & p-Xylene | 322 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:20 | AR |
| o-Xylene | 98.6 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:20 | AR |
| Total Xylene | 420.6 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08 20 | AR |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:20 | AR |
| SURROGATE: Toluene-D8 | 104.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 102.80% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 93.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063

April 8, 2003
Report # 304000211
Order # 28549
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawford DHE-12335

Sample I.D.: MW-10
Collected: 03/31/03 00:00
Received: 04/03/03 10:00
Collected by: Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 13400 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 12:56 | AA1 |
| Benzene | 4489 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 12:56 | AA1 |
| Toluene | 19300 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 12:57 | AA1 |
| Ethylbenzene | 769 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 12:57 | AA1 |
| m & p-Xylene | 3860 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 12:57 | AA1 |
| o-Xylene | 2160 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 12:57 | AA1 |
| Total Xylene | 6020 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 12:57 | AA1 |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 12:57 | AA1 |
| SURROGATE: Toluene-D8 | 109.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 107.60% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 88.50% | | | | | | | |

REPORT COMMENTS:
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Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


April 8, 2003
Report # 304000211
Order # 28550
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawford DHE-12335

Sample I.D.: MW-11
Collected: 03/31/03 00:00
Received: 04/03/03 10:00
Collected by: Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 4340 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:33 | AR |
| Benzene | 229 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:33 | AR |
| Toluene | 26 0 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:33 | AR |
| Ethylbenzene | 2.00 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:33 | AR |
| m & p-Xylene | 18.5 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:33 | AR |
| o-Xylene | 29.6 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:33 | AR |
| Total Xylene | 48.1 | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:33 | AR |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 08:33 | AR |
| SURROGATE: Toluene-D8 | 107.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 103.60% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 82.50% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


April 8, 2003
Report # 304000211
Order # 28551
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawford DHE-12335

Sample I.D.: MW-12
Collected: 03/31/03 00:00
Received: 04/03/03 10:00
Collected by: Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 479 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:32 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:32 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:32 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:32 | SKL |
| m & p-Xylene | 1.30 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:32 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:32 | SKL |
| Total Xylene | 1.3 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:32 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:32 | SKL |
| SURROGATE: Toluene-D8 | 100.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 99.20% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 105.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


April 8, 2003
Report # 304000211
Order # 28552
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawford DHE-12335

Sample I.D.: MW-13
Collected: 03/31/03 00:00
Received: 04/03/03 10:00
Collected by: Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 10400 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:45 | SKL |
| Benzene | 328 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:45 | SKL |
| Toluene | 9.18 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:45 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:45 | SKL |
| m & p-Xylene | 13.9 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:45 | SKL |
| o-Xylene | 75.2 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:45 | SKL |
| Total Xylene | 89.1 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:45 | SKL |
| Naphthalene | 26.0 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 11:45 | SKL |
| SURROGATE: Toluene-D8 | 83.50% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 111.20% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 91.00% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


April 8, 2003
Report # 304000211
Order # 28553
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawford DHE-12335

Sample I.D.: MW-14
Collected: 03/31/03 00:00
Received: 04/03/03 10:00
Collected by: Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:25 | SKL |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:25 | SKL |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:25 | SKL |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:25 | SKL |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:25 | SKL |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:25 | SKL |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:25 | SKL |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/05/2003 | 04/05/2003 | 11:25 | SKL |
| SURROGATE: Toluene-D8 | 88.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 110.40% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 98.50% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


April 8, 2003
Report # 304000211
Order # 28554
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawford DHE-12335

Sample I.D.: MW-15
Collected: 03/31/03 00:00
Received: 04/03/03 10:00
Collected by: Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 09:06 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 09:06 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 09:06 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 09:06 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 09:06 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 09:06 | PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 09:06 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 09:06 | PMD |
| SURROGATE: Toluene-D8 | 86.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 105.60% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 91.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


April 8, 2003
Report # 304000211
Order # 28555
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawford DHE-12335

Sample I.D.: MW-16
Collected: 03/31/03 00:00
Received: 04/03/03 10:00
Collected by: Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | 7.76 | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 09:06 | PMD |
| Benzene | 1.62 | ug/L | 5030/8260B | 1 000 | 04/03/2003 | 04/03/2003 | 09:06 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 09:06 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 09:06 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 09:06 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 09:06 | PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 09:06 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/03/2003 | 04/03/2003 | 09:06 | PMD |
| SURROGATE: Toluene-D8 | 86.75% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 101.60% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 94.50% | | | | | | | |

REPORT COMMENTS:
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Unless otherwise noted, mg/Kg denotes wet weight

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Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


April 8, 2003
Report # 304000211
Order # 28556
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawford DHE-12335

Sample I.D.: MW-17
Collected: 03/31/03 00:00
Received: 04/03/03 10:00
Collected by: Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 09.07 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1 000 | 04/04/2003 | 04/04/2003 | 09:07 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1 000 | 04/04/2003 | 04/04/2003 | 09.07 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1 000 | 04/04/2003 | 04/04/2003 | 09:07 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 09:07 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 09:07 | PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 09:07 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 09:07 | PMD |
| SURROGATE: Toluene-D8 | 99.25% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 106.40% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 104.25% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


April 8, 2003
Report # 304000211
Order # 28557
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
Crawford DHE-12335

Sample I.D.: CLS-WW
Collected: 03/31/03 00:00
Received: 04/03/03 10:00
Collected by: Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | | ANALYST |
|---|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 09.07 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 09 07 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 09.07 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 09 07 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 09:07 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 09:07 | PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 09:07 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 04/04/2003 | 04/04/2003 | 09:07 | PMD |
| SURROGATE: Toluene-D8 | 98.00% | | | | | | | |
| SURROGATE: Bromofluorobenzene | 98.80% | | | | | | | |
| SURROGATE: Dibromofluoromethane | 102.75% | | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
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Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

# Access Analytical - Chain of Custody Record

Project Submission #: 304-211 28539-28557 RUSH # _____ Laboratory ID: _____ PO #: _____

Company Name: H2O Environmental
Address: 121 Centrum Dr Ste 2
City: Irmo State: SC Zip: 29036
Project Name: Crawford DHEC-12335
Report To: R Gillespie
Sampled By (print): Burrit

Preservative (*see codes below)

| Sample I.D. | Date Collected | Time Collected | Matrix | # of Cont | REQUESTED LAB ANALYSIS: ↓ BTEX/MTBE/MAPTHE | | | | | | NOTES / COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 3-31-03 | | GW | 2 | X | 28539 | | | | | |
| 2 | | | | | X | 28541 | | | | | |
| 3 | | | | | X | 28542 | | | | | |
| 4 | | | | | X | 28543 | | | | | |
| 5 | | | | | X | 28544 | | | | | |
| 6 | | | | | X | 28545 | | | | | |
| 7 | | | | | X | 28546 | | | | | |
| 8 | | | | | X | 28547 | | | | | |
| 9 | | | | | X | 28548 | | | | | |
| 10 | | | | | X | 28549 | | | | | |

Access Analytical, Inc.
1248 Lake Murray Blvd.
Irmo, SC 29063
Phone: (803) 781-4243
Fax: 781-4303
Toll Free (888) 315-4243
www.accessanalyticalinc.com

**Turnaround Time:**
___Std. (5-7 Bus. days)
___RUSH*
*Date Required:_____
(For rush work, results faxed by end of business day on date required)

Samples Recd. on Ice? ✓Yes ___No 4°

Project Location: ✓SC ___NC ___Other_____(specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| Burrit | 4-1-03 | 9:30 | Cheryl Barr |
| Cheryl Barr | 4/1/03 | 1700 | Fedex |
| Fedex | 4/3/03 | 10:00 | |

* Preservative Codes (place corresponding # in block above analysis field): 0=None, 1=HCL, 2=$HNO_3$, 3=$H_2SO_4$, 4=NaOH, 5=$Na_2S_2O_3$, 6=$NaHSO_4$, Other=Specify



Access Analytical, Inc.
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Pink Copy - Client Copy

# Access Analytical - Chain of Custody Record

Project Submission #: 3/4-211 RUSH # Laboratory ID: PO #:

Company Name: $H_2O$ Environmental
Address: 121
City: Irmo State: SC Zip: 29063
Project Name: Cavenaugh's DHE-12335
Report To: R Gillespie
Sampled By (print): Burrill

| Sample ID | Date Collected | Time Collected | Matrix | # of Cont | Preservative (*see codes below) | REQUESTED LAB ANALYSIS: BTEX/MTBE/NAPTHT | | | | | | NOTES / COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW 11 | 3-31-03 | | GW | 2 | | X | | | 28550 | | | |
| 12 | | | | | | X | | | 28551 | | | |
| 13 | | | | | | X | | | 28552 | | | |
| 14 | | | | | | X | | | 28553 | | | |
| 15 | | | | | | X | | | 28554 | | | |
| 16 | | | | | | X | | | 28555 | | | |
| 17 | | | | | | X | | | 28556 | | | |
| CLS-WW | | | | | | X | | | 28557 | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

ACCESS ANALYTICAL, INC.
1248 Lake Murray Blvd.
Irmo, SC 29063
Phone: (803) 781-4243
Fax: 781-4303
Toll Free (888) 315-4243
www.accessanalyticalinc.com

**Turnaround Time:**
___Std. (5-7 Bus. days)
___RUSH*
*Date Required:_____
(For rush work, results faxed by end of business day on date required)

Samples Recd. on Ice? ✓ Yes ___No 4°

Project Location: ✓ SC ___NC ___Other_____(specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| J Burrell | 4-1-03 | 9:30 | Cheryl Barr |
| Cheryl Barr | 4/1/03 | 1700 | FedEx |
| FedEx | 4/03/03 | 10:00 | |

* Preservative Codes (*place corresponding # in block above analysis field*): 0=None, 1=HCL, 2=$HNO_3$, 3=$H_2SO_4$, 4=NaOH, 5=$Na_2S_2O_3$, 6=$NaHSO_4$, Other=Specify



Access Analytical, Inc.
See Reverse for Terms and Conditions

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Yellow Copy - Access File Copy
Pink Copy - Client Copy

Tech · File # 12335

July 31, 2003

RECEIVED
AUG 04 2003
UNDERGROUND STORAGE
TANK PROGRAM

Mr. Umar Khattak
Underground Storage Tank Program
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: 12th Quarterly Report
Crawford's Country Store
5870 Hwy 28 North
Antreville, South Carolina
SCDHEC Site ID # 12335

UST
DOCKETING
58teek

Dear Mr. Khattak:

On February 4, 2000, the South Carolina Department of Health and Environmental Control (SCDHEC) provided notice to proceed to $H_2O$ Environmental, Inc. ($H_2O$) to perform Corrective Action at Crawford's Country Store located at 5870 Highway 28 North, Antreville, South Carolina. See Figure 1, Attachment 1 for a layout of the site and remediation system. The objective of the project is to reduce the Chemicals of Concern (COC) in monitoring wells OMW-1, MW-2 through MW-5, MW-7 through MW-15, DMW-17, CP-WW and CLS-WW to the site specific target levels (SSTLs). A chronological summary of site activities is provided below:

| | |
|---|---|
| 2/4/00 | SCDHEC awarded Bid Number SB-9570-12/02/99-TC |
| 3/02/00 | Corrective Action Plan/Engineering Report submitted to SCDHEC |
| 4/18/00 | CAP/ER approved |
| 4/26/00 | Initial groundwater sampling event |
| 5/17/00 | Initial groundwater results submitted |
| 5/22/00-5/31/00 | System installed |
| 5/31/00 | System was inspected and approved Todd Adams of SCDHEC |
| 5/31/00 | Invoice submitted for payment of 40% of the contract amount |
| 6/14/00 | System start-up |
| 8/01/00 | 1st quarter sampling event |
| 8/28/99 | 1st quarter report submitted |
| 9/13/00 | Free product recovery from OMW-1, MW-2 and MW-3 |
| 12/13/00 | 2nd quarter sampling event |
| 2/16/01 | 2nd quarter report submitted |
| 2/6/01 | 3rd quarter sampling event |
| 3/15/01 | 3rd quarter report submitted |
| 6/5/01 | 4th quarter sampling event |

**$H_2O$ ENVIRONMENTAL, INC.**
SCIENTISTS & ENGINEERS

130 Centrum Drive, Suite 3B • Irmo, South Carolina 29063 • 803•749•4080 • Fax 803•749•9911

| | |
|---|---|
| 7/31/01 | 4th quarter report submitted |
| 9/13/01 | 5th quarter sampling event |
| 10/18/01 | 5th quarter report submitted |
| 12/7/01 | 6th quarter sampling event |
| 2/4/02 | 6th quarter report submitted |
| 3/5/02 | 7th quarter sampling event |
| 4/26/02 | 7th quarter report submitted |
| 6/6/02 | 8th quarter sampling event |
| 7/10/02 | 8th quarter report submitted |
| 9/17/02 | 9th quarter sampling event |
| 10/28/02 | 9th quarter report submitted |
| 12/12/02 | 10th quarter sampling event |
| 2/6/03 | 10th quarter report submitted |
| 3/31/03 | 11th quarter sampling event |
| 5/14/03 | 11th quarter report submitted |
| 7/16/03 | 12th quarter sampling event |

An air injection/vapor extraction system was installed in May 2000 and put in operation in June 2000. The system consists of ten air injection/vapor extraction wells SV-1 through SV-10. In order to target the source area, $H_2O$ is rotating air sparging in injection/vapor extraction wells SV-1 through SV-10 and extracting vapor from injection/vapor extraction wells SV-1 through SV-8. Refer to Figure 1, Attachment 1 for a map illustrating the system layout. The following table summarizes the general operating characteristics of the system.

| **Summary of System Operating Characteristics** | | | | |
|---|---|---|---|---|
| Well ID | Activity | PSI | CFM | IWG |
| SV-1 - SV-8 | Vapor Extraction | -- | -- | 55 |
| SV-1 - SV-10 | Air Sparging | 10 | 6 | -- |

An air sample was collected from the effluent of the vapor extraction system on August 1, 2000. Based on the review of the laboratory analysis, it is estimated that contaminant emissions will not exceed 1,000 pounds per month. An air sample was not collected this quarter because the OVA field screening results were below detection limits.

On July 16, 2003, $H_2O$ Environmental Inc. personnel gauged and collected groundwater samples from monitoring wells MW-1R, MW-2, MW-3, MW-5 through MW-12, MW-13R, MW-14 through MW-17, and water well CLS-WW at the site. Water well CP-WW located at the Green residence was not operational at the time of the sampling event and a groundwater sample could not be collected. A new water well has been installed and is currently being used by the Green residence. Monitoring well MW-4 was covered and could not be accessed. The groundwater samples were analyzed for Benzene, Toluene, Ethylbenzene, total Xylenes (BTEX), Methyl-Tert-Butyl Ether (MTBE), and Naphthalene. Following groundwater sampling, a bacteria nutrient mixture was injected into the subsurface. The bioremediation technology was approved for use on August 12, 2002.

A review of the groundwater elevation data indicated a groundwater flow direction to the south-southeast. Table 1, Attachment 2, summarizes field data collected during monitoring well purging. The groundwater elevations are summarized on Table 2, Attachment 2, and illustrated on Figure 2, Attachment 1. The groundwater quality for Chemicals of Concern is summarized on Table 3, Attachment 2, and illustrated on Figure 3, Attachment 1. A copy of the laboratory analytical report is provided in Attachment 3. Groundwater generated during well purging was either placed in on-site 55-gallon drums or discharged on site as warranted by the data. Any disposal manifests will be forwarded to DHEC upon receipt.

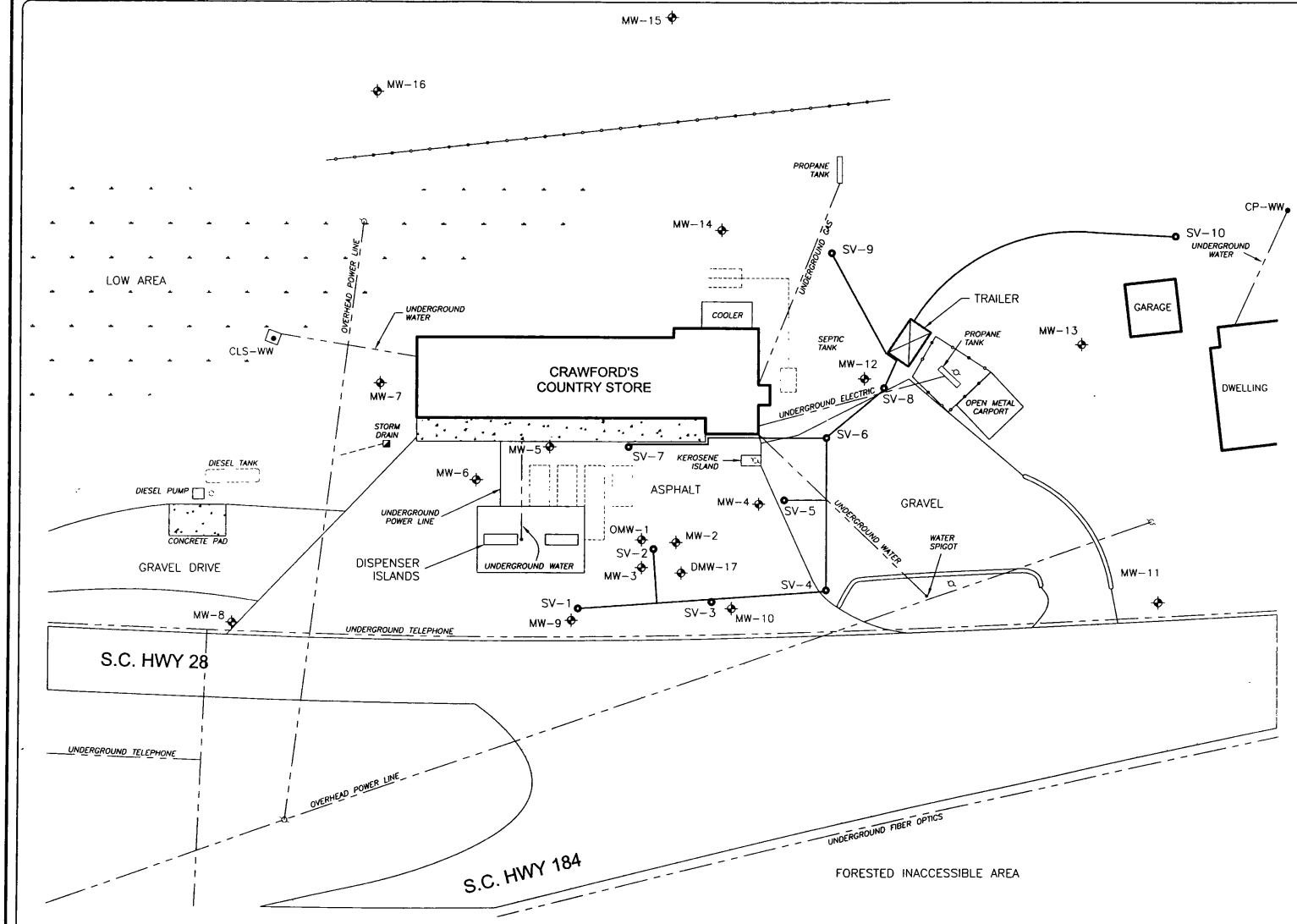
Based on the groundwater quality, $H_2O$ will continue to operate the remediation system. If you have any questions or comments please do not hesitate to contact me at (803) 749-4080.

Sincerely,

**$H_2O$ Environmental, Inc.**
Class I Site Rehabilitation Contractor No. 32

Richard D. Gillespie, P.G.
Senior Geologist 7-30-03
License Number 2199

# ATTACHMENT 1
# FIGURES




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

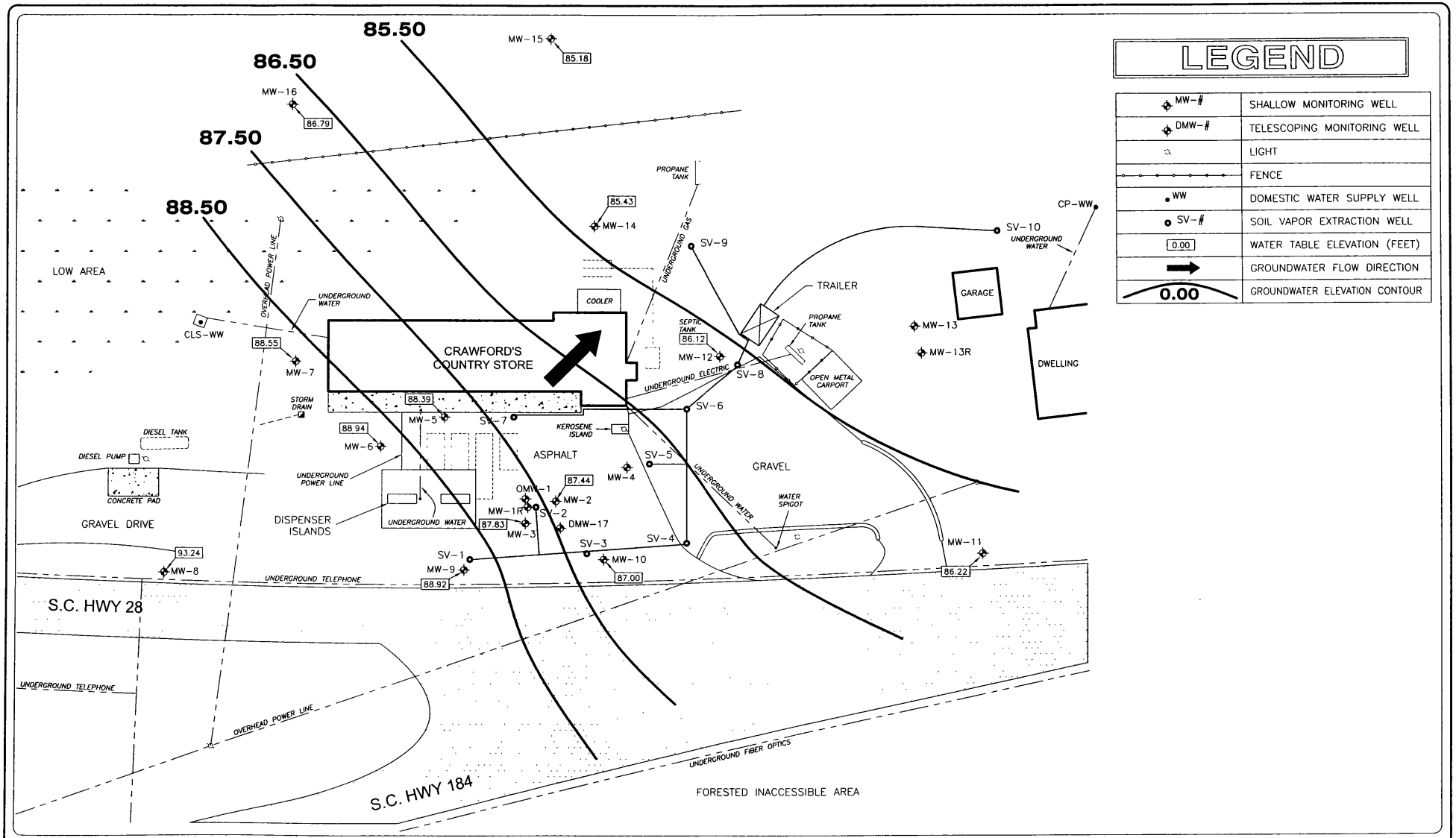
PROJECT NO: DHE-12335

DRAWING DATE: 08/24/2000

DRAWN BY: J.Driscoll

FIGURE NO: 1

FIGURE TITLE: REMEDIAL SYSTEM AS-BUILT




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |
| 0.00 | WATER TABLE ELEVATION (FEET) |
| | GROUNDWATER FLOW DIRECTION |
| 0.00 | GROUNDWATER ELEVATION CONTOUR |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

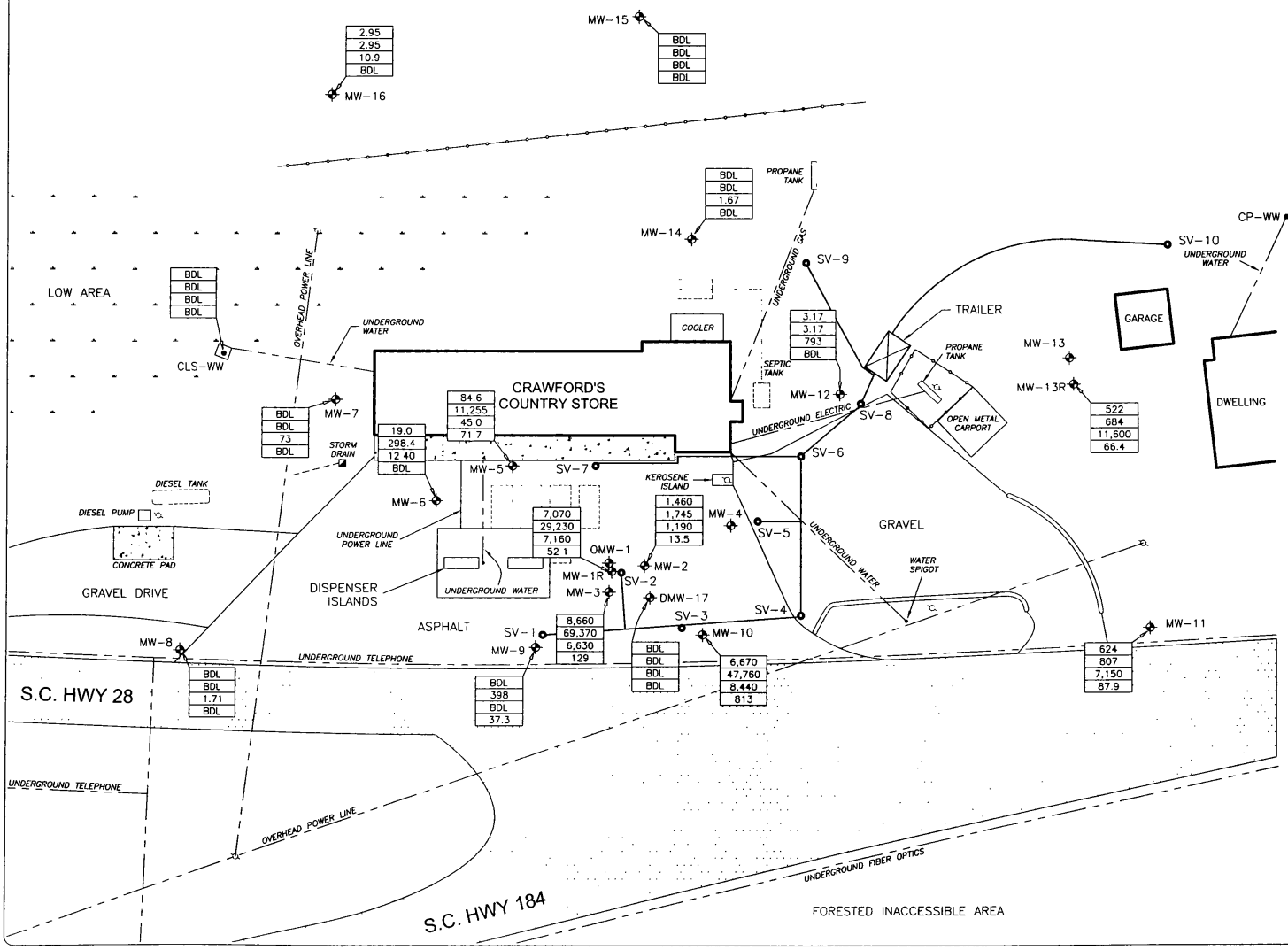
PROJECT NO: DHE-12335

DRAWING DATE: 7/30/2003

DRAWN BY: JJD

FIGURE NO.: 2

FIGURE TITLE: GROUNDWATER FLOW MAP - 7/16/2003




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

| | |
|---|---|
| BDL | BENZENE |
| BDL | TOTAL BTEX |
| BDL | MTBE |
| BDL | NAPHTHALENE |

All results reported in parts per billion (ug/L)
BDL = Below detectable levels

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 5/3/2003

DRAWN BY: JJD

FIGURE NO: 3

FIGURE TITLE

# GROUNDWATER QUALITY MAP - 7/16/2003

# ATTACHMENT 2
# TABLES

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 8/5/1999 | 17.95 | 22' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.68 | 22' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 21.50 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 21.46 | 22' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 19.89 | 22' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.18 | 22' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 18.74 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21.75 | 22' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 19.77 | 22' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 16.59 | 22' | 2" | 2.6 | NM | NM | NM | NM |
| | 9/17/2002 | 19.97 | 22' | 2" | 1.0 | NM | NM | 0.93 | 25.1 |
| MW-1R | 12/12/2002 | 17.44 | 22' | 2" | 2.2 | NM | 0.82 | 3.87 | 18.7 |
| | 3/31/2003 | 14.02 | 22' | 2" | 3.9 | 6.5 | NM | 2 68 | 20.0 |
| | 7/16/2003 | 9.21 | 22' | 2" | 6.3 | 6.4 | 385 | 257 | 19.3 |
| MW-2 | 8/5/1999 | 19.19 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 22.30 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 21.36 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 18.89 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.42 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 19.03 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21.98 | 25' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 19.90 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 16.88 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 20.44 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/12/2002 | 17.84 | 25' | 2" | 3.5 | NM | 0.92 | 1.53 | 19.2 |
| | 3/31/2003 | 13.50 | 25' | 2" | 5.6 | 6.3 | NM | 2.30 | 19.2 |
| | 7/16/2003 | 12.39 | 25' | 2" | 6.2 | 4.7 | 243 | NM | 18.3 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-3 | 8/5/1999 | 17.96 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.73 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 20.85 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 22.18 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 19.26 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.41 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 18.80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21.24 | 25' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 18.69 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 15.44 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 9/17/2002 | 20.11 | 25' | 2" | 2.4 | NM | NM | 1.21 | 24.3 |
| | 12/12/2002 | 17.45 | 25' | 2" | 3.7 | NM | 0.53 | 2.91 | 19.6 |
| | 3/31/2003 | 13.32 | 25' | 2" | 5.7 | 6.1 | NM | 2.09 | 19.4 |
| | 7/16/2003 | 12.15 | 25' | 2" | 6.3 | 6.1 | 267 | NM | 20.9 |
| MW-4 | 8/5/2000 | 17.59 | 25' | 2" | 3.7 | 4.3 | 75.7 | 2.06 | 21.0 |
| | 4/26/2000 | 16.51 | 25' | 2" | 4.2 | 6.0 | 0.78 | 1.82 | 20.2 |
| | 8/1/2000 | 20.63 | 25' | 2" | 2.1 | 5.4 | 0.52 | 3.91 | 21.9 |
| | 12/13/2000 | 20.81 | 25' | 2" | 2.0 | 5.5 | NM | 1.90 | 18.5 |
| | 2/6/2001 | 19.09 | 25' | 2" | 2.9 | NM | NM | NM | NM |
| | 6/5/2001 | 17.70 | 25' | 2" | 3.6 | 5.3 | NM | 1.80 | 21.8 |
| | 9/13/2001 | 19.16 | 25' | 2" | 2.9 | NM | NM | 2.29 | 22.2 |
| | 12/7/2001 | 21.86 | 25' | 2" | 1.5 | 7.1 | NM | 2.42 | 21.5 |
| | 3/5/2002 | 18.91 | 25' | 2" | 3.0 | 6.9 | NM | 5.40 | 15.3 |
| | 6/6/2002 | 16.93 | 25' | 2" | 3.9 | NM | NM | NM | NM |
| | 9/17/2002 | 20.63 | 25' | 2" | 2.1 | NM | NM | 3.20 | 24.1 |
| | 12/12/2002 | 16.14 | 25' | 2" | 4.3 | NM | 0.79 | 2.32 | 19.4 |
| | 3/31/2003 | 18.91 | 25' | 2" | 3.0 | 6.0 | NM | 2.65 | 17.9 |
| | 7/16/2003 | NM | NM | NM | NM | NM | NM | NM | NM |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-5 | 8/5/1999 | 15.95 | 25' | 2" | 4.4 | 4.5 | 111.8 | 1.65 | 21.0 |
| | 4/26/2000 | 14.35 | 25' | 2" | 5.2 | 6.2 | 0.92 | 2.73 | 19.4 |
| | 8/1/2000 | 19.18 | 25' | 2" | 2.8 | 5.1 | 0.5 | 1.25 | 20.8 |
| | 12/13/2000 | 19.68 | 25' | 2" | 2.6 | 5.3 | NM | 2.51 | 18.4 |
| | 2/6/2001 | 16.50 | 25' | 2" | 4.2 | NM | NM | NM | NM |
| | 6/5/2001 | 15.51 | 25' | 2" | 4.6 | 4.5 | NM | 1.88 | 21.5 |
| | 9/13/2001 | 17.48 | 25' | 2" | 3.7 | NM | NM | 1.94 | 22.2 |
| | 12/7/2001 | 20.09 | 25' | 2" | 2.4 | 6.9 | NM | 2.16 | 21.8 |
| | 3/5/2002 | 16.15 | 25' | 2" | 4.3 | 6.8 | NM | 3.90 | 18.4 |
| | 6/6/2002 | 15.11 | 25' | 2" | 4.8 | NM | NM | NM | NM |
| | 9/17/2002 | 18.31 | 25' | 2" | 3.3 | NM | NM | 1.72 | 22.9 |
| | 12/12/2002 | 15.09 | 25' | 2" | 4 8 | NM | 0.61 | 1.50 | 20.2 |
| | 3/31/2003 | 11.51 | 25' | 2" | 6.6 | 6.2 | NM | 2.79 | 15.7 |
| | 7/16/2003 | 11.03 | 25' | 2" | 6.8 | 6.2 | 240 | NM | 22.1 |
| MW-6 | 8/5/1999 | 15.44 | 25' | 2" | 4.7 | 4.6 | 96 | 2.35 | 22.0 |
| | 4/26/2000 | 13.65 | 25' | 2" | 5.6 | 6.1 | 0.92 | 1.72 | 18.6 |
| | 8/1/2000 | 18.75 | 25' | 2" | 3.1 | 4.95 | 0.48 | 2.23 | 20.4 |
| | 12/13/2000 | 18.23 | 25' | 2" | 3.3 | 5.14 | NM | 1.42 | 18.4 |
| | 2/6/2001 | 15.34 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 6/5/2001 | 14.84 | 25' | 2" | 5.0 | 5.57 | NM | 1.44 | 21.8 |
| | 9/13/2001 | 16.96 | 25' | 2" | 3.9 | NM | NM | 1.80 | 20.9 |
| | 12/7/2001 | 19.70 | 25' | 2" | 2.6 | 6.9 | NM | 2.05 | 20.4 |
| | 3/5/2002 | 15.20 | 25' | 2" | 4.8 | 6.7 | NM | 3.64 | 16.1 |
| | 6/6/2002 | 15.51 | 25' | 2" | 4.6 | NM | NM | NM | NM |
| | 9/17/2002 | 17.76 | 25' | 2" | 3.5 | NM | NM | 1.78 | 22.6 |
| | 12/12/2002 | 14.29 | 25' | 2" | 5.2 | NM | 1.32 | 0.51 | 19.1 |
| | 3/31/2003 | 10.77 | 25' | 2" | 7.0 | 6.2 | NM | 5.93 | 15.2 |
| | 7/16/2003 | 10.53 | 25' | 2" | 7.1 | 5.4 | 10.0 | NM | 21.3 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-7 | 8/5/1999 | 15.41 | 25' | 2" | 4.7 | 4.6 | 92.8 | 2.74 | 19.0 |
| | 4/26/2000 | 13.54 | 25' | 2" | 5.6 | 6.2 | 0.91 | 2.46 | 17.4 |
| | 8/1/2000 | 18.72 | 25' | 2" | 3.1 | 5.2 | 0.45 | 2.31 | 18.7 |
| | 12/13/2000 | 18.01 | 25' | 2" | 3.4 | 5.6 | NM | 1.96 | 16.5 |
| | 2/6/2001 | 15.41 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 6/5/2001 | 14.61 | 25' | 2" | 5.1 | 5.4 | NM | 2.25 | 19.9 |
| | 9/13/2001 | 16.91 | 25' | 2" | 4.0 | NM | NM | 2.50 | 20.9 |
| | 12/7/2001 | 19.64 | 25' | 2" | 2.6 | 7.1 | NM | 2.18 | 19.5 |
| | 3/5/2002 | 14.75 | 25' | 2" | 5.0 | 6 8 | NM | 7.83 | 14.6 |
| | 6/6/2002 | 14.43 | 25' | 2" | 5.2 | NM | NM | NM | NM |
| | 9/17/2002 | 17.34 | 25' | 2" | 3.7 | NM | NM | 1.29 | 21.5 |
| | 12/12/2002 | 13.91 | 25' | 2" | 5.4 | 6.9 | 0 72 | 3.69 | 16.4 |
| | 3/31/2003 | 10.75 | 25' | 2" | 7.0 | 6.6 | NM | 3.45 | 11.7 |
| | 7/16/2003 | 10.92 | 25' | 2" | 6.9 | 3.3 | 683 | NM | 20.5 |
| MW-8 | 8/5/2000 | 14.59 | 25' | 2" | 5.1 | 4.9 | 45.4 | 3.01 | 21.0 |
| | 4/26/2000 | 11.56 | 25' | 2" | 6.6 | 6.3 | 0.72 | 2.06 | 18.4 |
| | 8/1/2000 | 19.18 | 25' | 2" | 2.8 | 5.3 | 0.53 | 0.81 | 23.0 |
| | 12/13/2000 | 17.96 | 25' | 2" | 3.4 | 5.4 | NM | 1.93 | 18.7 |
| | 2/6/2001 | 13.34 | 25' | 2" | 5.7 | NM | NM | NM | NM |
| | 6/5/2001 | 13.15 | 25' | 2" | 5.8 | 5.4 | NM | 2.02 | 21.5 |
| | 9/13/2001 | 16.64 | 25' | 2" | 4.1 | NM | NM | 1.56 | 20.3 |
| | 12/7/2001 | 19.73 | 25' | 2" | 2.6 | 6.9 | NM | 1.40 | 20.4 |
| | 3/5/2002 | 11.41 | 25' | 2" | 6.6 | 6.7 | NM | 5.60 | 15.8 |
| | 6/6/2002 | 12.93 | 25' | 2" | 5.9 | NM | NM | NM | NM |
| | 9/17/2002 | 16.72 | 25' | 2" | 4.0 | NM | NM | 1.16 | 23.6 |
| | 12/12/2002 | 11.42 | 25' | 2" | 6.6 | 9.1 | 0.67 | 2.60 | 16.6 |
| | 3/31/2003 | 8.24 | 25' | 2" | 8.2 | 5.3 | NM | 2.81 | 15.3 |
| | 7/16/2003 | 9.18 | 25' | 2" | 7.7 | 5.3 | 216 | NM | 23.0 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-9 | 8/5/2000 | 16.74 | 25' | 2" | 4.0 | 4.9 | 57.2 | 1.47 | 22.0 |
| | 4/26/2000 | 15.09 | 25' | 2" | 4.8 | 5.9 | 0.72 | 1.45 | 20.4 |
| | 8/1/2000 | 21.2 | 25' | 2" | 1.9 | 5.7 | 0.59 | 2.62 | 23.9 |
| | 12/13/2000 | 19.73 | 25' | 2" | 2.6 | 5.4 | NM | 1.12 | 18.6 |
| | 2/6/2001 | 17.54 | 25' | 2" | 3.6 | NM | NM | NM | NM |
| | 6/5/2001 | 16.35 | 25' | 2" | 4.2 | NM | NM | NM | NM |
| | 9/13/2001 | 18.40 | 25' | 2" | 3.2 | 4.4 | NM | 2.91 | 23.5 |
| | 12/7/2001 | 21.00 | 25' | 2" | 2.0 | 6.9 | NM | 3.43 | 22.6 |
| | 3/5/2002 | 17.38 | 25' | 2" | 3.7 | 6.8 | NM | 1.83 | 19.4 |
| | 6/6/2002 | 16.80 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 19.64 | 25' | 2" | 2.6 | NM | NM | 0.97 | 23.7 |
| | 12/12/2002 | 16.29 | 25' | 2" | 4.3 | NM | 0.26 | 1.30 | 19.9 |
| | 3/31/2003 | 11.90 | 25' | 2" | 6.4 | 5.4 | NM | 2 88 | 16.6 |
| | 7/16/2003 | 11.61 | 25' | 2" | 6.5 | 5.4 | 57 | NM | 22.2 |
| MW-10 | 8/5/1999 | 18.06 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.75 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 20.50 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 19.40 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 18.84 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.38 | 25' | 2" | 3.7 | 5.6 | NM | 1.4 | 22.9 |
| | 9/13/2001 | 18.82 | 25' | 2" | 3.0 | 5.2 | NM | 3.20 | 23.2 |
| | 12/7/2001 | 23.90 | 25' | 2" | 0.5 | NM | NM | NM | NM |
| | 3/5/2002 | 19.09 | 25' | 2" | 2.9 | 6.9 | NM | 9.55 | 19.3 |
| | 6/6/2002 | 16.78 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 20.53 | 25' | 2" | 2.2 | NM | NM | 2.90 | 23.3 |
| | 12/12/2002 | 18.00 | 25' | 2" | 3.4 | NM | 0.87 | 4.25 | 18.1 |
| | 3/31/2003 | 13.49 | 25' | 2" | 5.6 | 6.3 | NM | 2.70 | 19.0 |
| | 7/16/2003 | 12.65 | 25' | 2" | 6.0 | 6.3 | 135 | NM | 23.1 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-11 | 8/5/1999 | 15.60 | 25' | 2" | 4.6 | 4.8 | 42.7 | 6.38 | 22.0 |
| | 4/26/2000 | 13 65 | 25' | 2" | 5.6 | 6.2 | 0.6 | 4.48 | 20.8 |
| | 8/1/2000 | 18 61 | 25' | 2" | 3.1 | 5.6 | 0.31 | 4.79 | 21.4 |
| | 12/13/2000 | 19.01 | 25' | 2" | 2.9 | 5.7 | NM | 5.15 | 19.8 |
| | 2/6/2001 | 17 43 | 25' | 2" | 3.7 | NM | NM | NM | NM |
| | 6/5/2001 | 15.96 | 25' | 2" | 4.4 | 5.8 | NM | 6.01 | 21.4 |
| | 9/13/2001 | 17 23 | 25' | 2" | 3.8 | 4.6 | NM | 5.82 | 22.4 |
| | 12/7/2001 | 19.74 | 25' | 2" | 2.6 | 6.8 | NM | 4.76 | 21.7 |
| | 3/5/2002 | 17.12 | 25' | 2" | 3.9 | 6.9 | NM | 7.56 | 15.2 |
| | 6/6/2002 | 15.03 | 25' | 2" | 4.9 | NM | NM | NM | NM |
| | 9/17/2002 | 18 88 | 25' | 2" | 3.0 | NM | NM | 1.68 | 23.2 |
| | 12/12/2002 | 16.13 | 25' | 2" | 4.3 | NM | 0.23 | 2.73 | 18.1 |
| | 3/31/2003 | 11.72 | 25' | 2" | 6.5 | 6.1 | NM | 2.18 | 16.6 |
| | 7/16/2003 | 10 25 | 25' | 2" | 7.2 | 6.0 | 70.0 | NM | 22.5 |
| MW-12 | 8/5/1999 | 17 33 | 25' | 2" | 3.8 | 4.6 | 129.2 | 2.09 | 19.0 |
| | 4/26/2000 | 16.06 | 25' | 2" | 4.4 | 6.3 | 1.03 | 2.9 | 18.5 |
| | 8/1/2000 | 20.15 | 25' | 2" | 2.4 | 4.5 | 0.67 | 5.01 | 19.6 |
| | 12/13/2000 | 23 7 | 25' | 2" | 0.6 | 5.4 | NM | 2.9 | 17.1 |
| | 2/6/2001 | 18.45 | 25' | 2" | 3.2 | NM | NM | NM | NM |
| | 6/5/2001 | 17.26 | 25' | 2" | 3.8 | 10.2 | NM | 2.07 | 19.3 |
| | 9/13/2001 | 18.63 | 25' | 2" | 3.1 | NM | NM | 2.71 | 20.5 |
| | 12/7/2001 | 21.37 | 25' | 2" | 1.8 | 7.2 | NM | 8.00 | 19.9 |
| | 3/5/2002 | 18.65 | 25' | 2" | 3.1 | 6.8 | NM | 8.53 | 15.7 |
| | 6/6/2002 | 16.90 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 19.97 | 25' | 2" | 2.5 | 8.0 | NM | 8.07 | 21.7 |
| | 12/12/2002 | 17.33 | 25' | 2" | 3.8 | NM | 0.59 | 7.73 | 15.3 |
| | 3/31/2003 | 13.46 | 25' | 2" | 5.6 | 5.4 | NM | 3.75 | 15.9 |
| | 7/16/2003 | 12.51 | 25' | 2" | 6.1 | 4.6 | 247 | NM | 21.4 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-13 | 8/5/1999 | 21.26 | 25' | 2" | 1.8 | 4.2 | 51.7 | 2.32 | 18.0 |
| | 4/26/2000 | 20.02 | 25' | 2" | 2.4 | 6.3 | 0.62 | 3.00 | 18.5 |
| | 8/1/2000 | 24.05 | 25' | 2" | 0.5 | 5.2 | 0.42 | 2.14 | 19.7 |
| | 12/13/2000 | 24.13 | 25' | 2" | 0.4 | 5.5 | NM | 1.04 | 15.9 |
| | 2/6/2001 | 22.43 | 25' | 2" | 1.3 | NM | NM | NM | NM |
| | 6/5/2001 | 21.34 | 25' | 2" | 1.8 | NM | 5.4 | 2.61 | 19.6 |
| | 9/13/2001 | 22.91 | 25' | 2" | 1.0 | NM | NM | NM | 20.3 |
| | 12/7/2001 | 25.22 | 25.22' | 2" | 0.0 | NM | NM | NM | NM |
| | 3/5/2002 | 22.21 | 25.22' | 2" | 1.5 | 6.9 | NM | 7.99 | 16.4 |
| | 6/6/2002 | 20.82 | 25.22' | 2" | 2.2 | NM | NM | NM | NM |
| | 9/17/2002 | 24.22 | 25.22' | 2" | 0.5 | NM | NM | 4.02 | 22.1 |
| | 12/12/2002 | 21.33 | 25.22' | 2" | 1.9 | NM | 0.31 | 2.85 | 15.9 |
| MW-13R | 3/31/2003 | 17.71 | 25.22' | 2" | 3.7 | 5.5 | NM | 2.19 | 16.6 |
| | 7/16/2003 | 16.89 | 25.22' | 2" | 4.1 | 5.6 | 69.0 | NM | 22.1 |
| MW-14 | 8/5/1999 | 7.96 | 25' | 2" | 8.3 | 5.0 | 312 | 0.80 | 19.0 |
| | 4/26/2000 | 6.46 | 25' | 2" | 9.1 | 6.1 | 1.56 | 1.72 | 15.5 |
| | 8/1/2000 | 10.8 | 25' | 2" | 6.9 | 5.4 | 0.93 | 1.43 | 18.8 |
| | 12/13/2000 | 10.8 | 25' | 2" | 6.9 | 5.5 | NM | 1.72 | 14.7 |
| | 2/6/2001 | 8.72 | 25' | 2" | 8.0 | NM | NM | NM | NM |
| | 6/5/2001 | 7.32 | 25' | 2" | 8.6 | 5.8 | NM | 2.08 | 17.4 |
| | 9/13/2001 | 9.31 | 25' | 2" | 7.7 | NM | NM | 1.77 | 21.0 |
| | 12/7/2001 | 11.91 | 25' | 2" | 6.4 | 6.9 | NM | 1.84 | 20.5 |
| | 3/5/2002 | 8.51 | 25' | 2" | 8.1 | 6.9 | NM | 5.90 | 12.2 |
| | 6/6/2002 | 7.41 | 25' | 2" | 8.6 | NM | NM | NM | NM |
| | 9/17/2002 | 9.98 | 25' | 2" | 7.3 | NM | NM | 4.58 | 21.4 |
| | 12/12/2002 | 8.22 | 25' | 2" | 8.2 | NM | 0.48 | 5.50 | 14.6 |
| | 3/31/2003 | 4.25 | 25' | 2" | 10.1 | 5.8 | NM | 1.63 | 13.6 |
| | 7/16/2003 | 3.95 | 25' | 2" | 10.3 | 6.5 | 289 | NM | 23.5 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-15 | 8/5/1999 | 6.28 | 25' | 2" | 9.2 | 4.8 | 86.5 | 0.87 | 18.0 |
| | 4/26/2000 | 4.75 | 25' | 2" | 9.9 | 6.5 | 0.6 | 3.32 | 16.2 |
| | 8/1/2000 | 9.11 | 25' | 2" | 7.8 | 5.5 | 0.41 | 3.17 | 19.5 |
| | 12/13/2000 | 8.57 | 25' | 2" | 8.0 | 5 6 | NM | 1.93 | 15.1 |
| | 2/6/2001 | 6.36 | 25' | 2" | 9.1 | NM | NM | NM | NM |
| | 6/5/2001 | 5.68 | 25' | 2" | 9.4 | 6.1 | NM | 2.41 | 19.2 |
| | 9/13/2001 | 7.61 | 25' | 2" | 8.5 | NM | NM | 2.90 | 21.2 |
| | 12/7/2001 | 9.91 | 25' | 2" | 7.4 | 6.9 | NM | 3.66 | 20.3 |
| | 3/5/2002 | 5.86 | 25' | 2" | 9.4 | 6.6 | NM | 6.50 | 12.6 |
| | 6/6/2002 | NM | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/12/2002 | 4.74 | 25' | 2" | 9.9 | NM | 0.17 | 7.08 | 13.8 |
| | 3/31/2003 | 2.69 | 25' | 2" | 10.9 | 5.9 | NM | 5.45 | 12.6 |
| | 7/16/2003 | 2.15 | 25' | 2" | 11.2 | 8.6 | 117 | NM | 23.4 |
| MW-16 | 8/5/1999 | 11.22 | 25' | 2" | 6.7 | 4.9 | 49 | 0.79 | 18.0 |
| | 4/26/2000 | 9.50 | 25' | 2" | 7.6 | 6.5 | 0.61 | 1.66 | 15.5 |
| | 8/1/2000 | 14.35 | 25' | 2" | 5.2 | 6.0 | 0.95 | 1.64 | 19.3 |
| | 12/13/2000 | 13.45 | 25' | 2" | 5.6 | 5.8 | NM | 2.27 | 15.6 |
| | 2/6/2001 | 10.89 | 25' | 2" | 6.9 | NM | NM | NM | NM |
| | 6/5/2001 | 10.34 | 25' | 2" | 7.2 | 6.5 | NM | 2.02 | 18.3 |
| | 9/13/2001 | 12.58 | 25' | 2" | 6.1 | NM | NM | 1.87 | 21.5 |
| | 12/7/2001 | 13.41 | 25' | 2" | 5.7 | 6.9 | NM | 4.75 | 19.1 |
| | 3/5/2002 | 8.67 | 25' | 2" | 8.0 | 6.7 | NM | 5.20 | 12.4 |
| | 6/6/2002 | NM | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/12/2002 | 9.58 | 25' | 2" | 7.5 | NM | 0.25 | 3.53 | 14.6 |
| | 3/31/2003 | 7.29 | 25' | 2" | 8.7 | 5.5 | NM | 1.85 | 12.8 |
| | 7/16/2003 | 6.95 | 25' | 2" | 8.8 | 5.9 | 67.0 | NM | 20.4 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-17 | 8/5/1999 | 16.16 | 75' | 2" | 28.8 | 5.6 | 90.8 | 2.76 | 20.5 |
| | 4/26/2000 | 16.8 | 75' | 2" | 28.5 | 6.4 | 0.86 | 6.1 | 20.8 |
| | 8/1/2000 | 19.27 | 75' | 2" | 27.3 | 6.2 | 0.59 | 3.12 | 22.5 |
| | 12/13/2000 | 19.20 | 75' | 2" | 27.3 | NM | NM | NM | NM |
| | 2/6/2001 | 16.82 | 75' | 2" | 28.5 | NM | NM | NM | NM |
| | 6/5/2001 | 15.52 | 75' | 2" | 29.1 | 7.1 | NM | 2.67 | 21.8 |
| | 9/13/2001 | 17.42 | 75' | 2" | 28.2 | NM | NM | 3.60 | 22.5 |
| | 12/7/2001 | 19.54 | 75' | 2" | 27.1 | 7.1 | NM | 2.73 | 22.5 |
| | 3/5/2002 | NM | 75' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | NM | 75' | 2" | NM | NM | NM | NM | NM |
| | 9/17/2002 | 18.32 | 75' | 2" | 27.7 | NM | NM | 4.12 | 23.1 |
| | 12/12/2002 | 16.66 | 75' | 2" | 28.5 | NM | 0.43 | 3.2 | 19.3 |
| | 3/31/2003 | 13.32 | 75' | 2" | 30.2 | 6.8 | NM | 5.23 | 21.1 |
| | 7/16/2003 | 11.39 | 75' | 2" | 31.1 | 6.7 | 107 | NM | 23.5 |

NOTES:
NS - Not sampled
Temperature in Degrees Celcius
Dissolved Oxygen in mg/L
Depth to Water and Depth to bottom in units of feet
Well volumes (Gallons)
Specific Conductivity (umhos/cm)

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| OMW-1 | 01-Dec-97 | 99.82 | 17.13 | - | 82.69 |
| | 05-Aug-99 | | 17.95 | 1.05 | 81.87 |
| | 26-Apr-00 | | 15.68 | 0.99 | 84.14 |
| | 01-Aug-00 | | 21.50 | 1.40 | 78.32 |
| | 13-Dec-00 | | 21.46 | 1.70 | 78.36 |
| | 06-Feb-01 | | 19.89 | 1.78 | 79.93 |
| | 05-Jun-01 | | 17.18 | 0.19 | 82.64 |
| | 16-Aug-01 | | 18.10 | 0.13 | 81.72 |
| | 13-Sep-01 | | 18.74 | 0.02 | 81.08 |
| | 26-Sep-01 | | 19.31 | 0.07 | 80 51 |
| | 27-Sep-01 | | 19.32 | 0.01 | 80.50 |
| | 19-Oct-01 | | 19.93 | 0.02 | 79.89 |
| | 09-Nov-01 | | 21.00 | 0 39 | 78.82 |
| | 21-Nov-01 | | 21.63 | 1.28 | 78.19 |
| | 05-Dec-01 | | 21.65 | 0.96 | 78 17 |
| | 07-Dec-01 | | 21.75 | 0.76 | 78.07 |
| | 10-Dec-01 | | 21.65 | 0.01 | 78.17 |
| | 11-Dec-01 | | 21.65 | sheen | 78 17 |
| | | | 21.61 | 0.40 | 78.21 |
| | 07-Jan-02 | | 21.76 | 0.40 | 78.06 |
| | 04-Feb-02 | | 21.45 | 1.31 | 78.37 |
| | 05-Mar-02 | | 19.77 | 0.17 | 80.05 |
| | 19-Apr-02 | | 16.65 | 0.01 | 83.17 |
| | 17-May-02 | | 15.76 | 0.01 | 84.06 |
| | 24-May-02 | | 15.86 | sheen | 83.96 |
| | 28-May-02 | | 16.09 | sheen | 83.73 |
| | 30-May-02 | | 19.11 | sheen | 80.71 |
| | 06-Jun-02 | | 16.59 | - | 83.23 |
| | 17-Sep-02 | | 19.97 | - | 79.85 |
| MW-1R | 12-Dec-02 | - | 17.44 | - | NM |
| | 31-Mar-03 | - | 14.02 | - | NM |
| | 16-Jul-03 | - | 9.21 | - | NM |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-2 | 01-Dec-97 | 99.83 | 17.43 | - | 82.40 |
| | 05-Aug-99 | | 19.19 | 2.29 | 80.64 |
| | 26-Apr-00 | | 15.80 | 2.18 | 84.03 |
| | 01-Aug-00 | | 22.30 | 2.10 | 77.53 |
| | 13-Dec-00 | | 21.36 | 0 84 | 78.47 |
| | 06-Feb-01 | | 18.89 | sheen | 80.94 |
| | 05-Jun-01 | | 17.42 | sheen | 82.41 |
| | 16-Aug-01 | | 18.35 | - | 81.48 |
| | 13-Sep-01 | | 19.03 | - | 80.80 |
| | 26-Sep-01 | | 19.42 | sheen | 80.41 |
| | 27-Sep-01 | | 19.69 | 0.01 | 80.14 |
| | 19-Oct-01 | | 20.22 | - | 79.61 |
| | 09-Nov-01 | | 21.02 | 0.01 | 78.81 |
| | 21-Nov-01 | | 20.70 | sheen | 79.13 |
| | 05-Dec-01 | | 21.59 | 0.63 | 78.24 |
| | 07-Dec-01 | | 21.98 | 0 02 | 77.85 |
| | 10-Dec-01 | | 22.00 | 0.01 | 77.83 |
| | 11-Dec-01 | | 21.91 | sheen | 77.92 |
| | | | 21.73 | 0.02 | 78.10 |
| | 07-Jan-02 | | 22.34 | 0 22 | 77.49 |
| | 04-Feb-02 | | 20 50 | 0.15 | 79.33 |
| | 05-Mar-02 | | 19.90 | sheen | 79.93 |
| | 19-Apr-02 | | 17.03 | 0 01 | 82.80 |
| | 17-May-02 | | 16 25 | 0 01 | 83.58 |
| | 24-May-02 | | 16.28 | 0.01 | 83.55 |
| | 28-May-02 | | 16.49 | sheen | 83.34 |
| | 30-May-02 | | 19.50 | - | 80.33 |
| | 06-Jun-02 | | 16.88 | - | 82.95 |
| | 17-Sep-02 | | 20.44 | 0.05 | 79.39 |
| | 12-Dec-02 | | 17.84 | - | 81.99 |
| | 31-Mar-03 | | 13.50 | - | 86.33 |
| | 16-Jul-03 | | 12.39 | - | 87.44 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-5 | 01-Dec-97 | 99.42 | 15.04 | - | 84.38 |
| | 05-Aug-99 | | 15.95 | - | 83.47 |
| | 26-Apr-00 | | 14.35 | - | 85.07 |
| | 01-Aug-00 | | 19.18 | - | 80.24 |
| | 13-Dec-00 | | 19.68 | - | 79.74 |
| | 06-Feb-01 | | 16.50 | - | 82.92 |
| | 05-Jun-01 | | 15.51 | - | 83.91 |
| | 13-Sep-01 | | 17.48 | - | 81.94 |
| | 07-Dec-01 | | 20.09 | - | 79.33 |
| | 05-Mar-02 | | 16.15 | - | 83.27 |
| | 06-Jun-02 | | 15.11 | - | 84.31 |
| | 17-Sep-02 | | 18.31 | - | 81.11 |
| | 12-Dec-02 | | 15.09 | - | 84.33 |
| | 31-Mar-03 | | 11.51 | - | 87.91 |
| | 16-Jul-03 | | 11.03 | - | 88.39 |
| MW-6 | 01-Dec-97 | 99.47 | 14.37 | - | 85.10 |
| | 05-Aug-99 | | 15.44 | - | 84.03 |
| | 26-Apr-00 | | 13.65 | - | 85.82 |
| | 01-Aug-00 | | 18.75 | - | 80.72 |
| | 13-Dec-00 | | 18.23 | - | 81.24 |
| | 06-Feb-01 | | 15.34 | - | 84.13 |
| | 05-Jun-01 | | 14.84 | - | 84.63 |
| | 13-Sep-01 | | 16.96 | - | 82.51 |
| | 07-Dec-01 | | 19.70 | - | 79.77 |
| | 05-Mar-02 | | 15.20 | - | 84.27 |
| | 06-Jun-02 | | 15.51 | - | 83.96 |
| | 17-Sep-02 | | 17.76 | - | 81.71 |
| | 12-Dec-02 | | 14.29 | - | 85.18 |
| | 31-Mar-03 | | 10.77 | - | 88.70 |
| | 16-Jul-03 | | 10.53 | - | 88.94 |
| MW-7 | 01-Dec-97 | 99.47 | 13.96 | - | 85.51 |
| | 05-Aug-99 | | 15.41 | - | 84.06 |
| | 26-Apr-00 | | 13.54 | - | 85.93 |
| | 01-Aug-00 | | 18.72 | - | 80.75 |
| | 13-Dec-00 | | 18.01 | - | 81.46 |
| | 06-Feb-01 | | 15.41 | - | 84.06 |
| | 05-Jun-01 | | 14.61 | - | 84.86 |
| | 13-Sep-01 | | 16.91 | - | 82.56 |
| | 07-Dec-01 | | 19.64 | - | 79.83 |
| | 05-Mar-02 | | 14.75 | - | 84.72 |
| | 06-Jun-02 | | 14.43 | - | 85.04 |
| | 17-Sep-02 | | 17.34 | - | 82.13 |
| | 12-Dec-02 | | 13.91 | - | 85.56 |
| | 31-Mar-03 | | 10.75 | - | 88.72 |
| | 16-Jul-03 | | 10.92 | - | 88.55 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-8 | 01-Dec-97 | 102.42 | 12.53 | - | 89.89 |
| | 05-Aug-99 | | 14.59 | - | 87.83 |
| | 26-Apr-00 | | 11.56 | - | 90.86 |
| | 01-Aug-00 | | 19.18 | - | 83.24 |
| | 13-Dec-00 | | 17.96 | - | 84.46 |
| | 06-Feb-01 | | 13.34 | - | 89.08 |
| | 05-Jun-01 | | 13.15 | - | 89.27 |
| | 13-Sep-01 | | 16.64 | - | 85.78 |
| | 07-Dec-01 | | 19.73 | - | 82.69 |
| | 05-Mar-02 | | 11.41 | - | 91 01 |
| | 06-Jun-02 | | 12.93 | - | 89.49 |
| | 17-Sep-02 | | 16.72 | - | 85.70 |
| | 12-Dec-02 | | 11.42 | - | 91.00 |
| | 31-Mar-03 | | 8.24 | - | 94.18 |
| | 16-Jul-03 | | 9.18 | - | 93.24 |
| MW-9 | 01-Dec-97 | 100 53 | 16.17 | - | 84 36 |
| | 05-Aug-99 | | 16.74 | - | 83.79 |
| | 26-Apr-00 | | 15.09 | - | 85.44 |
| | 01-Aug-00 | | 21.20 | - | 79.33 |
| | 13-Dec-00 | | 19.73 | - | 80.80 |
| | 06-Feb-01 | | 17.54 | - | 82.99 |
| | 05-Jun-01 | | 16.35 | - | 84.18 |
| | 13-Sep-01 | | 18.40 | - | 82.13 |
| | 07-Dec-01 | | 21.00 | - | 79 53 |
| | 05-Mar-02 | | 17.38 | - | 83.15 |
| | 06-Jun-02 | | 16.80 | - | 83.73 |
| | 17-Sep-02 | | 19.64 | - | 80.89 |
| | 12-Dec-02 | | 16.29 | - | 84.24 |
| | 31-Mar-03 | | 11.90 | - | 88.63 |
| | 16-Jul-03 | | 11.61 | - | 88.92 |
| MW-10 | 01-Dec-97 | 99.65 | 17.40 | - | 82.25 |
| | 05-Aug-99 | | 18.06 | 1.01 | 81.59 |
| | 26-Apr-00 | | 15.75 | 1.65 | 83.90 |
| | 01-Aug-00 | | 20.50 | 0.03 | 79.15 |
| | 13-Dec-00 | | 19.40 | 0.01 | 80.25 |
| | 06-Feb-01 | | 18.84 | sheen | 80.81 |
| | 05-Jun-01 | | 17.38 | - | 82.27 |
| | 16-Aug-01 | | 18.15 | - | 81.50 |
| | 13-Sep-01 | | 18.82 | - | 80.83 |
| | 07-Dec-01 | | 23.90 | - | 75.75 |
| | 11-Dec-01 | | 21.88 | - | 77 77 |
| | 04-Feb-02 | | 20.65 | - | 79 00 |
| | 05-Mar-02 | | 19.09 | - | 80.56 |
| | 06-Jun-02 | | 16.78 | - | 82.87 |
| | 17-Sep-02 | | 20.53 | - | 79.12 |
| | 12-Dec-02 | | 18.00 | - | 81 65 |
| | 31-Mar-03 | | 13.49 | - | 86.16 |
| | 16-Jul-03 | | 12.65 | - | 87.00 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-11 | 01-Dec-97 | 96.47 | 15.74 | - | 80 73 |
| | 05-Aug-99 | | 15.60 | - | 80.87 |
| | 26-Apr-00 | | 13.65 | - | 82.82 |
| | 01-Aug-00 | | 18.61 | - | 77.86 |
| | 13-Dec-00 | | 19.01 | - | 77.46 |
| | 06-Feb-01 | | 17.43 | - | 79.04 |
| | 05-Jun-01 | | 15.96 | - | 80.51 |
| | 13-Sep-01 | | 17.23 | - | 79.24 |
| | 07-Dec-01 | | 19.74 | - | 76.73 |
| | 05-Mar-02 | | 17.12 | - | 79.35 |
| | 06-Jun-02 | | 15.03 | - | 81 44 |
| | 17-Sep-02 | | 18.88 | - | 77 59 |
| | 12-Dec-02 | | 16.13 | - | 80 34 |
| | 31-Mar-03 | | 11.72 | - | 84.75 |
| | 16-Jul-03 | | 10.25 | - | 86.22 |
| MW-12 | 01-Dec-97 | 98.63 | 17.03 | - | 81.60 |
| | 05-Aug-99 | | 17.33 | - | 81.30 |
| | 26-Apr-00 | | 16.06 | - | 82 57 |
| | 01-Aug-00 | | 20.15 | - | 78 48 |
| | 13-Dec-00 | | 23.70 | - | 74.93 |
| | 06-Feb-01 | | 18.45 | - | 80.18 |
| | 05-Jun-01 | | 17.26 | - | 81.37 |
| | 13-Sep-01 | | 18.63 | - | 80.00 |
| | 07-Dec-01 | | 21.37 | - | 77.26 |
| | 05-Mar-02 | | 18.65 | - | 79.98 |
| | 06-Jun-02 | | 16.90 | - | 81.73 |
| | 17-Sep-02 | | 19.97 | - | 78.66 |
| | 12-Dec-02 | | 17.33 | - | 81.30 |
| | 31-Mar-03 | | 13.46 | - | 85.17 |
| | 16-Jul-03 | | 12.51 | - | 86.12 |
| MW-13 | 01-Dec-97 | 100.80 | 21.05 | - | 79 75 |
| | 05-Aug-99 | | 21.26 | - | 79.54 |
| | 26-Apr-00 | | 20.02 | - | 80.78 |
| | 01-Aug-00 | | 24.05 | - | 76 75 |
| | 13-Dec-00 | | 24.13 | - | 76.67 |
| | 06-Feb-01 | | 22.43 | - | 78.37 |
| | 05-Jun-01 | | 21.34 | - | 79.46 |
| | 13-Sep-01 | | 22.91 | - | 77.89 |
| | 07-Dec-01 | | 25.22 | - | 75.58 |
| | 05-Mar-02 | | 22.21 | - | 78.59 |
| | 06-Jun-02 | | 20.82 | - | 79.98 |
| | 17-Sep-02 | | 24.22 | - | 76.58 |
| | 12-Dec-02 | | 21.33 | - | 79.47 |
| MW-13R | 31-Mar-03 | NM | 17.71 | - | NM |
| | 16-Jul-03 | | 16.89 | - | NM |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-14 | 01-Dec-97 | 89.38 | 7.27 | - | 82.11 |
| | 05-Aug-99 | | 7.96 | - | 81.42 |
| | 26-Apr-00 | | 6.46 | - | 82.92 |
| | 11-Aug-00 | | 10.80 | - | 78.58 |
| | 13-Dec-00 | | 10.80 | - | 78.58 |
| | 06-Feb-01 | | 8.72 | - | 80.66 |
| | 05-Jun-01 | | 7 32 | - | 82.06 |
| | 13-Sep-01 | | 9.31 | - | 80.07 |
| | 07-Dec-01 | | 11.91 | - | 77.47 |
| | 05-Mar-02 | | 8 51 | - | 80.87 |
| | 06-Jun-02 | | 7 41 | - | 81.97 |
| | 17-Sep-02 | | 9.98 | - | 79.40 |
| | 12-Dec-02 | | 8.22 | - | 81.16 |
| | 31-Mar-03 | | 4.25 | - | 85.13 |
| | 16-Jul-03 | | 3.95 | - | 85.43 |
| MW-15 | 01-Dec-97 | 87 33 | 5 10 | - | 82.23 |
| | 05-Aug-99 | | 6.28 | - | 81.05 |
| | 26-Apr-00 | | 4.75 | - | 82 58 |
| | 01-Aug-00 | | 9.11 | - | 78.22 |
| | 13-Dec-00 | | 8.57 | - | 78 76 |
| | 06-Feb-01 | | 6.36 | - | 80.97 |
| | 05-Jun-01 | | 5.68 | - | 81.65 |
| | 13-Sep-01 | | 7 61 | - | 79.72 |
| | 07-Dec-01 | | 9 91 | - | 77.42 |
| | 05-Mar-02 | | 5.86 | - | 81.47 |
| | 06-Jun-02 | | NM | - | NM |
| | 12-Dec-02 | | 4.74 | - | 82.59 |
| | 31-Mar-03 | | 2 69 | - | 84.64 |
| | 16-Jul-03 | | 2.15 | - | 85.18 |
| MW-16 | 01-Dec-97 | 93.74 | 9.69 | - | 84.05 |
| | 05-Aug-99 | | 11.22 | - | 82.52 |
| | 26-Apr-00 | | 9.50 | - | 84.24 |
| | 01-Aug-00 | | 14.35 | - | 79.39 |
| | 13-Dec-00 | | 13.45 | - | 80.29 |
| | 06-Feb-01 | | 10.89 | - | 82.85 |
| | 05-Jun-01 | | 10.34 | - | 83.40 |
| | 13-Sep-01 | | 12.58 | - | 81.16 |
| | 07-Dec-01 | | 13.41 | - | 80.33 |
| | 05-Mar-02 | | 8.67 | - | 85.07 |
| | 06-Jun-02 | | NM | - | NM |
| | 12-Dec-02 | | 9.58 | - | 84 16 |
| | 31-Mar-03 | | 7.29 | - | 86.45 |
| | 16-Jul-03 | | 6.95 | - | 86.79 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| DMW-17 | 01-Dec-97 | 100.08 | 15.53 | - | 84.55 |
| | 05-Aug-99 | | 16.16 | - | 83.92 |
| | 26-Apr-00 | | 16.80 | - | 83.28 |
| | 01-Aug-00 | | 19.27 | - | 80.81 |
| | 13-Dec-00 | | 19.20 | - | 80.88 |
| | 06-Feb-01 | | 16 82 | - | 83.26 |
| | 05-Jun-01 | | 15.52 | - | 84.56 |
| | 13-Sep-01 | | 17 42 | - | 82.66 |
| | 07-Dec-01 | | 19 54 | - | 80.54 |
| | 05-Mar-02 | | NM | - | NM |
| | 06-Jun-02 | | NM | - | NM |
| | 17-Sep-02 | | 18 32 | - | 81.76 |
| | 12-Dec-02 | | 16.66 | - | 83.42 |
| | 31-Mar-03 | | 13.32 | - | 86.76 |
| | 16-Jul-03 | | 11.39 | - | 88.69 |

**Notes:**
TOC - Top-of-Casing elevation refrenced to common datum
NM - Not measured.
All measurments in units of feet.
- = No Data

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| OMW-1 | 1-Dec-97 | 14.9 | 85.5 | 5.2 | 24.8 | 130 | 96 | BDL |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 1,570 | 19,000 | 474 | 4,050 | 25,094 | 33,900 | 1,440 |
| | 17-Sep-02 | 2,940 | 25,200 | 1,330 | 9,580 | 39,050 | 30,600 | 620 |
| MW-1R | 12-Dec-02 | 6,590 | 23,500 | 3,670 | 20,480 | 54,240 | 18,200 | 8,330 |
| | 31-Mar-03 | 7,830 | 19,300 | 1,680 | 8,600 | 37,410 | 5,850 | 49.4 |
| | 16-Jul-03 | 7,070 | 13,400 | 1,450 | 7,310 | 29,230 | 7,160 | 52.1 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-2 | 1-Dec-97 | 9,900 | 42,300 | 2,040 | 12,100 | 66,340 | 242,000 | 71.2 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 4,400 | 7,570 | 2,890 | 6,790 | 21,650 | 9,490 | 592 |
| | 13-Sep-01 | 2,280 | 9,780 | 1,630 | 7,650 | 21,340 | 1,750 | 399 |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 3,660 | 2,070 | 858 | 2,788 | 9,376 | 8,390 | 294 |
| | 17-Sep-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | 5,120 | 2,180 | 1,180 | 1,691 | 10,171 | 11,000 | 363 |
| | 31-Mar-03 | 3,800 | 288 | 427 | 90 7 | 4,606 | 2,430 | 217 |
| | 16-Jul-03 | 1,460 | 132 | 52 0 | 101.2 | 1,745 | 1,190 | 13.5 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-3 | 1-Dec-97 | 9,820 | 54,500 | 2,160 | 11,900 | 78,380 | 81,200 | 445 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 8,770 | 34,700 | 2,610 | 14,760 | 60,840 | 8,940 | 503 |
| | 17-Sep-02 | 8,710 | 41,300 | 2,950 | 17,070 | 70,030 | 9,540 | 669 |
| | 12-Dec-02 | 6,360 | 44,900 | 3,640 | 23,760 | 78,660 | 12,600 | 1,330 |
| | 31-Mar-03 | 4,830 | 16,600 | 1,160 | 7,430 | 30,020 | 3,990 | 609 |
| | 16-Jul-03 | 8,660 | 41,000 | 2,760 | 16,950 | 69,370 | 6,630 | 129 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-4 | 1-Dec-97 | 8,140 | 21,000 | 1,510 | 11,500 | 42,150 | 215,000 | 813 |
| | 5-Aug-99 | 14,200 | 34,600 | 2,750 | 15,900 | 67,450 | 109,000 | <5 |
| | 26-Apr-00 | 13,400 | 33,200 | 3,420 | 13,270 | 63,290 | 102,000 | 1,060 |
| | 1-Aug-00 | 10,100 | 23,300 | 1,740 | 11,410 | 46,550 | 109,000 | 559 |
| | 13-Dec-00 | 6,730 | 16,300 | 635 | 4,170 | 27,835 | 32,300 | 742 |
| | 6-Feb-01 | 5,860 | 13,500 | 1,080 | 7,230 | 27,670 | 26,100 | 210 |
| | 5-Jun-01 | 3,570 | 10,900 | 965 | 9,510 | 24,945 | 5,730 | 302 |
| | 13-Sep-01 | 5,910 | 14,900 | 1,050 | 7,100 | 28,960 | 5,980 | 384 |
| | 7-Dec-01 | 10,000 | 19,200 | 2,210 | 11,600 | 43,010 | BDL | 682 |
| | 5-Mar-02 | 7,880 | 12,890 | 1,860 | 12,650 | 35,280 | 14,530 | 2,010 |
| | 6-Jun-02 | 2,520 | 2,700 | 483 | 3,620 | 9,323 | 3,850 | 497 |
| | 17-Sep-02 | 5,750 | 3,480 | 1,480 | 6,170 | 16,880 | 3,140 | 555 |
| | 12-Dec-02 | 5,100 | 2,300 | 1,690 | 7,080 | 16,170 | 1,640 | 319 |
| | 31-Mar-03 | 1,900 | BDL | 406 | 2,395 | 4,701 | 1,430 | BDL |
| | 16-Jul-03 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 5 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-5 | 1-Dec-97 | 5,930 | 47,600 | 2,100 | 12,600 | 68,230 | BDL | 125 |
| | 5-Aug-99 | 6,400 | 61,600 | 2,460 | 12,100 | 82,560 | 410 | 335 |
| | 26-Apr-00 | 6,680 | 48,300 | 2,390 | 9,610 | 66,980 | 681 | 609 |
| | 1-Aug-00 | 4,250 | 40,300 | 1,960 | 12,530 | 59,040 | 258 | 396 |
| | 13-Dec-00 | 4,530 | 38,100 | 2,520 | 14,640 | 59,790 | 381 | 4,770 |
| | 6-Feb-01 | 5,070 | 30,800 | 2,200 | 12,500 | 50,570 | 225 | 678 |
| | 5-Jun-01 | 6,070 | 52,000 | 2,900 | 13,720 | 74,690 | 228 | 342 |
| | 13-Sep-01 | 4,990 | 7,210 | 3,340 | 17,900 | 33,440 | 60 7 | 2,900 |
| | 7-Dec-01 | 3,520 | 38,600 | 1,700 | 11,490 | 55,310 | BDL | 408 |
| | 5-Mar-02 | 3,160 | 21,300 | 3,260 | 18,490 | 46,210 | 171 | 342 |
| | 6-Jun-02 | 3,820 | 26,700 | 2,570 | 14,620 | 47,710 | 199 | 397 |
| | 17-Sep-02 | 4,480 | 42,800 | 2,820 | 15,100 | 65,200 | 117 | 209 |
| | 12-Dec-02 | 110 | 5,390 | 1,340 | 5,900 | 12,740 | 13 8 | 287 |
| | 31-Mar-03 | 75.7 | 3,760 | 796 | 4,520 | 9,152 | 87 4 | BDL |
| | 16-Jul-03 | 84.6 | 4,960 | 1,330 | 4,880 | 11,255 | 45 0 | 71.7 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-6 | 1-Dec-97 | 5.5 | 137 | 6.0 | 149 | 297 5 | BDL | BDL |
| | 5-Aug-99 | 4.1 | 1.1 | 3.7 | 16.7 | 25.6 | 5 | BDL |
| | 26-Apr-00 | 13.0 | 19.2 | 15 | 48 | 95 2 | 27 2 | 6.44 |
| | 1-Aug-00 | 117 | 1820 | 128 | 877 | 2942 | 10.7 | 32.2 |
| | 13-Dec-00 | 47.9 | 460 | 35.4 | 332 | 875 | 14 8 | 7.2 |
| | 6-Feb-01 | 47.4 | 143 | 47.6 | 219.2 | 457 | 17 8 | 22 6 |
| | 5-Jun-01 | 9.3 | 44.5 | 23.5 | 141.3 | 219 | 7 5 | BDL |
| | 13-Sep-01 | 18.1 | 36 6 | 24 7 | 119 0 | 198 | 8 35 | 1 06 |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | 5 23 | BDL |
| | 5-Mar-02 | 79.8 | 765 | 114 | 1,242 | 2,201 | 35 1 | 75 8 |
| | 6-Jun-02 | 55.1 | 629 | 91.8 | 959 | 1,735 | 25 9 | 5 10 |
| | 17-Sep-02 | 11.5 | 115 | 25.4 | 258 | 410 | 2 70 | 7.77 |
| | 12-Dec-02 | 11.1 | 206 | 26.2 | 236 | 479 | 4 04 | 51 6 |
| | 31-Mar-03 | 2.22 | BDL | 1.50 | 16 2 | 19.9 | 2 84 | BDL |
| | 16-Jul-03 | 19.0 | 38.3 | 37 0 | 204 | 298.4 | 12 4 | BDL |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-7 | 1-Dec-97 | 1.1 | 1.7 | BDL | 1.1 | 3.9 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 41 | <1 |
| | 26-Apr-00 | 2.13 | 13.5 | BDL | 1.59 | 17.2 | 68.9 | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 53.8 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 52.9 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 18.7 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | 10.6 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | 6 16 | BDL | BDL | 6.16 | 1.68 | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 10.0 | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | 10 5 | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | 3.60 | 3.60 | 567 | BDL |
| | 16-Jul-03 | BDL | BDL | BDL | BDL | BDL | 72.5 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-8 | 1-Dec-97 | BDL | 2 4 | 1 2 | 5 4 | 9 0 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 1.58 | 8 53 | BDL | BDL | 10.1 | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | 2 95 | BDL | BDL | 2 95 | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 16-Jul-03 | BDL | BDL | BDL | BDL | BDL | 1.71 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-9 | 1-Dec-97 | 77 | 14,000 | 2,390 | 20,700 | 37,167 | 114 | 384 |
| | 5-Aug-99 | 110 | 4,280 | 2,450 | 17,000 | 23,840 | 150 | <500 |
| | 26-Apr-00 | 163 | 2,640 | 3,520 | 14,760 | 21,083 | BDL | 2,090 |
| | 1-Aug-00 | 187 | 18,400 | 1,010 | 16,070 | 35,667 | BDL | 909 |
| | 13-Dec-00 | 9 14 | 657 | 108 | 1,340 | 2,114 | 26.0 | 47 |
| | 6-Feb-01 | 10 6 | 254 | 181 | 2,907 | 3,353 | 16.9 | 179 |
| | 5-Jun-01 | 27 7 | 402 | 139 | 1,798 | 2,367 | 17.2 | 66.6 |
| | 13-Sep-01 | 15 0 | 133 | 710 | 7,690 | 8,548 | 13.0 | 186 |
| | 7-Dec-01 | 34 4 | 35 5 | 28 9 | 713 | 812 | BDL | 20.6 |
| | 5-Mar-02 | 25 5 | 29 8 | 157 | 2,144 | 2,356 | BDL | 49.0 |
| | 6-Jun-02 | 13 2 | 24 6 | 105 | 1,420 | 1,563 | 3.17 | 44.5 |
| | 17-Sep-02 | 13 3 | 21 0 | 111 | 1,532 | 1,677 | 2.71 | 41.5 |
| | 12-Dec-02 | 8.14 | BDL | 21.7 | 483 | 513 | BDL | 19.1 |
| | 31-Mar-03 | 2.16 | 4.80 | 23.7 | 421 | 451 | BDL | BDL |
| | 16-Jul-03 | BDL | 3.02 | 28.9 | 366 | 398 | BDL | 37.3 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-10 | 1-Dec-97 | 6,220 | 46,300 | 2,320 | 14,800 | 69,640 | 938 | 542 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 8,020 | 32,900 | 856 | 8,280 | 50,056 | 8,780 | 327 |
| | 13-Sep-01 | 9,870 | 47,700 | 1,190 | 20,400 | 79,160 | 12,500 | 356 |
| | 7-Dec-01 | 5,590 | 56,000 | 8,150 | 61,700 | 131,440 | 1,050 | 2,540 |
| | 5-Mar-02 | 2.06 | 72.2 | 5.80 | 190.1 | 270 | 1,110 | 13.7 |
| | 6-Jun-02 | BDL | 57 8 | BDL | 165.0 | 223 | 3,780 | 27.0 |
| | 17-Sep-02 | 36.3 | 75 9 | 7 38 | 308 | 428 | 6,850 | 11.4 |
| | 12-Dec-02 | 159 | 428 | 26.3 | 637 | 1,250 | BDL | 24.6 |
| | 31-Mar-03 | 4,489 | 19,300 | 769 | 6,020 | 30,578 | 13,400 | BDL |
| | 16-Jul-03 | 6,670 | 27,500 | 2,040 | 11,550 | 47,760 | 8,440 | 813 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-11 | 1-Dec-97 | 1.4 | 3.4 | BDL | 4.7 | 9 5 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 7 | <5 |
| | 26-Apr-00 | 1.18 | 3.96 | BDL | BDL | 5.1 | 4 69 | 9.98 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | 2 51 | 91.0 | 15.0 | 104 | 212.9 | 26.3 | 17.2 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 39 5 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | 4 88 | 9 52 | 14 4 | 266 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | 1.32 | 1.32 | 358 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 1070 | BDL |
| | 6-Jun-02 | 1.84 | BDL | BDL | 1.02 | 2.86 | 2,220 | BDL |
| | 17-Sep-02 | 98.7 | BDL | BDL | 19 9 | 118 59 | 3,780 | BDL |
| | 12-Dec-02 | 23 5 | BDL | BDL | 8.39 | 31.89 | BDL | BDL |
| | 31-Mar-03 | 229 | 26.0 | 2.00 | 48.1 | 305 | 4,340 | BDL |
| | 16-Jul-03 | 624 | 10.0 | 2.20 | 171 | 807 | 7,150 | 87 9 |
| SSTL | | <1 | <1 | <1 | <1 | - | 7 | <5 |
| MW-12 | 1-Dec-97 | 7,970 | 382 | 266 | 1,540 | 10,158 | 99,900 | 119 |
| | 5-Aug-99 | 5,000 | 260 | <200 | <200 | 5,260 | 41,200 | <1000 |
| | 26-Apr-00 | 135 | 4.51 | BDL | 11.0 | 151 | 6,800 | 18 2 |
| | 1-Aug-00 | 1670 | 17.1 | 4.33 | 114.9 | 1806 | 44,200 | BDL |
| | 13-Dec-00 | 119 | 9.1 | 2.11 | 26.7 | 157 | 4,230 | 31 7 |
| | 6-Feb-01 | 32 5 | 9 3 | 1.51 | 13.8 | 57 | 1,570 | 10 6 |
| | 5-Jun-01 | 61 0 | BDL | BDL | 2 1 | 63 | 1,960 | 17 2 |
| | 13-Sep-01 | 329 | 4.55 | 2.96 | 29.27 | 366 | 2,860 | 60 1 |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 906 | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 613 | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | 1.30 | 1.30 | 479 | BDL |
| | 16-Jul-03 | 3 17 | BDL | BDL | BDL | 3 17 | 793 | BDL |
| SSTL | | 5 | 260 | <200 | <200 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-13 | 1-Dec-97 | BDL | 1.4 | BDL | 1.6 | 3 | 82 3 | BDL |
| | 5-Aug-99 | 3 | <1 | <1 | <1 | 3 | 604 | <5 |
| | 26-Apr-00 | 188 | 149 | BDL | BDL | 337 | 3,150 | BDL |
| | 1-Aug-00 | 207 | 5.74 | BDL | 32.8 | 245 | 3,641 | 24.3 |
| | 13-Dec-00 | 29.9 | 3.81 | 1.0 | 76.6 | 111 | 4,350 | 29 8 |
| | 6-Feb-01 | 377 | 12.10 | 2.8 | 105.2 | 497 | 5,200 | 54.9 |
| | 5-Jun-01 | 259 | 5.87 | 1.8 | 112.8 | 380 | 8,530 | 23.2 |
| | 13-Sep-01 | 374 | 7.44 | 4 52 | 127.5 | 513 | 7,150 | 24.7 |
| | 7-Dec-01 | 15 4 | BDL | BDL | 8.10 | 24 | 1,130 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 103 | BDL |
| | 6-Jun-02 | 3.24 | BDL | BDL | 6.25 | 9.49 | 6,360 | 1.42 |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | 561 | BDL |
| | 12-Dec-02 | 17.4 | BDL | BDL | 29.3 | 46.7 | BDL | BDL |
| MW-13R | 31-Mar-03 | 328 | 9.18 | BDL | 89.1 | 426 | 10,400 | 26.0 |
| | 16-Jul-03 | 522 | 13.4 | 5 39 | 143 | 684 | 11,600 | 66 4 |
| SSTL | | 3 | 1 | 1 | 1 | -- | 40 | 5 |
| MW-14 | 1-Dec-97 | 1 1 | 1.4 | BDL | 2.7 | 5 | 76 5 | BDL |
| | 5-Aug-99 | 57 | 7 | 1 | 23 | 88 | 606 | 5 |
| | 26-Apr-00 | BDL | 1.38 | BDL | BDL | 1.38 | 1 11 | BDL |
| | 1-Aug-00 | 138 | 4.04 | BDL | 39.04 | 181 08 | 35.3 | 13 0 |
| | 13-Dec-00 | BDL | BDL | BDL | 2.13 | 2 13 | 129 | 2 33 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 11 1 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | 54 9 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 1 53 | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 16-Jul-03 | BDL | BDL | BDL | BDL | BDL | 1.67 | BDL |
| SSTL | | 5 | 7 | 1 | 23 | - | 40 | 5 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-15 | 1-Dec-97 | 1.0 | 1.6 | BDL | 2.5 | 5 | BDL | BDL |
| | 5-Aug-99 | 3 | 6 | 1 | 6 | 16 | 27 | <5 |
| | 26-Apr-00 | 1.01 | 1.32 | BDL | BDL | 2.33 | 2.82 | 5.66 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 2.77 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 16-Jul-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 3 | 6 | 1 | 6 | - | 27 | <5 |
| MW-16 | 1-Dec-97 | BDL | 1 2 | BDL | 1 3 | 2 5 | BDL | BDL |
| | 5-Aug-99 | 2 2 | 8.8 | 1 6 | 7 1 | 19 7 | 4 | BDL |
| | 26-Apr-00 | 2.17 | 1 27 | BDL | BDL | 3.4 | 10.1 | BDL |
| | 1-Aug-00 | 5.02 | 3 01 | BDL | 3.5 | 11.5 | 16.1 | 1.35 |
| | 13-Dec-00 | 10 7 | BDL | BDL | 2.66 | 13.4 | 30.6 | 1 96 |
| | 6-Feb-01 | 6.25 | BDL | BDL | BDL | 6.25 | 32.7 | BDL |
| | 5-Jun-01 | 22.3 | BDL | BDL | 1.30 | 23 6 | 78.8 | BDL |
| | 13-Sep-01 | 18.9 | BDL | BDL | BDL | BDL | 35.6 | BDL |
| | 7-Dec-01 | 15.7 | BDL | BDL | 1.01 | 16 7 | 25.0 | BDL |
| | 5-Mar-02 | 15 1 | BDL | BDL | BDL | 15.1 | 104 | BDL |
| | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | 2.60 | BDL | 9.03 | BDL | 11.6 | 14.0 | BDL |
| | 31-Mar-03 | 1.62 | BDL | BDL | BDL | 1.62 | 7.76 | BDL |
| | 16-Jul-03 | 2.95 | BDL | BDL | BDL | 2 95 | 10.9 | BDL |
| DMW-17 | 1-Dec-97 | 1.6 | 3.8 | 2 3 | 12.7 | 20.3 | BDL | BDL |
| | 5-Aug-99 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 26-Apr-00 | 1.06 | 1.24 | BDL | BDL | 2.3 | 8.97 | BDL |
| | 1-Aug-00 | BDL | 3.02 | BDL | BDL | 3 02 | 7.75 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 6.98 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 5.34 | BDL |
| | 5-Jun-01 | BDL | 2.0 | BDL | BDL | 2.0 | 23.8 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 3.42 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 6.82 | 1.1 |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | 10.1 | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 16-Jul-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| CP-WW | 1-Dec-97 | BDL | 1.2 | BDL | BDL | 1.2 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 2.96 | 1.09 | BDL | BDL | 4 1 | 315 | BDL |
| | 1-Aug-00 | 3.23 | 2 56 | BDL | 1.09 | 7 | 224 | BDL |
| | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| | 17-Sep-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | NS | NS | NS | NS | NS | NS | NS |
| | 16-Jul-03 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |
| CLS-WW | 1-Dec-97 | 81.3 | 1.1 | BDL | 9.6 | 92 | 34.5 | BDL |
| | 5-Aug-99 | 81 | 1 | <1 | 10 | 92 | 35 | <5 |
| | 26-Apr-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 16-Jul-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | <1 | <1 | 10 | - | 35 | <5 |

Notes:
All results reported in parts per billion (ug/L) unless otherwise noted
SSTL = Site specific target levels referenced in bid
FP = Free Product; NS = Not Sampled
BDL = Below detecatable Levels
Total BTEX = Summation of benzene, toluene, ethylbenzene and xylenes
MTBE = Methyl-tert-buytl-ether

# ATTACHMENT 3
# LABORATORY ANALYTICAL REPORT

RECEIVED JUL 2 9 2003

# ACCESS ANALYTICAL, INC.

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


July 23, 2003
Report # 307000984
Order # 61650
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-1
Collected: 07/16/03 00:00
Received: 07/19/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 10 | | | |
| Methyl-Tert-Butyl-Ether | 7160 | ug/L | 5030/8260B | 10 000 | 07/20/2003 | 07/20/2003 | 09:33PMD |
| Benzene | 7070 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 09:33PMD |
| Toluene | 13400 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 09:33PMD |
| Ethylbenzene | 1450 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 09:33PMD |
| m & p-Xylene | 4850 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 09:33PMD |
| o-Xylene | 2460 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 09:33PMD |
| Total Xylene | 7310 | ug/L | 5030/8260B | 10 000 | 07/20/2003 | 07/20/2003 | 09:33PMD |
| Naphthalene | 52.1 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 09:33PMD |
| SURROGATE: Toluene-D8 | 109.00% | | | | | | |
| SURROGATE: Bromofluorobenzene | 96.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 83.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


July 23, 2003
Report # 307000984
Order # 61651
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-2
Collected: 07/16/03 00:00
Received: 07/19/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 10 | | | |
| Methyl-Tert-Butyl-Ether | 1190 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 09:54PMD |
| Benzene | 1460 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 09:54PMD |
| Toluene | 132 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 09:54PMD |
| Ethylbenzene | 52.0 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 09:54PMD |
| m & p-Xylene | 53.5 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 09:54PMD |
| o-Xylene | 47.7 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 09:54PMD |
| Total Xylene | 101.2 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 09:54PMD |
| Naphthalene | 13.5 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 09:54PMD |
| SURROGATE: Toluene-D8 | 103.00% | | | | | | |
| SURROGATE: Bromofluorobenzene | 96.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 99.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063

July 23, 2003
Report # 307000984
Order # 61652
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-3
Collected: 07/16/03 00:00
Received: 07/19/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 10 | | | |
| Methyl-Tert-Butyl-Ether | 6630 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 10:15PMD |
| Benzene | 8660 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 10:15PMD |
| Toluene | 41000 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 10:15PMD |
| Ethylbenzene | 2760 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 10:15PMD |
| m & p-Xylene | 11100 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 10:15PMD |
| o-Xylene | 5850 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 10:15PMD |
| Total Xylene | 16950 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 10:15PMD |
| Naphthalene | 129 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 10:15PMD |
| SURROGATE: Toluene-D8 | 102.50% | | | | | | |
| SURROGATE: Bromofluorobenzene | 87.20% | | | | | | |
| SURROGATE: Dibromofluoromethane | 87.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063

July 23, 2003
Report # 307000984
Order # 61654
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-5
Collected: 07/16/03 00:00
Received: 07/19/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 10 | | | |
| Methyl-Tert-Butyl-Ether | 45.0 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 10:36PMD |
| Benzene | 84.6 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 10:36PMD |
| Toluene | 4960 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 10:36PMD |
| Ethylbenzene | 1330 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 10:36PMD |
| m & p-Xylene | 3370 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 10:36PMD |
| o-Xylene | 1510 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 10:36PMD |
| Total Xylene | 4880 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 10:36PMD |
| Naphthalene | 71.7 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 10:36PMD |
| SURROGATE: Toluene-D8 | 102.50% | | | | | | |
| SURROGATE: Bromofluorobenzene | 84.80% | | | | | | |
| SURROGATE: Dibromofluoromethane | 87.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

**Richard Gillespie**
**H2O Environmental Inc**
**121 Centrum Dr. Ste 2**

**Irmo, SC 29063**


**July 23, 2003**
**Report # 307000984**
**Order # 61655**
**STL Miami Cert ID# 96023**
**NELAP ID# E86349**

**Site Location/Project**
**South Carolina**
**DHE-12335**

**Sample I.D.: MW-6**
**Collected: 07/16/03 00:00**
**Received: 07/19/03 10:00**
**Collected by: D.Burritt**

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 12 4 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 10:57AR |
| Benzene | 19.0 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 10:57AR |
| Toluene | 38.3 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 10:57AR |
| Ethylbenzene | 37.0 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 10:57AR |
| m & p-Xylene | 147 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 10:57AR |
| o-Xylene | 57.1 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 10:57AR |
| Total Xylene | 204.1 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 10:57AR |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 10:57AR |
| SURROGATE: Toluene-D8 | 98.00% | | | | | | |
| SURROGATE: Bromofluorobenzene | 85.60% | | | | | | |
| SURROGATE: Dibromofluoromethane | 92.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


July 23, 2003
Report # 307000984
Order # 61656
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-7
Collected: 07/16/03 00:00
Received: 07/19/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 72 5 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 11:18AR |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 11.18AR |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 11:18AR |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 11.18AR |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 11:18AR |
| o-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 11:18AR |
| Total Xylene | BDL | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 11:18AR |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 11:18AR |
| SURROGATE· Toluene-D8 | 100.00% | | | | | | |
| SURROGATE· Bromofluorobenzene | 120.00% | | | | | | |
| SURROGATE. Dibromofluoromethane | 92.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


July 23, 2003
Report # 307000984
Order # 61657
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-8
Collected: 07/16/03 00:00
Received: 07/19/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 1.71 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 15:32PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 15:32PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 15:32PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 15:32PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 15:32PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 15:32PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 15:32PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 15:32PMD |
| SURROGATE: Toluene-D8 | 102.50% | | | | | | |
| SURROGATE Bromofluorobenzene | 141.20% | | | | | | |
| SURROGATE: Dibromofluoromethane | 99.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


July 23, 2003
Report # 307000984
Order # 61658
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-9
Collected: 07/16/03 00:00
Received: 07/19/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 14:33PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 14:33PMD |
| Toluene | 3.02 | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 14:33PMD |
| Ethylbenzene | 28.9 | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 14:33PMD |
| m & p-Xylene | 287 | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 14:33PMD |
| o-Xylene | 79 1 | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 14:33PMD |
| Total Xylene | 366.1 | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 14:33PMD |
| Naphthalene | 37.3 | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 14:33PMD |
| SURROGATE· Toluene-D8 | 100.50% | | | | | | |
| SURROGATE· Bromofluorobenzene | 117.60% | | | | | | |
| SURROGATE: Dibromofluoromethane | 106.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


July 23, 2003
Report # 307000984
Order # 61659
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-10
Collected: 07/16/03 00:00
Received: 07/19/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C.) | | | MEDF | 10 | | | |
| Methyl-Tert-Butyl-Ether | 8440 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 14:52AR |
| Benzene | 6670 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 14:52AR |
| Toluene | 27500 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 14:52AR |
| Ethylbenzene | 2040 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 14:52AR |
| m & p-Xylene | 7810 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 14.52AR |
| o-Xylene | 3740 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 14:52AR |
| Total Xylene | 11550 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 14:52AR |
| Naphthalene | 813 | ug/L | 5030/8260B | 10.000 | 07/20/2003 | 07/20/2003 | 14:52AR |
| SURROGATE: Toluene-D8 | 100.00% | | | | | | |
| SURROGATE Bromofluorobenzene | 116.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 112.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


July 23, 2003
Report # 307000984
Order # 61660
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-11
Collected: 07/16/03 00:00
Received: 07/19/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 7150 | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 15:12PMD |
| Benzene | 624 | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 15:12PMD |
| Toluene | 10 0 | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 15:12PMD |
| Ethylbenzene | 2.20 | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 15:12PMD |
| m & p-Xylene | 44.9 | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 15:12PMD |
| o-Xylene | 126 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 15:12PMD |
| Total Xylene | 170.9 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 15:12PMD |
| Naphthalene | 87 9 | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 15:12PMD |
| SURROGATE. Toluene-D8 | 94.25% | | | | | | |
| SURROGATE Bromofluorobenzene | 122.40% | | | | | | |
| SURROGATE: Dibromofluoromethane | 112.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
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Company Representative

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H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


July 23, 2003
Report # 307000984
Order # 61661
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-12
Collected: 07/16/03 00:00
Received: 07/19/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 793 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 16:50PMD |
| Benzene | 3.17 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 16:50PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 16:50PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 16.50PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 16:50PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 16:50PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 16:50PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 16:50PMD |
| SURROGATE: Toluene-D8 | 99.75% | | | | | | |
| SURROGATE: Bromofluorobenzene | 146.40% | | | | | | |
| SURROGATE: Dibromofluoromethane | 107.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


July 23, 2003
Report # 307000984
Order # 61662
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-13
Collected: 07/16/03 00:00
Received: 07/19/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 11600 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 17:09PMD |
| Benzene | 522 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 17:09PMD |
| Toluene | 13 4 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 17 09PMD |
| Ethylbenzene | 5 39 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 17 09PMD |
| m & p-Xylene | 32 8 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 17.09PMD |
| o-Xylene | 110 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 17:09PMD |
| Total Xylene | 142 8 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 17:09PMD |
| Naphthalene | 66 4 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 17.09PMD |
| SURROGATE: Toluene-D8 | 93.75% | | | | | | |
| SURROGATE: Bromofluorobenzene | 111.60% | | | | | | |
| SURROGATE: Dibromofluoromethane | 116.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


July 23, 2003
Report # 307000984
Order # 61663
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-14
Collected: 07/16/03 00:00
Received: 07/19/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 1.67 | ug/L | 5030/8260B | 1.000 | 07/21/2003 | 07/21/2003 | 14.43PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 07/21/2003 | 07/21/2003 | 14 43PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 07/21/2003 | 07/21/2003 | 14·43PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1 000 | 07/21/2003 | 07/21/2003 | 14.43PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 07/21/2003 | 07/21/2003 | 14 43PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 07/21/2003 | 07/21/2003 | 14 43PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 07/21/2003 | 07/21/2003 | 14 43PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 07/21/2003 | 07/21/2003 | 14·43PMD |
| SURROGATE: Toluene-D8 | 100.50% | | | | | | |
| SURROGATE: Bromofluorobenzene | 96.80% | | | | | | |
| SURROGATE: Dibromofluoromethane | 89.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


July 23, 2003
Report # 307000984
Order # 61664
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-15
Collected: 07/16/03 00:00
Received: 07/19/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 17.48PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 17:48PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 17:48PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 17:48PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 17:48PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 17:48PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 17.48PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 17:48PMD |
| SURROGATE Toluene-D8 | 99.75% | | | | | | |
| SURROGATE Bromofluorobenzene | 137.60% | | | | | | |
| SURROGATE Dibromofluoromethane | 113.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


July 23, 2003
Report # 307000984
Order # 61665
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-16
Collected: 07/16/03 00:00
Received: 07/19/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 10.9 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18:08PMD |
| Benzene | 2.95 | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18:08PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18:08PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 18.08PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 18:08PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18:08PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18:08PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18:08PMD |
| SURROGATE Toluene-D8 | 106.00% | | | | | | |
| SURROGATE Bromofluorobenzene | 152.00% | | | | | | |
| SURROGATE Dibromofluoromethane | 113.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


July 23, 2003
Report # 307000984
Order # 61666
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: MW-17
Collected: 07/16/03 00:00
Received: 07/19/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18.27PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18:27PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18:27PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18:27PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18:27PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18.27PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18 27PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18:27PMD |
| SURROGATE: Toluene-D8 | 102.25% | | | | | | |
| SURROGATE. Bromofluorobenzene | 151.60% | | | | | | |
| SURROGATE: Dibromofluoromethane | 117.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


July 23, 2003
Report # 307000984
Order # 61667
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335

Sample I.D.: CLS-WW
Collected: 07/16/03 00:00
Received: 07/19/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 18:47PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18:47PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18:47PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1 000 | 07/20/2003 | 07/20/2003 | 18:47PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18:47PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18:47PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18:47PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 07/20/2003 | 07/20/2003 | 18:47PMD |
| SURROGATE. Toluene-D8 | 106.00% | | | | | | |
| SURROGATE: Bromofluorobenzene | 149.20% | | | | | | |
| SURROGATE: Dibromofluoromethane | 105.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

# Access Analytical - Chain of Custody Record

Laboratory ID: _____

Project Submission #: 16 03/07-984 61650 - 61667 RUSH # _____ PO #: _____

Company Name: H2O Environmental

Address: 121 Centrum Dr #2

City: Irmo State: SC Zip: 29063

Project Name: DHE-12335

Report To: R. Gilespie

Sampled By (print): D Burch

Preservative: (*See codes below) 1

REQUESTED LAB ANALYSIS: ↓

BTEX/MAPH/MTBE

ACCESS ANALYTICAL, INC.

Phone (803) 781-4273
1318 Lake Murray Blvd Fax 781-4303
Irmo SC 29063 Toll Free (888) 315-4243
www.accessanalytical.inc.com

| Sample Label | Date Collected | Time Collected | Matrix | # of Cont | | BTEX/MAPH/MTBE | | NOTES / COMMENTS |
|---|---|---|---|---|---|---|---|---|
| MW-1 | 7-16-03 | | GW | 2 | | X | 61650 | |
| MW-2 | ↓ | | | 2 | | X | 61651 | |
| MW-3 | | | | 2 | | X | 61652 | |
| MW-4 | NS | | | | — | | 61653 | No sample received J.V 7/19/03 |
| MW-5 | 7-16-03 | | | 2 | | X | 61654 | |
| MW-6 | | | | 2 | | X | 61655 | |
| MW-7 | | | | 2 | | X | 61656 | |
| MW-8 | | | | 2 | | X | 61657 | |
| MW-9 | | | | 2 | | X | 61658 | |
| MW-10 | ↓ | | V | 2 | | X | 61659 | |

Turnaround Time:

✓ Std. (5-7 Bus. days)

RUSH*

Date Required: _____

(For rush work, results faxed by end of business day on date required)

Sample Received on Ice: ✓ Yes No

Project Location: ✓ SC No Other _____ (specify)

| Relinquished By: | Date | Time: | Received By: |
|---|---|---|---|
| D Burch | 7/18/03 | 1345 | Cheryl Barr |
| Cheryl Barr | 7/19/03 | 1710 | Fed |
| Fed | 7/19/03 | 10:00 | DSE Borges/SFL |

* Preservative Codes (place corresponding # in block above analysis field): 0=None, 1=HCL, 2=HNO3, 3=H2SO4, 4=NaOH, 5=Na2S2O3, 6=NaHSO4, Other=Specify



Access Analytical, Inc.
See Reverse for Terms and Conditions

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Pink Copy - Client Copy

# Access Analytical - Chain of Custody Record

Project Submission #: 317-984 RUSH # PO #: Laboratory ID:

Company Name: H2O Environmental
Address: 121 Centrum Dr
City: Irmo State: SC Zip: 29063
Project Name: DHE - 12335
Report To: R. Gillespie
Sampled By (print):

Preservative (*see codes below): 1

| Sample Label | Date Collected | Time Collected | Matrix | # of Cont | * REQUESTED LAB ANALYSIS: BTE / NAPH / MTBE | |
|---|---|---|---|---|---|---|
| MW-11 | 7-16-03 | | GW | 2 | X | G1660 |
| MW-12 | " | | | 2 | X | G1661 |
| MW-13 | | | | 2 | X | G1662 |
| MW-14 | | | | 2 | X | G1663 |
| MW-15 | | | | 2 | X | G1664 |
| MW-16 | | | | 2 | X | G1665 |
| MW-17 | | | | 2 | X | G1666 |
| CLS - WW | | | | 2 | X | G1667 |
| CP - WW | NS | | | | | |

NOTES / COMMENTS

Turnaround Time:
✓ Std. (5-7 Bus. days)
RUSH*
*Date Required:
(For rush work, results faxed by end of business day on date required)

Samples Iced on Ice? ✓ Yes No

Project Location: ✓ SC NC Other (specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| D Burnett | 7/16/03 | 1345 | Cheryl Bass |
| Cheryl Bass | 7/16/03 | 1700 | FedEx |
| FedEx | | | |

* Preservative Codes (place corresponding # in block above analysis field) 0=None, 1=HCL, 2=HNO3, 3=H2SO4, 4=NaOH, 5=Na2S2O3, 6=NaHSO4, Other=Specify

ACCESS ANALYTICAL, INC.
Phone: (803) 781-1773
1548 Lake Murray Blvd Fax: 781-1303
Irmo, SC 29063 Toll Free: (888) 315-4243
www.accessanalyticalinc.com



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September 30, 2003

Mr. Joel Padgett
Underground Storage Tank Program
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RECEIVED
OCT 0 2 2003
UNDERGROUND STORAGE
TANK PROGRAM

RE: 13th Quarterly Report
Crawford's Country Store
5870 Hwy 28 North
Antreville, South Carolina
SCDHEC Site ID # 12335

Dear Mr. Padgett:

On February 4, 2000, the South Carolina Department of Health and Environmental Control (SCDHEC) provided notice to proceed to $H_2O$ Environmental, Inc. ($H_2O$) to perform Corrective Action at Crawford's Country Store located at 5870 Highway 28 North, Antreville, South Carolina. See Figure 1, Attachment 1 for a layout of the site and remediation system. The objective of the project is to reduce the Chemicals of Concern (COC) in monitoring wells OMW-1, MW-2 through MW-5, MW-7 through MW-15, DMW-17, CP-WW and CLS-WW to the site specific target levels (SSTLs). A chronological summary of site activities is provided below:

| | |
|---|---|
| 2/4/00 | SCDHEC awarded Bid Number SB-9570-12/02/99-TC |
| 3/02/00 | Corrective Action Plan/Engineering Report submitted to SCDHEC |
| 4/18/00 | CAP/ER approved |
| 4/26/00 | Initial groundwater sampling event |
| 5/17/00 | Initial groundwater results submitted |
| 5/22/00-5/31/00 | System installed |
| 5/31/00 | System was inspected and approved Todd Adams of SCDHEC |
| 5/31/00 | Invoice submitted for payment of 40% of the contract amount |
| 6/14/00 | System start-up |
| 8/01/00 | 1st quarter sampling event |
| 8/28/99 | 1st quarter report submitted |
| 9/13/00 | Free product recovery from OMW-1, MW-2 and MW-3 |
| 12/13/00 | 2nd quarter sampling event |
| 2/16/01 | 2nd quarter report submitted |
| 2/6/01 | 3rd quarter sampling event |
| 3/15/01 | 3rd quarter report submitted |

UST
59 tcl
DOCKETING

**$H_2O$ ENVIRONMENTAL, INC.**
SCIENTISTS & ENGINEERS

130 Centrum Drive, Suite 3B • Irmo, South Carolina 29063 • 803•749•4080 • Fax 803•749•9911

| | |
|---|---|
| 6/5/01 | 4th quarter sampling event |
| 7/31/01 | 4th quarter report submitted |
| 9/13/01 | 5th quarter sampling event |
| 10/18/01 | 5th quarter report submitted |
| 12/7/01 | 6th quarter sampling event |
| 2/4/02 | 6th quarter report submitted |
| 3/5/02 | 7th quarter sampling event |
| 4/26/02 | 7th quarter report submitted |
| 6/6/02 | 8th quarter sampling event |
| 7/10/02 | 8th quarter report submitted |
| 9/17/02 | 9th quarter sampling event |
| 10/28/02 | 9th quarter report submitted |
| 12/12/02 | 10th quarter sampling event |
| 2/6/03 | 10th quarter report submitted |
| 3/31/03 | 11th quarter sampling event |
| 5/14/03 | 11th quarter report submitted |
| 7/16/03 | 12th quarter sampling event |
| 7/31/03 | 12th quarter report submitted |
| 8/20/03 | 13th quarter sampling event |

An air injection/vapor extraction system was installed in May 2000 and put in operation in June 2000. The system consists of ten air injection/vapor extraction wells SV-1 through SV-10. In order to target the source area, $H_2O$ is rotating air sparging in injection/vapor extraction wells SV-1 through SV-10 and extracting vapor from injection/vapor extraction wells SV-1 through SV-8. Refer to Figure 1, Attachment 1 for a map illustrating the system layout. The following table summarizes the general operating characteristics of the system.

**Summary of System Operating Characteristics**

| Well ID | Activity | PSI | CFM | IWG |
|---|---|---|---|---|
| SV-1 - SV-8 | Vapor Extraction | -- | -- | 55 |
| SV-1 - SV-10 | Air Sparging | 10 | 6 | -- |

An air sample was collected from the effluent of the vapor extraction system on August 1, 2000. Based on the review of the laboratory analysis, it is estimated that contaminant emissions will not exceed 1,000 pounds per month. An air sample was not collected this quarter because the OVA field screening results were below detection limits.

On August 20, 2003, $H_2O$ Environmental Inc. personnel gauged and collected groundwater samples from monitoring wells MW-1R, MW-2 through MW-12, MW-13R, MW-14 through MW-17, and water well CLS-WW at the site. Water well CP-WW located at the Green residence was not operational at the time of the sampling event and a groundwater sample could not be collected. A new water well has been installed and is currently being used by the Green residence. The groundwater samples were analyzed for Benzene, Toluene, Ethylbenzene, total Xylenes (BTEX), Methyl-Tert-Butyl Ether (MTBE), and Naphthalene. Following groundwater sampling, a bacteria nutrient mixture was injected into the subsurface. The bioremediation technology was approved for use on August 12, 2002.

A review of the groundwater elevation data indicated a groundwater flow direction to the south-southeast. Table 1, Attachment 2, summarizes field data collected during monitoring well purging. The groundwater elevations are summarized on Table 2, Attachment 2, and illustrated on Figure 2, Attachment 1. The groundwater quality for Chemicals of Concern is summarized on Table 3, Attachment 2, and illustrated on Figure 3, Attachment 1. A copy of the laboratory analytical report is provided in Attachment 3. Groundwater generated during well purging was either placed in on-site 55-gallon drums or discharged on site as warranted by the data. Any disposal manifests will be forwarded to DHEC upon receipt.

Based on the groundwater quality, $H_2O$ will continue to operate the remediation system. If you have any questions or comments please do not hesitate to contact me at (803) 749-4080.

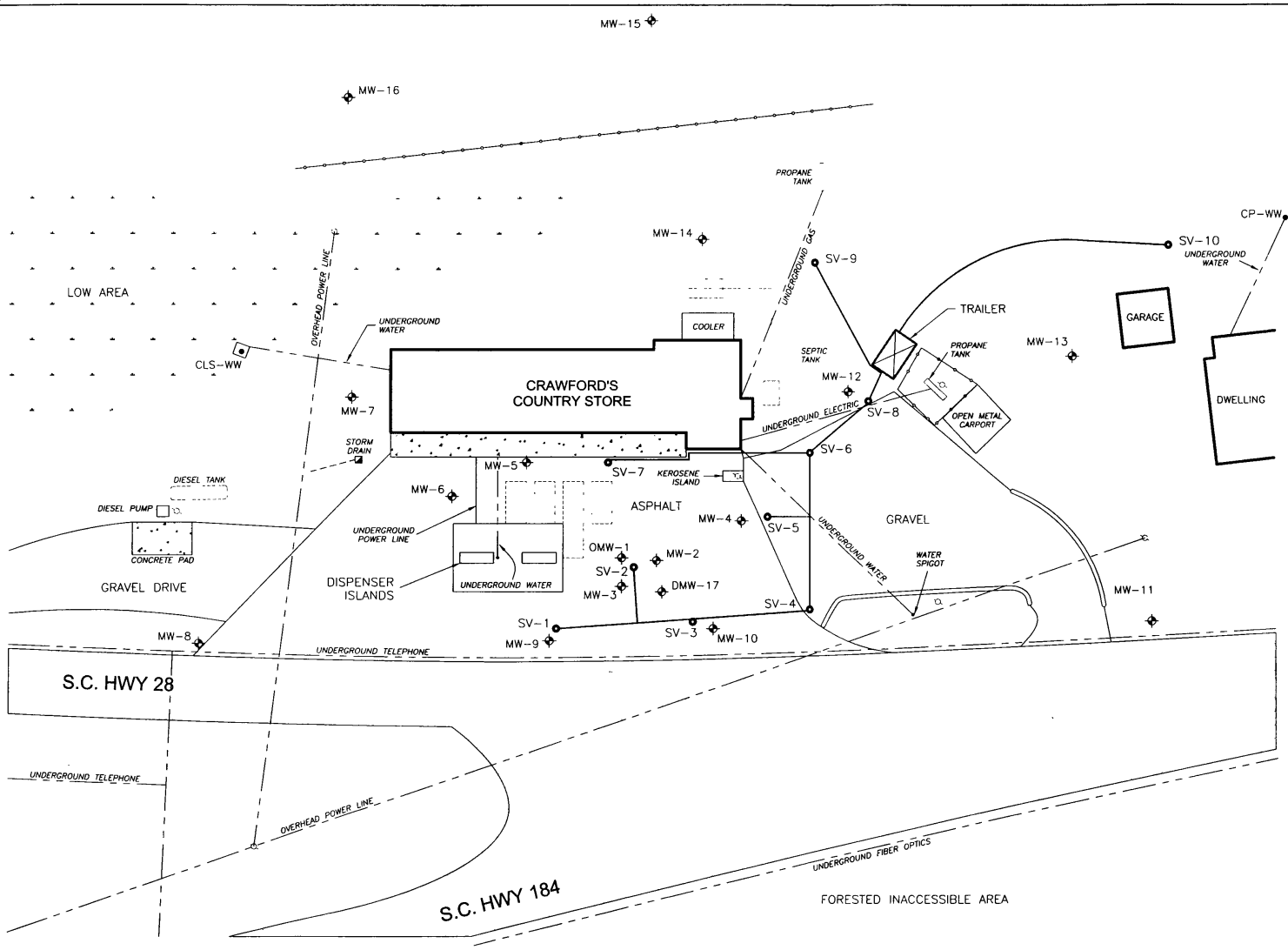
Sincerely,

**$H_2O$ Environmental, Inc.**
Class I Site Rehabilitation Contractor No. 32

Richard Gillespie

Richard D. Gillespie, P.G.
Senior Geologist 9-30-03
License Number 2199

# ATTACHMENT 1
# FIGURES




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

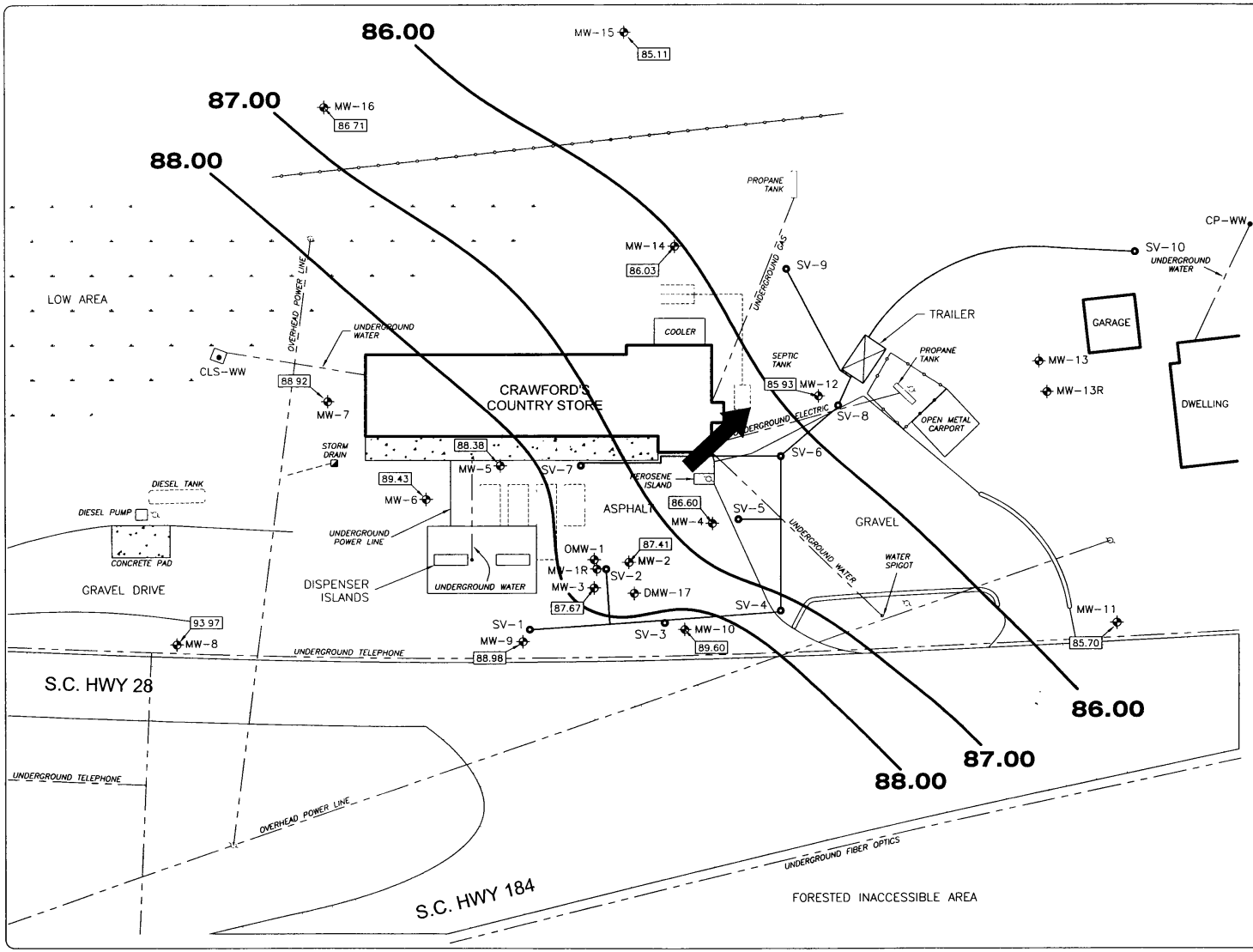
PROJECT NO: DHE-12335

DRAWING DATE: 08/24/2000

DRAWN BY: J.Driscoll

FIGURE NO: 1

FIGURE TITLE: REMEDIAL SYSTEM AS-BUILT




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |
| 0 00 | WATER TABLE ELEVATION (FEET) |
| | GROUNDWATER FLOW DIRECTION |
| 0.00 | GROUNDWATER ELEVATION CONTOUR |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

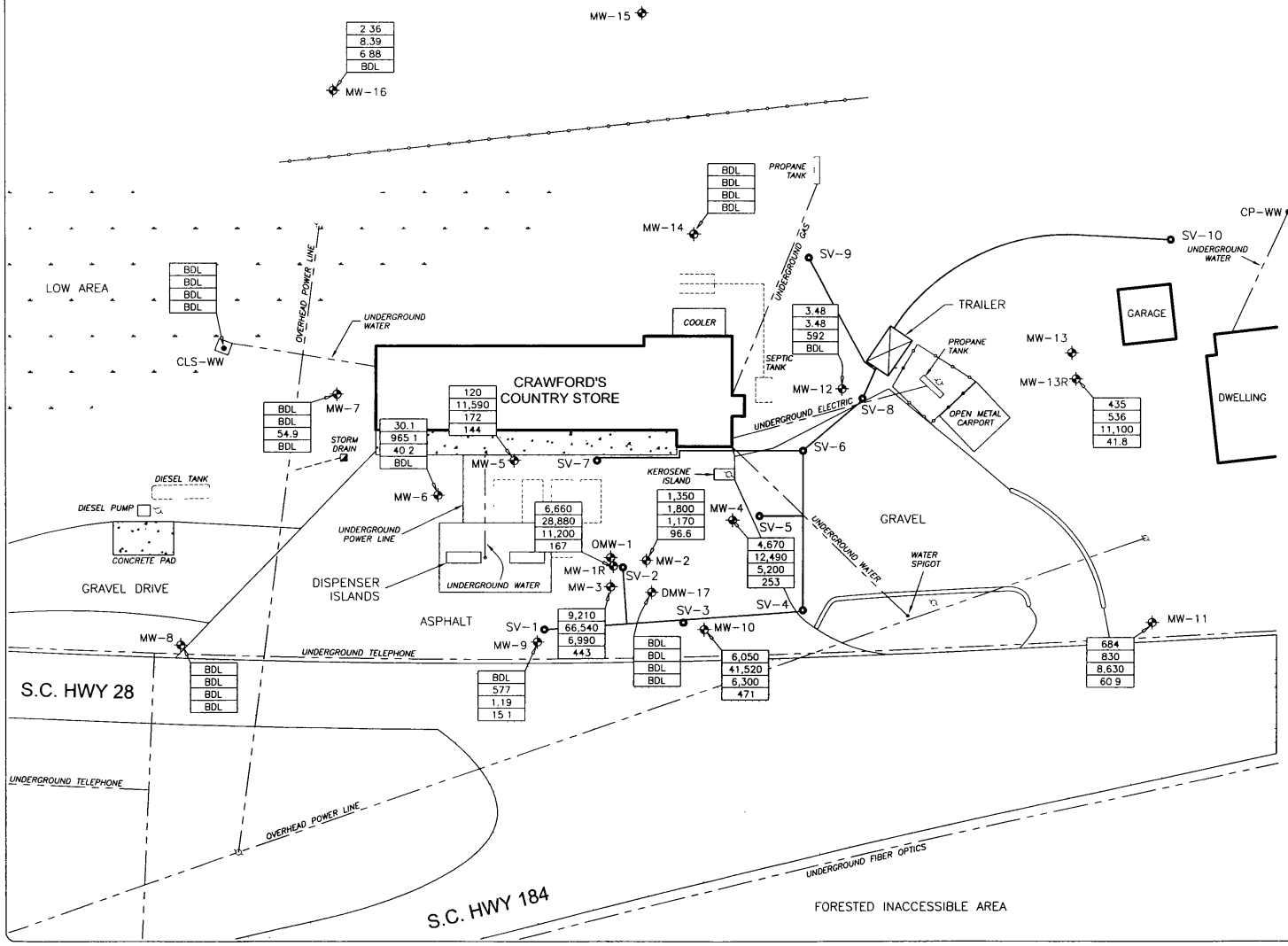
PROJECT NO.: DHE-12335

DRAWING DATE: 9/24/2003

DRAWN BY: JJD

FIGURE NO.: 2

FIGURE TITLE: GROUNDWATER FLOW MAP - 8/20/2003




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

| | |
|---|---|
| BDL | BENZENE |
| BDL | TOTAL BTEX |
| BDL | MTBE |
| BDL | NAPHTHALENE |

All results reported in parts per billion (ug/L)
BDL = Below detectable levels

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 9/24/2003

DRAWN BY: JJD

FIGURE NO: 3

FIGURE TITLE: GROUNDWATER QUALITY MAP - 8/20/2003

# ATTACHMENT 2
# TABLES

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 8/5/1999 | 17.95 | 22' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.68 | 22' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 21.50 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 21.46 | 22' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 19.89 | 22' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.18 | 22' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 18.74 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21.75 | 22' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 19.77 | 22' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 16.59 | 22' | 2" | 2.6 | NM | NM | NM | NM |
| | 9/17/2002 | 19.97 | 22' | 2" | 1.0 | NM | NM | 0.93 | 25.1 |
| MW-1R | 12/12/2002 | 17.44 | 22' | 2" | 2.2 | NM | 0.82 | 3.87 | 18.7 |
| | 3/31/2003 | 14.02 | 22' | 2" | 3.9 | 6.5 | NM | 2.68 | 20.0 |
| | 7/16/2003 | 9.21 | 22' | 2" | 6.3 | 6 4 | 385 | 257 | 19.3 |
| | 8/20/2003 | 8.65 | 22' | 2" | 6 5 | 6 1 | 363 | 8.25 | 26.6 |
| MW-2 | 8/5/1999 | 19.19 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 22.30 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 21.36 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 18.89 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.42 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 19.03 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21.98 | 25' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 19.90 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 16.88 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 20.44 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/12/2002 | 17.84 | 25' | 2" | 3.5 | NM | 0.92 | 1.53 | 19.2 |
| | 3/31/2003 | 13.50 | 25' | 2" | 5.6 | 6.3 | NM | 2.30 | 19.2 |
| | 7/16/2003 | 12.39 | 25' | 2" | 6.2 | 4.7 | 243 | NM | 18.3 |
| | 8/20/2003 | 12.42 | 25' | 2" | 6.2 | 6.0 | 230 | 1.15 | 23.4 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-3 | 8/5/1999 | 17.96 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15 73 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 20.85 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 22.18 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 19 26 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17 41 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 18 80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21.24 | 25' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 18.69 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 15 44 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 9/17/2002 | 20 11 | 25' | 2" | 2 4 | NM | NM | 1.21 | 24.3 |
| | 12/12/2002 | 17.45 | 25' | 2" | 3 7 | NM | 0.53 | 2.91 | 19.6 |
| | 3/31/2003 | 13.32 | 25' | 2" | 5 7 | 6.1 | NM | 2.09 | 19.4 |
| | 7/16/2003 | 12 15 | 25' | 2" | 6 3 | 6.1 | 267 | NM | 20.9 |
| | 8/20/2003 | 12.31 | 25' | 2" | 6.2 | 6.1 | 196 | 4 25 | 24.5 |
| MW-4 | 8/5/2000 | 17.59 | 25' | 2" | 3.7 | 4.3 | 75.7 | 2.06 | 21.0 |
| | 4/26/2000 | 16.51 | 25' | 2" | 4.2 | 6.0 | 0.78 | 1.82 | 20.2 |
| | 8/1/2000 | 20.63 | 25' | 2" | 2.1 | 5.4 | 0.52 | 3.91 | 21.9 |
| | 12/13/2000 | 20.81 | 25' | 2" | 2.0 | 5.5 | NM | 1.90 | 18.5 |
| | 2/6/2001 | 19 09 | 25' | 2" | 2.9 | NM | NM | NM | NM |
| | 6/5/2001 | 17.70 | 25' | 2" | 3 6 | 5.3 | NM | 1.80 | 21.8 |
| | 9/13/2001 | 19.16 | 25' | 2" | 2.9 | NM | NM | 2.29 | 22.2 |
| | 12/7/2001 | 21.86 | 25' | 2" | 1.5 | 7.1 | NM | 2.42 | 21.5 |
| | 3/5/2002 | 18.91 | 25' | 2" | 3.0 | 6.9 | NM | 5.40 | 15.3 |
| | 6/6/2002 | 16.93 | 25' | 2" | 3.9 | NM | NM | NM | NM |
| | 9/17/2002 | 20.63 | 25' | 2" | 2.1 | NM | NM | 3.20 | 24.1 |
| | 12/12/2002 | 16.14 | 25' | 2" | 4.3 | NM | 0.79 | 2.32 | 19.4 |
| | 3/31/2003 | 18.91 | 25' | 2" | 3.0 | 6.0 | NM | 2.65 | 17.9 |
| | 7/16/2003 | NM | NM | NM | NM | NM | NM | NM | NM |
| | 8/20/2003 | 12.99 | 25' | 2" | 5.9 | 8.9 | 220 | 2.71 | 21.9 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-5 | 8/5/1999 | 15.95 | 25' | 2" | 4.4 | 4.5 | 111.8 | 1.65 | 21.0 |
| | 4/26/2000 | 14 35 | 25' | 2" | 5.2 | 6.2 | 0.92 | 2.73 | 19.4 |
| | 8/1/2000 | 19 18 | 25' | 2" | 2.8 | 5.1 | 0.5 | 1.25 | 20.8 |
| | 12/13/2000 | 19.68 | 25' | 2" | 2.6 | 5.3 | NM | 2.51 | 18 4 |
| | 2/6/2001 | 16.50 | 25' | 2" | 4.2 | NM | NM | NM | NM |
| | 6/5/2001 | 15.51 | 25' | 2" | 4.6 | 4.5 | NM | 1.88 | 21.5 |
| | 9/13/2001 | 17.48 | 25' | 2" | 3.7 | NM | NM | 1.94 | 22.2 |
| | 12/7/2001 | 20.09 | 25' | 2" | 2.4 | 6.9 | NM | 2.16 | 21.8 |
| | 3/5/2002 | 16 15 | 25' | 2" | 4.3 | 6.8 | NM | 3.90 | 18.4 |
| | 6/6/2002 | 15 11 | 25' | 2" | 4.8 | NM | NM | NM | NM |
| | 9/17/2002 | 18 31 | 25' | 2" | 3.3 | NM | NM | 1.72 | 22 9 |
| | 12/12/2002 | 15.09 | 25' | 2" | 4.8 | NM | 0.61 | 1.50 | 20.2 |
| | 3/31/2003 | 11 51 | 25' | 2" | 6.6 | 6.2 | NM | 2.79 | 15.7 |
| | 7/16/2003 | 11 03 | 25' | 2" | 6.8 | 6.2 | 240 | NM | 22 1 |
| | 8/20/2003 | 11 04 | 25' | 2" | 6.8 | 5.8 | 22.0 | 2.11 | 22 0 |
| MW-6 | 8/5/1999 | 15.44 | 25' | 2" | 4.7 | 4.6 | 96 | 2.35 | 22.0 |
| | 4/26/2000 | 13.65 | 25' | 2" | 5.6 | 6.1 | 0.92 | 1.72 | 18.6 |
| | 8/1/2000 | 18.75 | 25' | 2" | 3.1 | 4.95 | 0.48 | 2.23 | 20.4 |
| | 12/13/2000 | 18.23 | 25' | 2" | 3.3 | 5.14 | NM | 1.42 | 18.4 |
| | 2/6/2001 | 15.34 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 6/5/2001 | 14.84 | 25' | 2" | 5.0 | 5.57 | NM | 1.44 | 21.8 |
| | 9/13/2001 | 16.96 | 25' | 2" | 3.9 | NM | NM | 1.80 | 20.9 |
| | 12/7/2001 | 19.70 | 25' | 2" | 2.6 | 6.9 | NM | 2.05 | 20 4 |
| | 3/5/2002 | 15.20 | 25' | 2" | 4.8 | 6.7 | NM | 3.64 | 16.1 |
| | 6/6/2002 | 15.51 | 25' | 2" | 4.6 | NM | NM | NM | NM |
| | 9/17/2002 | 17.76 | 25' | 2" | 3.5 | NM | NM | 1.78 | 22.6 |
| | 12/12/2002 | 14.29 | 25' | 2" | 5.2 | NM | 1.32 | 0.51 | 19.1 |
| | 3/31/2003 | 10.77 | 25' | 2" | 7.0 | 6.2 | NM | 5.93 | 15.2 |
| | 7/16/2003 | 10.53 | 25' | 2" | 7.1 | 5.4 | 10.0 | NM | 21.3 |
| | 8/20/2003 | 10.55 | 25' | 2" | 7.1 | 5.3 | 18.0 | 3.27 | 21.7 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-7 | 8/5/1999 | 15.41 | 25' | 2" | 4.7 | 4.6 | 92 8 | 2 74 | 19.0 |
| | 4/26/2000 | 13.54 | 25' | 2" | 5.6 | 6.2 | 0 91 | 2.46 | 17 4 |
| | 8/1/2000 | 18.72 | 25' | 2" | 3.1 | 5.2 | 0 45 | 2 31 | 18.7 |
| | 12/13/2000 | 18.01 | 25' | 2" | 3.4 | 5.6 | NM | 1 96 | 16 5 |
| | 2/6/2001 | 15.41 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 6/5/2001 | 14.61 | 25' | 2" | 5.1 | 5.4 | NM | 2.25 | 19.9 |
| | 9/13/2001 | 16.91 | 25' | 2" | 4.0 | NM | NM | 2.50 | 20.9 |
| | 12/7/2001 | 19.64 | 25' | 2" | 2.6 | 7.1 | NM | 2.18 | 19.5 |
| | 3/5/2002 | 14.75 | 25' | 2" | 5.0 | 6.8 | NM | 7.83 | 14.6 |
| | 6/6/2002 | 14.43 | 25' | 2" | 5.2 | NM | NM | NM | NM |
| | 9/17/2002 | 17.34 | 25' | 2" | 3.7 | NM | NM | 1.29 | 21.5 |
| | 12/12/2002 | 13.91 | 25' | 2" | 5.4 | 6.9 | 0.72 | 3.69 | 16.4 |
| | 3/31/2003 | 10.75 | 25' | 2" | 7.0 | 6.6 | NM | 3.45 | 11.7 |
| | 7/16/2003 | 10.92 | 25' | 2" | 6.9 | 3.3 | 683 | NM | 20.5 |
| | 8/20/2003 | 10.55 | 25' | 2" | 7.1 | 6 6 | 590 | 4 23 | 22.9 |
| MW-8 | 8/5/2000 | 14.59 | 25' | 2" | 5.1 | 4.9 | 45.4 | 3.01 | 21.0 |
| | 4/26/2000 | 11.56 | 25' | 2" | 6.6 | 6.3 | 0 72 | 2.06 | 18.4 |
| | 8/1/2000 | 19.18 | 25' | 2" | 2.8 | 5.3 | 0.53 | 0.81 | 23.0 |
| | 12/13/2000 | 17.96 | 25' | 2" | 3.4 | 5.4 | NM | 1.93 | 18.7 |
| | 2/6/2001 | 13.34 | 25' | 2" | 5.7 | NM | NM | NM | NM |
| | 6/5/2001 | 13.15 | 25' | 2" | 5.8 | 5.4 | NM | 2.02 | 21.5 |
| | 9/13/2001 | 16.64 | 25' | 2" | 4.1 | NM | NM | 1.56 | 20.3 |
| | 12/7/2001 | 19.73 | 25' | 2" | 2.6 | 6.9 | NM | 1.40 | 20.4 |
| | 3/5/2002 | 11.41 | 25' | 2" | 6.6 | 6.7 | NM | 5.60 | 15.8 |
| | 6/6/2002 | 12.93 | 25' | 2" | 5.9 | NM | NM | NM | NM |
| | 9/17/2002 | 16.72 | 25' | 2" | 4.0 | NM | NM | 1.16 | 23.6 |
| | 12/12/2002 | 11.42 | 25' | 2" | 6.6 | 9.1 | 0.67 | 2.60 | 16.6 |
| | 3/31/2003 | 8.24 | 25' | 2" | 8.2 | 5.3 | NM | 2.81 | 15.3 |
| | 7/16/2003 | 9.18 | 25' | 2" | 7.7 | 5.3 | 216 | NM | 23.0 |
| | 8/20/2003 | 8.45 | 25' | 2" | 8.1 | 4.7 | 196 | 1.71 | 23.4 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-9 | 8/5/2000 | 16.74 | 25' | 2" | 4.0 | 4 9 | 57.2 | 1.47 | 22.0 |
| | 4/26/2000 | 15.09 | 25' | 2" | 4.8 | 5 9 | 0.72 | 1.45 | 20.4 |
| | 8/1/2000 | 21.2 | 25' | 2" | 1.9 | 5.7 | 0.59 | 2.62 | 23.9 |
| | 12/13/2000 | 19.73 | 25' | 2" | 2.6 | 5.4 | NM | 1.12 | 18.6 |
| | 2/6/2001 | 17.54 | 25' | 2" | 3.6 | NM | NM | NM | NM |
| | 6/5/2001 | 16.35 | 25' | 2" | 4.2 | NM | NM | NM | NM |
| | 9/13/2001 | 18.40 | 25' | 2" | 3.2 | 4.4 | NM | 2.91 | 23.5 |
| | 12/7/2001 | 21.00 | 25' | 2" | 2 0 | 6 9 | NM | 3.43 | 22 6 |
| | 3/5/2002 | 17.38 | 25' | 2" | 3.7 | 6.8 | NM | 1.83 | 19.4 |
| | 6/6/2002 | 16.80 | 25' | 2" | 4 0 | NM | NM | NM | NM |
| | 9/17/2002 | 19.64 | 25' | 2" | 2.6 | NM | NM | 0.97 | 23.7 |
| | 12/12/2002 | 16.29 | 25' | 2" | 4.3 | NM | 0.26 | 1.30 | 19.9 |
| | 3/31/2003 | 11.90 | 25' | 2" | 6.4 | 5.4 | NM | 2.88 | 16.6 |
| | 7/16/2003 | 11.61 | 25' | 2" | 6.5 | 5.4 | 57 | NM | 22.2 |
| | 8/20/2003 | 11.55 | 25' | 2" | 6.6 | 3.5 | 63.0 | 2.23 | 23.9 |
| MW-10 | 8/5/1999 | 18.06 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.75 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 20.50 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 19.40 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 18.84 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.38 | 25' | 2" | 3.7 | 5 6 | NM | 1.4 | 22 9 |
| | 9/13/2001 | 18.82 | 25' | 2" | 3.0 | 5.2 | NM | 3.20 | 23.2 |
| | 12/7/2001 | 23.90 | 25' | 2" | 0.5 | NM | NM | NM | NM |
| | 3/5/2002 | 19.09 | 25' | 2" | 2.9 | 6.9 | NM | 9.55 | 19.3 |
| | 6/6/2002 | 16.78 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 20.53 | 25' | 2" | 2.2 | NM | NM | 2.90 | 23.3 |
| | 12/12/2002 | 18.00 | 25' | 2" | 3.4 | NM | 0.87 | 4.25 | 18.1 |
| | 3/31/2003 | 13.49 | 25' | 2" | 5.6 | 6.3 | NM | 2.70 | 19.0 |
| | 7/16/2003 | 12.65 | 25' | 2" | 6.0 | 6.3 | 135 | NM | 23.1 |
| | 8/20/2003 | 10.05 | 25' | 2" | 7.3 | 5.2 | 142 | 1.71 | 24.1 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-11 | 8/5/1999 | 15.60 | 25' | 2" | 4.6 | 4.8 | 42.7 | 6 38 | 22.0 |
| | 4/26/2000 | 13.65 | 25' | 2" | 5.6 | 6.2 | 0 6 | 4.48 | 20.8 |
| | 8/1/2000 | 18.61 | 25' | 2" | 3.1 | 5 6 | 0.31 | 4.79 | 21.4 |
| | 12/13/2000 | 19.01 | 25' | 2" | 2 9 | 5.7 | NM | 5.15 | 19.8 |
| | 2/6/2001 | 17.43 | 25' | 2" | 3.7 | NM | NM | NM | NM |
| | 6/5/2001 | 15.96 | 25' | 2" | 4.4 | 5.8 | NM | 6.01 | 21.4 |
| | 9/13/2001 | 17.23 | 25' | 2" | 3.8 | 4.6 | NM | 5.82 | 22 4 |
| | 12/7/2001 | 19.74 | 25' | 2" | 2.6 | 6.8 | NM | 4.76 | 21.7 |
| | 3/5/2002 | 17.12 | 25' | 2" | 3 9 | 6 9 | NM | 7.56 | 15.2 |
| | 6/6/2002 | 15.03 | 25' | 2" | 4 9 | NM | NM | NM | NM |
| | 9/17/2002 | 18.88 | 25' | 2" | 3.0 | NM | NM | 1.68 | 23.2 |
| | 12/12/2002 | 16.13 | 25' | 2" | 4 3 | NM | 0.23 | 2.73 | 18.1 |
| | 3/31/2003 | 11 72 | 25' | 2" | 6.5 | 6.1 | NM | 2.18 | 16.6 |
| | 7/16/2003 | 10.25 | 25' | 2" | 7 2 | 6.0 | 70.0 | NM | 22.5 |
| | 8/20/2003 | 10.77 | 25' | 2" | 7.0 | 5.3 | 82 0 | 1.71 | 21.8 |
| MW-12 | 8/5/1999 | 17.33 | 25' | 2" | 3.8 | 4.6 | 129.2 | 2.09 | 19.0 |
| | 4/26/2000 | 16.06 | 25' | 2" | 4.4 | 6.3 | 1.03 | 2.9 | 18.5 |
| | 8/1/2000 | 20.15 | 25' | 2" | 2.4 | 4.5 | 0.67 | 5.01 | 19.6 |
| | 12/13/2000 | 23.7 | 25' | 2" | 0.6 | 5.4 | NM | 2.9 | 17.1 |
| | 2/6/2001 | 18.45 | 25' | 2" | 3.2 | NM | NM | NM | NM |
| | 6/5/2001 | 17.26 | 25' | 2" | 3.8 | 10.2 | NM | 2.07 | 19.3 |
| | 9/13/2001 | 18.63 | 25' | 2" | 3.1 | NM | NM | 2.71 | 20.5 |
| | 12/7/2001 | 21.37 | 25' | 2" | 1.8 | 7.2 | NM | 8.00 | 19.9 |
| | 3/5/2002 | 18.65 | 25' | 2" | 3.1 | 6.8 | NM | 8.53 | 15.7 |
| | 6/6/2002 | 16.90 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 19.97 | 25' | 2" | 2.5 | 8.0 | NM | 8.07 | 21.7 |
| | 12/12/2002 | 17.33 | 25' | 2" | 3.8 | NM | 0.59 | 7.73 | 15.3 |
| | 3/31/2003 | 13.46 | 25' | 2" | 5.6 | 5.4 | NM | 3.75 | 15.9 |
| | 7/16/2003 | 12.51 | 25' | 2" | 6.1 | 4.6 | 247 | NM | 21.4 |
| | 8/20/2003 | 12.70 | 25' | 2" | 6.0 | 4.9 | 213 | 6.50 | 20.5 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-13 | 8/5/1999 | 21 26 | 25' | 2" | 1.8 | 4.2 | 51.7 | 2.32 | 18.0 |
| | 4/26/2000 | 20.02 | 25' | 2" | 2.4 | 6.3 | 0.62 | 3 00 | 18.5 |
| | 8/1/2000 | 24.05 | 25' | 2" | 0.5 | 5.2 | 0.42 | 2.14 | 19.7 |
| | 12/13/2000 | 24.13 | 25' | 2" | 0.4 | 5.5 | NM | 1.04 | 15.9 |
| | 2/6/2001 | 22.43 | 25' | 2" | 1.3 | NM | NM | NM | NM |
| | 6/5/2001 | 21.34 | 25' | 2" | 1.8 | NM | 5.4 | 2 61 | 19.6 |
| | 9/13/2001 | 22.91 | 25' | 2" | 1.0 | NM | NM | NM | 20.3 |
| | 12/7/2001 | 25.22 | 25.22' | 2" | 0.0 | NM | NM | NM | NM |
| | 3/5/2002 | 22.21 | 25.22' | 2" | 1.5 | 6.9 | NM | 7.99 | 16.4 |
| | 6/6/2002 | 20.82 | 25 22' | 2" | 2.2 | NM | NM | NM | NM |
| | 9/17/2002 | 24 22 | 25 22' | 2" | 0.5 | NM | NM | 4.02 | 22.1 |
| | 12/12/2002 | 21 33 | 25 22' | 2" | 1.9 | NM | 0.31 | 2.85 | 15.9 |
| MW-13R | 3/31/2003 | 17 71 | 25.22' | 2" | 3.7 | 5.5 | NM | 2.19 | 16.6 |
| | 7/16/2003 | 16.89 | 25 22' | 2" | 4.1 | 5.6 | 69.0 | NM | 22.1 |
| | 8/20/2003 | 17 17 | 25 22' | 2" | 3.9 | 7.9 | 300 | 2.65 | 19.6 |
| MW-14 | 8/5/1999 | 7.96 | 25' | 2" | 8.3 | 5.0 | 312 | 0.80 | 19.0 |
| | 4/26/2000 | 6.46 | 25' | 2" | 9.1 | 6.1 | 1.56 | 1.72 | 15.5 |
| | 8/1/2000 | 10.8 | 25' | 2" | 6.9 | 5.4 | 0.93 | 1.43 | 18.8 |
| | 12/13/2000 | 10.8 | 25' | 2" | 6.9 | 5.5 | NM | 1.72 | 14.7 |
| | 2/6/2001 | 8.72 | 25' | 2" | 8.0 | NM | NM | NM | NM |
| | 6/5/2001 | 7.32 | 25' | 2" | 8.6 | 5.8 | NM | 2.08 | 17.4 |
| | 9/13/2001 | 9.31 | 25' | 2" | 7.7 | NM | NM | 1.77 | 21.0 |
| | 12/7/2001 | 11.91 | 25' | 2" | 6.4 | 6.9 | NM | 1.84 | 20.5 |
| | 3/5/2002 | 8.51 | 25' | 2" | 8.1 | 6.9 | NM | 5.90 | 12.2 |
| | 6/6/2002 | 7.41 | 25' | 2" | 8.6 | NM | NM | NM | NM |
| | 9/17/2002 | 9.98 | 25' | 2" | 7.3 | NM | NM | 4.58 | 21.4 |
| | 12/12/2002 | 8.22 | 25' | 2" | 8.2 | NM | 0.48 | 5.50 | 14.6 |
| | 3/31/2003 | 4.25 | 25' | 2" | 10.1 | 5.8 | NM | 1.63 | 13.6 |
| | 7/16/2003 | 3.95 | 25' | 2" | 10.3 | 6.5 | 289 | NM | 23.5 |
| | 8/20/2003 | 3.35 | 25' | 2" | 10.6 | 5.2 | 214 | 2.57 | 23.4 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-15 | 8/5/1999 | 6 28 | 25' | 2" | 9.2 | 4.8 | 86 5 | 0.87 | 18.0 |
| | 4/26/2000 | 4.75 | 25' | 2" | 9.9 | 6.5 | 0.6 | 3.32 | 16.2 |
| | 8/1/2000 | 9.11 | 25' | 2" | 7.8 | 5.5 | 0.41 | 3.17 | 19.5 |
| | 12/13/2000 | 8.57 | 25' | 2" | 8.0 | 5.6 | NM | 1.93 | 15.1 |
| | 2/6/2001 | 6.36 | 25' | 2" | 9.1 | NM | NM | NM | NM |
| | 6/5/2001 | 5.68 | 25' | 2" | 9.4 | 6 1 | NM | 2 41 | 19.2 |
| | 9/13/2001 | 7.61 | 25' | 2" | 8.5 | NM | NM | 2.90 | 21.2 |
| | 12/7/2001 | 9.91 | 25' | 2" | 7.4 | 6.9 | NM | 3.66 | 20.3 |
| | 3/5/2002 | 5.86 | 25' | 2" | 9 4 | 6 6 | NM | 6 50 | 12.6 |
| | 6/6/2002 | NM | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/12/2002 | 4.74 | 25' | 2" | 9 9 | NM | 0 17 | 7 08 | 13.8 |
| | 3/31/2003 | 2.69 | 25' | 2" | 10.9 | 5.9 | NM | 5.45 | 12.6 |
| | 7/16/2003 | 2.15 | 25' | 2" | 11.2 | 8.6 | 117 | NM | 23.4 |
| | 8/20/2003 | 2.22 | 25' | 2" | 11.1 | 5 6 | 116 | 2.42 | 21.9 |
| MW-16 | 8/5/1999 | 11.22 | 25' | 2" | 6.7 | 4.9 | 49 | 0.79 | 18.0 |
| | 4/26/2000 | 9.50 | 25' | 2" | 7.6 | 6.5 | 0.61 | 1.66 | 15.5 |
| | 8/1/2000 | 14.35 | 25' | 2" | 5.2 | 6.0 | 0.95 | 1.64 | 19.3 |
| | 12/13/2000 | 13.45 | 25' | 2" | 5.6 | 5.8 | NM | 2.27 | 15.6 |
| | 2/6/2001 | 10.89 | 25' | 2" | 6.9 | NM | NM | NM | NM |
| | 6/5/2001 | 10.34 | 25' | 2" | 7.2 | 6.5 | NM | 2 02 | 18.3 |
| | 9/13/2001 | 12.58 | 25' | 2" | 6.1 | NM | NM | 1.87 | 21.5 |
| | 12/7/2001 | 13.41 | 25' | 2" | 5.7 | 6.9 | NM | 4.75 | 19.1 |
| | 3/5/2002 | 8.67 | 25' | 2" | 8.0 | 6.7 | NM | 5.20 | 12.4 |
| | 6/6/2002 | NM | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/12/2002 | 9.58 | 25' | 2" | 7.5 | NM | 0.25 | 3.53 | 14.6 |
| | 3/31/2003 | 7.29 | 25' | 2" | 8.7 | 5.5 | NM | 1.85 | 12.8 |
| | 7/16/2003 | 6.95 | 25' | 2" | 8.8 | 5.9 | 67.0 | NM | 20.4 |
| | 8/20/2003 | 7.03 | 25' | 2" | 8.8 | 5.0 | 72.0 | 2.21 | 22.6 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-17 | 8/5/1999 | 16.16 | 75' | 2" | 28.8 | 5 6 | 90 8 | 2 76 | 20.5 |
| | 4/26/2000 | 16.8 | 75' | 2" | 28.5 | 6 4 | 0 86 | 6.1 | 20.8 |
| | 8/1/2000 | 19.27 | 75' | 2" | 27.3 | 6.2 | 0.59 | 3.12 | 22.5 |
| | 12/13/2000 | 19.20 | 75' | 2" | 27.3 | NM | NM | NM | NM |
| | 2/6/2001 | 16.82 | 75' | 2" | 28.5 | NM | NM | NM | NM |
| | 6/5/2001 | 15.52 | 75' | 2" | 29.1 | 7.1 | NM | 2.67 | 21.8 |
| | 9/13/2001 | 17.42 | 75' | 2" | 28.2 | NM | NM | 3.60 | 22.5 |
| | 12/7/2001 | 19.54 | 75' | 2" | 27.1 | 7.1 | NM | 2.73 | 22.5 |
| | 3/5/2002 | NM | 75' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | NM | 75' | 2" | NM | NM | NM | NM | NM |
| | 9/17/2002 | 18.32 | 75' | 2" | 27.7 | NM | NM | 4 12 | 23.1 |
| | 12/12/2002 | 16.66 | 75' | 2" | 28 5 | NM | 0 43 | 3 2 | 19.3 |
| | 3/31/2003 | 13.32 | 75' | 2" | 30.2 | 6.8 | NM | 5.23 | 21 1 |
| | 7/16/2003 | 11.39 | 75' | 2" | 31.1 | 6.7 | 107 | NM | 23.5 |
| | 8/20/2003 | 11.05 | 75' | 2" | 31 3 | 6 2 | 110 | 4.46 | 23.8 |

NOTES:
NS - Not sampled
Temperature in Degrees Celcius
Dissolved Oxygen in mg/L
Depth to Water and Depth to bottom in units of feet
Well volumes (Gallons)
Specific Conductivity (umhos/cm)

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| OMW-1 | 01-Dec-97 | 99 82 | 17.13 | - | 82 69 |
| | 05-Aug-99 | | 17 95 | 1 05 | 81.87 |
| | 26-Apr-00 | | 15.68 | 0 99 | 84.14 |
| | 01-Aug-00 | | 21 50 | 1.40 | 78.32 |
| | 13-Dec-00 | | 21 46 | 1 70 | 78 36 |
| | 06-Feb-01 | | 19.89 | 1 78 | 79.93 |
| | 05-Jun-01 | | 17 18 | 0 19 | 82.64 |
| | 16-Aug-01 | | 18.10 | 0 13 | 81.72 |
| | 13-Sep-01 | | 18 74 | 0.02 | 81.08 |
| | 26-Sep-01 | | 19 31 | 0.07 | 80 51 |
| | 27-Sep-01 | | 19 32 | 0 01 | 80 50 |
| | 19-Oct-01 | | 19 93 | 0.02 | 79.89 |
| | 09-Nov-01 | | 21.00 | 0.39 | 78.82 |
| | 21-Nov-01 | | 21 63 | 1 28 | 78.19 |
| | 05-Dec-01 | | 21 65 | 0 96 | 78.17 |
| | 07-Dec-01 | | 21 75 | 0 76 | 78.07 |
| | 10-Dec-01 | | 21 65 | 0 01 | 78.17 |
| | 11-Dec-01 | | 21 65 | sheen | 78 17 |
| | | | 21.61 | 0.40 | 78.21 |
| | 07-Jan-02 | | 21 76 | 0.40 | 78.06 |
| | 04-Feb-02 | | 21 45 | 1 31 | 78.37 |
| | 05-Mar-02 | | 19 77 | 0.17 | 80.05 |
| | 19-Apr-02 | | 16.65 | 0.01 | 83 17 |
| | 17-May-02 | | 15 76 | 0 01 | 84.06 |
| | 24-May-02 | | 15 86 | sheen | 83 96 |
| | 28-May-02 | | 16 09 | sheen | 83 73 |
| | 30-May-02 | | 19 11 | sheen | 80.71 |
| | 06-Jun-02 | | 16 59 | - | 83 23 |
| | 17-Sep-02 | | 19 97 | - | 79.85 |
| MW-1R | 12-Dec-02 | - | 17 44 | - | NM |
| | 31-Mar-03 | - | 14 02 | - | NM |
| | 16-Jul-03 | - | 9 21 | - | NM |
| | 20-Aug-03 | - | 8.65 | - | NM |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-2 | 01-Dec-97 | 99.83 | 17.43 | - | 82.40 |
| | 05-Aug-99 | | 19 19 | 2 29 | 80.64 |
| | 26-Apr-00 | | 15.80 | 2 18 | 84.03 |
| | 01-Aug-00 | | 22 30 | 2.10 | 77.53 |
| | 13-Dec-00 | | 21 36 | 0.84 | 78.47 |
| | 06-Feb-01 | | 18.89 | sheen | 80.94 |
| | 05-Jun-01 | | 17 42 | sheen | 82.41 |
| | 16-Aug-01 | | 18.35 | - | 81.48 |
| | 13-Sep-01 | | 19 03 | - | 80.80 |
| | 26-Sep-01 | | 19.42 | sheen | 80.41 |
| | 27-Sep-01 | | 19.69 | 0.01 | 80 14 |
| | 19-Oct-01 | | 20.22 | - | 79.61 |
| | 09-Nov-01 | | 21 02 | 0.01 | 78.81 |
| | 21-Nov-01 | | 20.70 | sheen | 79.13 |
| | 05-Dec-01 | | 21.59 | 0.63 | 78.24 |
| | 07-Dec-01 | | 21.98 | 0 02 | 77.85 |
| | 10-Dec-01 | | 22.00 | 0.01 | 77.83 |
| | 11-Dec-01 | | 21.91 | sheen | 77.92 |
| | | | 21.73 | 0.02 | 78.10 |
| | 07-Jan-02 | | 22.34 | 0.22 | 77.49 |
| | 04-Feb-02 | | 20.50 | 0 15 | 79.33 |
| | 05-Mar-02 | | 19 90 | sheen | 79.93 |
| | 19-Apr-02 | | 17.03 | 0.01 | 82.80 |
| | 17-May-02 | | 16.25 | 0.01 | 83.58 |
| | 24-May-02 | | 16 28 | 0.01 | 83.55 |
| | 28-May-02 | | 16 49 | sheen | 83.34 |
| | 30-May-02 | | 19.50 | - | 80.33 |
| | 06-Jun-02 | | 16.88 | - | 82.95 |
| | 17-Sep-02 | | 20.44 | 0.05 | 79.39 |
| | 12-Dec-02 | | 17 84 | - | 81.99 |
| | 31-Mar-03 | | 13.50 | - | 86.33 |
| | 16-Jul-03 | | 12.39 | - | 87.44 |
| | 20-Aug-03 | | 12.42 | - | 87.41 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-3 | 01-Dec-97 | 99.98 | 17.00 | - | 82.98 |
| | 05-Aug-99 | | 17 96 | 1 01 | 82 02 |
| | 26-Apr-00 | | 15.73 | 0 68 | 84.25 |
| | 01-Aug-00 | | 20.85 | 0 78 | 79 13 |
| | 13-Dec-00 | | 22 18 | 2 22 | 77.80 |
| | 06-Feb-01 | | 19.26 | 0 96 | 80 72 |
| | 05-Jun-01 | | 17.41 | 0 40 | 82 57 |
| | 16-Aug-01 | | 18 19 | 0 09 | 81 79 |
| | 13-Sep-01 | | 18.80 | 0 02 | 81 18 |
| | 26-Sep-01 | | 19 25 | sheen | 80 73 |
| | 27-Sep-01 | | 19.32 | 0 04 | 80 66 |
| | 19-Oct-01 | | 20 04 | 0 06 | 79.94 |
| | 09-Nov-01 | | 20 86 | sheen | 79 12 |
| | 21-Nov-01 | | 20.59 | sheen | 79.39 |
| | 05-Dec-01 | | 21.10 | sheen | 78.88 |
| | 07-Dec-01 | | 21.24 | sheen | 78.74 |
| | 10-Dec-01 | | 21 62 | 0.01 | 78 36 |
| | 11-Dec-01 | | 21 65 | sheen | 78 33 |
| | | | 22.01 | 0 56 | 77 97 |
| | 07-Jan-02 | | 22.87 | 1 15 | 77 11 |
| | 04-Feb-02 | | 21.20 | 0.75 | 78 78 |
| | 05-Mar-02 | | 18.69 | 0 27 | 81 29 |
| | 19-Apr-02 | | 16.60 | sheen | 83 38 |
| | 17-May-02 | | 15 78 | 0 01 | 84 20 |
| | 24-May-02 | | 15.88 | sheen | 84 10 |
| | 28-May-02 | | 16 12 | sheen | 83 86 |
| | 30-May-02 | | 12.14 | - | 87 84 |
| | 06-Jun-02 | | 15.44 | - | 84 54 |
| | 17-Sep-02 | | 20.11 | - | 79 87 |
| | 12-Dec-02 | | 17.45 | - | 82 53 |
| | 31-Mar-03 | | 13.32 | - | 86 66 |
| | 16-Jul-03 | | 12.15 | - | 87 83 |
| | 20-Aug-03 | | 12 31 | - | 87.67 |
| MW-4 | 01-Dec-97 | 99 59 | 17.60 | - | 81.99 |
| | 05-Aug-99 | | 17 59 | - | 82 00 |
| | 26-Apr-00 | | 16.51 | - | 83.08 |
| | 01-Aug-00 | | 20.63 | - | 78.96 |
| | 13-Dec-00 | | 20.81 | - | 78.78 |
| | 06-Feb-01 | | 19.09 | - | 80.50 |
| | 05-Jun-01 | | 17.70 | - | 81.89 |
| | 13-Sep-01 | | 19.16 | - | 80.43 |
| | 07-Dec-01 | | 21.86 | - | 77.73 |
| | 05-Mar-02 | | 18 91 | - | 80.68 |
| | 06-Jun-02 | | 16.93 | - | 82.66 |
| | 17-Sep-02 | | 20.63 | - | 78.96 |
| | 12-Dec-02 | | 16.14 | - | 83.45 |
| | 31-Mar-03 | | 18.91 | - | 80.68 |
| | 16-Jul-03 | | NM | - | NM |
| | 20-Aug-03 | | 12.99 | - | 86.60 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-5 | 01-Dec-97 | 99 42 | 15 04 | - | 84.38 |
| | 05-Aug-99 | | 15 95 | - | 83 47 |
| | 26-Apr-00 | | 14 35 | - | 85 07 |
| | 01-Aug-00 | | 19.18 | - | 80.24 |
| | 13-Dec-00 | | 19.68 | - | 79.74 |
| | 06-Feb-01 | | 16.50 | - | 82.92 |
| | 05-Jun-01 | | 15 51 | - | 83.91 |
| | 13-Sep-01 | | 17.48 | - | 81 94 |
| | 07-Dec-01 | | 20 09 | - | 79 33 |
| | 05-Mar-02 | | 16 15 | - | 83.27 |
| | 06-Jun-02 | | 15 11 | - | 84 31 |
| | 17-Sep-02 | | 18 31 | - | 81 11 |
| | 12-Dec-02 | | 15.09 | - | 84.33 |
| | 31-Mar-03 | | 11.51 | - | 87.91 |
| | 16-Jul-03 | | 11.03 | - | 88.39 |
| | 20-Aug-03 | | 11 04 | - | 88.38 |
| MW-6 | 01-Dec-97 | 99 47 | 14 37 | - | 85.10 |
| | 05-Aug-99 | | 15.44 | - | 84 03 |
| | 26-Apr-00 | | 13 65 | - | 85.82 |
| | 01-Aug-00 | | 18 75 | - | 80 72 |
| | 13-Dec-00 | | 18.23 | - | 81.24 |
| | 06-Feb-01 | | 15.34 | - | 84.13 |
| | 05-Jun-01 | | 14 84 | - | 84 63 |
| | 13-Sep-01 | | 16.96 | - | 82.51 |
| | 07-Dec-01 | | 19.70 | - | 79.77 |
| | 05-Mar-02 | | 15.20 | - | 84 27 |
| | 06-Jun-02 | | 15.51 | - | 83.96 |
| | 17-Sep-02 | | 17.76 | - | 81.71 |
| | 12-Dec-02 | | 14.29 | - | 85.18 |
| | 31-Mar-03 | | 10 77 | - | 88 70 |
| | 16-Jul-03 | | 10.53 | - | 88 94 |
| | 20-Aug-03 | | 10.04 | | 89.43 |
| MW-7 | 01-Dec-97 | 99 47 | 13.96 | - | 85 51 |
| | 05-Aug-99 | | 15.41 | - | 84.06 |
| | 26-Apr-00 | | 13.54 | - | 85 93 |
| | 01-Aug-00 | | 18.72 | - | 80 75 |
| | 13-Dec-00 | | 18 01 | - | 81.46 |
| | 06-Feb-01 | | 15.41 | - | 84.06 |
| | 05-Jun-01 | | 14.61 | - | 84 86 |
| | 13-Sep-01 | | 16.91 | - | 82.56 |
| | 07-Dec-01 | | 19.64 | - | 79.83 |
| | 05-Mar-02 | | 14.75 | - | 84.72 |
| | 06-Jun-02 | | 14 43 | - | 85 04 |
| | 17-Sep-02 | | 17.34 | - | 82.13 |
| | 12-Dec-02 | | 13.91 | - | 85.56 |
| | 31-Mar-03 | | 10.75 | - | 88.72 |
| | 16-Jul-03 | | 10.92 | - | 88.55 |
| | 20-Aug-03 | | 10.55 | - | 88.92 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-8 | 01-Dec-97 | 102.42 | 12.53 | - | 89.89 |
| | 05-Aug-99 | | 14.59 | - | 87.83 |
| | 26-Apr-00 | | 11 56 | - | 90.86 |
| | 01-Aug-00 | | 19.18 | - | 83.24 |
| | 13-Dec-00 | | 17.96 | - | 84.46 |
| | 06-Feb-01 | | 13 34 | - | 89 08 |
| | 05-Jun-01 | | 13.15 | - | 89.27 |
| | 13-Sep-01 | | 16.64 | - | 85 78 |
| | 07-Dec-01 | | 19.73 | - | 82.69 |
| | 05-Mar-02 | | 11 41 | - | 91.01 |
| | 06-Jun-02 | | 12 93 | - | 89.49 |
| | 17-Sep-02 | | 16 72 | - | 85.70 |
| | 12-Dec-02 | | 11.42 | - | 91.00 |
| | 31-Mar-03 | | 8.24 | - | 94.18 |
| | 16-Jul-03 | | 9.18 | - | 93.24 |
| | 20-Aug-03 | | 8.45 | - | 93.97 |
| MW-9 | 01-Dec-97 | 100 53 | 16 17 | - | 84.36 |
| | 05-Aug-99 | | 16 74 | - | 83.79 |
| | 26-Apr-00 | | 15.09 | - | 85.44 |
| | 01-Aug-00 | | 21.20 | - | 79.33 |
| | 13-Dec-00 | | 19 73 | - | 80 80 |
| | 06-Feb-01 | | 17.54 | - | 82.99 |
| | 05-Jun-01 | | 16 35 | - | 84 18 |
| | 13-Sep-01 | | 18.40 | - | 82.13 |
| | 07-Dec-01 | | 21.00 | - | 79.53 |
| | 05-Mar-02 | | 17 38 | - | 83 15 |
| | 06-Jun-02 | | 16.80 | - | 83.73 |
| | 17-Sep-02 | | 19 64 | - | 80.89 |
| | 12-Dec-02 | | 16 29 | - | 84.24 |
| | 31-Mar-03 | | 11 90 | - | 88 63 |
| | 16-Jul-03 | | 11 61 | - | 88 92 |
| | 20-Aug-03 | | 11.55 | - | 88.98 |
| MW-10 | 01-Dec-97 | 99 65 | 17.40 | - | 82.25 |
| | 05-Aug-99 | | 18.06 | 1.01 | 81.59 |
| | 26-Apr-00 | | 15.75 | 1.65 | 83.90 |
| | 01-Aug-00 | | 20.50 | 0.03 | 79.15 |
| | 13-Dec-00 | | 19.40 | 0.01 | 80.25 |
| | 06-Feb-01 | | 18.84 | sheen | 80.81 |
| | 05-Jun-01 | | 17.38 | - | 82.27 |
| | 16-Aug-01 | | 18.15 | - | 81.50 |
| | 13-Sep-01 | | 18.82 | - | 80.83 |
| | 07-Dec-01 | | 23.90 | - | 75.75 |
| | 11-Dec-01 | | 21.88 | - | 77.77 |
| | 04-Feb-02 | | 20.65 | - | 79.00 |
| | 05-Mar-02 | | 19.09 | - | 80.56 |
| | 06-Jun-02 | | 16.78 | - | 82.87 |
| | 17-Sep-02 | | 20.53 | - | 79.12 |
| | 12-Dec-02 | | 18 00 | - | 81.65 |
| | 31-Mar-03 | | 13.49 | - | 86.16 |
| | 16-Jul-03 | | 12.65 | - | 87.00 |
| | 20-Aug-03 | | 10.05 | - | 89.60 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-11 | 01-Dec-97 | 96 47 | 15.74 | - | 80.73 |
| | 05-Aug-99 | | 15.60 | - | 80 87 |
| | 26-Apr-00 | | 13 65 | - | 82.82 |
| | 01-Aug-00 | | 18.61 | - | 77.86 |
| | 13-Dec-00 | | 19.01 | - | 77.46 |
| | 06-Feb-01 | | 17 43 | - | 79 04 |
| | 05-Jun-01 | | 15.96 | - | 80 51 |
| | 13-Sep-01 | | 17.23 | - | 79.24 |
| | 07-Dec-01 | | 19 74 | - | 76 73 |
| | 05-Mar-02 | | 17.12 | - | 79 35 |
| | 06-Jun-02 | | 15.03 | - | 81.44 |
| | 17-Sep-02 | | 18 88 | - | 77.59 |
| | 12-Dec-02 | | 16.13 | - | 80.34 |
| | 31-Mar-03 | | 11.72 | - | 84.75 |
| | 16-Jul-03 | | 10 25 | - | 86.22 |
| | 20-Aug-03 | | 10 77 | - | 85.70 |
| MW-12 | 01-Dec-97 | 98 63 | 17 03 | - | 81.60 |
| | 05-Aug-99 | | 17.33 | - | 81.30 |
| | 26-Apr-00 | | 16.06 | - | 82.57 |
| | 01-Aug-00 | | 20.15 | - | 78.48 |
| | 13-Dec-00 | | 23.70 | - | 74.93 |
| | 06-Feb-01 | | 18.45 | - | 80.18 |
| | 05-Jun-01 | | 17.26 | - | 81.37 |
| | 13-Sep-01 | | 18.63 | - | 80.00 |
| | 07-Dec-01 | | 21.37 | - | 77.26 |
| | 05-Mar-02 | | 18 65 | - | 79.98 |
| | 06-Jun-02 | | 16.90 | - | 81.73 |
| | 17-Sep-02 | | 19.97 | - | 78.66 |
| | 12-Dec-02 | | 17.33 | - | 81.30 |
| | 31-Mar-03 | | 13.46 | - | 85.17 |
| | 16-Jul-03 | | 12.51 | - | 86.12 |
| | 20-Aug-03 | | 12 70 | - | 85.93 |
| MW-13 | 01-Dec-97 | 100 80 | 21 05 | - | 79 75 |
| | 05-Aug-99 | | 21 26 | - | 79 54 |
| | 26-Apr-00 | | 20.02 | - | 80.78 |
| | 01-Aug-00 | | 24.05 | - | 76 75 |
| | 13-Dec-00 | | 24.13 | - | 76.67 |
| | 06-Feb-01 | | 22.43 | - | 78.37 |
| | 05-Jun-01 | | 21.34 | - | 79.46 |
| | 13-Sep-01 | | 22.91 | - | 77.89 |
| | 07-Dec-01 | | 25.22 | - | 75.58 |
| | 05-Mar-02 | | 22.21 | - | 78.59 |
| | 06-Jun-02 | | 20.82 | - | 79.98 |
| | 17-Sep-02 | | 24.22 | - | 76.58 |
| | 12-Dec-02 | | 21 33 | - | 79.47 |
| MW-13R | 31-Mar-03 | NM | 17 71 | - | NM |
| | 16-Jul-03 | | 16.89 | - | NM |
| | 20-Aug-03 | | 17.17 | - | NM |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-14 | 01-Dec-97 | 89.38 | 7.27 | - | 82 11 |
| | 05-Aug-99 | | 7 96 | - | 81.42 |
| | 26-Apr-00 | | 6.46 | - | 82.92 |
| | 11-Aug-00 | | 10.80 | - | 78 58 |
| | 13-Dec-00 | | 10.80 | - | 78 58 |
| | 06-Feb-01 | | 8.72 | - | 80 66 |
| | 05-Jun-01 | | 7.32 | - | 82.06 |
| | 13-Sep-01 | | 9.31 | - | 80 07 |
| | 07-Dec-01 | | 11.91 | - | 77.47 |
| | 05-Mar-02 | | 8.51 | - | 80.87 |
| | 06-Jun-02 | | 7 41 | - | 81 97 |
| | 17-Sep-02 | | 9.98 | - | 79 40 |
| | 12-Dec-02 | | 8.22 | - | 81.16 |
| | 31-Mar-03 | | 4.25 | - | 85.13 |
| | 16-Jul-03 | | 3.95 | - | 85 43 |
| | 20-Aug-03 | | 3.35 | - | 86 03 |
| MW-15 | 01-Dec-97 | 87 33 | 5.10 | - | 82 23 |
| | 05-Aug-99 | | 6.28 | - | 81 05 |
| | 26-Apr-00 | | 4 75 | - | 82 58 |
| | 01-Aug-00 | | 9.11 | - | 78 22 |
| | 13-Dec-00 | | 8.57 | - | 78 76 |
| | 06-Feb-01 | | 6 36 | - | 80 97 |
| | 05-Jun-01 | | 5.68 | - | 81 65 |
| | 13-Sep-01 | | 7 61 | - | 79 72 |
| | 07-Dec-01 | | 9 91 | - | 77 42 |
| | 05-Mar-02 | | 5 86 | - | 81 47 |
| | 06-Jun-02 | | NM | - | NM |
| | 12-Dec-02 | | 4 74 | - | 82 59 |
| | 31-Mar-03 | | 2 69 | - | 84 64 |
| | 16-Jul-03 | | 2.15 | - | 85 18 |
| | 20-Aug-03 | | 2 22 | - | 85 11 |
| MW-16 | 01-Dec-97 | 93.74 | 9.69 | - | 84 05 |
| | 05-Aug-99 | | 11 22 | - | 82 52 |
| | 26-Apr-00 | | 9.50 | - | 84.24 |
| | 01-Aug-00 | | 14.35 | - | 79.39 |
| | 13-Dec-00 | | 13 45 | - | 80 29 |
| | 06-Feb-01 | | 10.89 | - | 82.85 |
| | 05-Jun-01 | | 10.34 | - | 83.40 |
| | 13-Sep-01 | | 12.58 | - | 81.16 |
| | 07-Dec-01 | | 13.41 | - | 80.33 |
| | 05-Mar-02 | | 8 67 | - | 85.07 |
| | 06-Jun-02 | | NM | - | NM |
| | 12-Dec-02 | | 9.58 | - | 84.16 |
| | 31-Mar-03 | | 7.29 | - | 86.45 |
| | 16-Jul-03 | | 6.95 | - | 86.79 |
| | 20-Aug-03 | | 7.03 | - | 86.71 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| DMW-17 | 01-Dec-97 | 100.08 | 15.53 | - | 84.55 |
| | 05-Aug-99 | | 16.16 | - | 83.92 |
| | 26-Apr-00 | | 16.80 | - | 83 28 |
| | 01-Aug-00 | | 19 27 | - | 80 81 |
| | 13-Dec-00 | | 19 20 | - | 80 88 |
| | 06-Feb-01 | | 16.82 | - | 83 26 |
| | 05-Jun-01 | | 15.52 | - | 84 56 |
| | 13-Sep-01 | | 17 42 | - | 82.66 |
| | 07-Dec-01 | | 19 54 | - | 80 54 |
| | 05-Mar-02 | | NM | - | NM |
| | 06-Jun-02 | | NM | - | NM |
| | 17-Sep-02 | | 18 32 | - | 81.76 |
| | 12-Dec-02 | | 16.66 | - | 83 42 |
| | 31-Mar-03 | | 13.32 | - | 86 76 |
| | 16-Jul-03 | | 11.39 | - | 88 69 |
| | 20-Aug-03 | | 11.05 | - | 89 03 |

**Notes:**
TOC - Top-of-Casing elevation refrenced to common datum.
NM - Not measured.
All measurments in units of feet
- = No Data

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| OMW-1 | 1-Dec-97 | 14 9 | 85 5 | 5 2 | 24.8 | 130 | 96 | BDL |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 1,570 | 19,000 | 474 | 4,050 | 25,094 | 33,900 | 1,440 |
| | 17-Sep-02 | 2,940 | 25,200 | 1,330 | 9,580 | 39,050 | 30,600 | 620 |
| MW-1R | 12-Dec-02 | 6,590 | 23,500 | 3,670 | 20,480 | 54,240 | 18,200 | 8,330 |
| | 31-Mar-03 | 7,830 | 19,300 | 1,680 | 8,600 | 37,410 | 5,850 | 49.4 |
| | 16-Jul-03 | 7,070 | 13,400 | 1,450 | 7,310 | 29,230 | 7,160 | 52.1 |
| | 20-Aug-03 | 6,660 | 11,100 | 1,900 | 9,220 | 28,880 | 11,200 | 167 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-2 | 1-Dec-97 | 9,900 | 42,300 | 2,040 | 12,100 | 66,340 | 242,000 | 71.2 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 4,400 | 7,570 | 2,890 | 6,790 | 21,650 | 9,490 | 592 |
| | 13-Sep-01 | 2,280 | 9,780 | 1,630 | 7,650 | 21,340 | 1,750 | 399 |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 3,660 | 2,070 | 858 | 2,788 | 9,376 | 8,390 | 294 |
| | 17-Sep-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | 5,120 | 2,180 | 1,180 | 1,691 | 10,171 | 11,000 | 363 |
| | 31-Mar-03 | 3,800 | 288 | 427 | 90 7 | 4,606 | 2,430 | 217 |
| | 16-Jul-03 | 1,460 | 132 | 52 0 | 101 2 | 1,745 | 1,190 | 13.5 |
| | 20-Aug-03 | 1,350 | 167 | 70 2 | 212 6 | 1,800 | 1,170 | 96.6 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-3 | 1-Dec-97 | 9,820 | 54,500 | 2,160 | 11,900 | 78,380 | 81,200 | 445 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 8,770 | 34,700 | 2,610 | 14,760 | 60,840 | 8,940 | 503 |
| | 17-Sep-02 | 8,710 | 41,300 | 2,950 | 17,070 | 70,030 | 9,540 | 669 |
| | 12-Dec-02 | 6,360 | 44,900 | 3,640 | 23,760 | 78,660 | 12,600 | 1,330 |
| | 31-Mar-03 | 4,830 | 16,600 | 1,160 | 7,430 | 30,020 | 3,990 | 609 |
| | 16-Jul-03 | 8,660 | 41,000 | 2,760 | 16,950 | 69,370 | 6,630 | 129 |
| | 20-Aug-03 | 9,210 | 37,400 | 3,140 | 16,790 | 66,540 | 6,990 | 443 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-4 | 1-Dec-97 | 8,140 | 21,000 | 1,510 | 11,500 | 42,150 | 215,000 | 813 |
| | 5-Aug-99 | 14,200 | 34,600 | 2,750 | 15,900 | 67,450 | 109,000 | <5 |
| | 26-Apr-00 | 13,400 | 33,200 | 3,420 | 13,270 | 63,290 | 102,000 | 1,060 |
| | 1-Aug-00 | 10,100 | 23,300 | 1,740 | 11,410 | 46,550 | 109,000 | 559 |
| | 13-Dec-00 | 6,730 | 16,300 | 635 | 4,170 | 27,835 | 32,300 | 742 |
| | 6-Feb-01 | 5,860 | 13,500 | 1,080 | 7,230 | 27,670 | 26,100 | 210 |
| | 5-Jun-01 | 3,570 | 10,900 | 965 | 9,510 | 24,945 | 5,730 | 302 |
| | 13-Sep-01 | 5,910 | 14,900 | 1,050 | 7,100 | 28,960 | 5,980 | 384 |
| | 7-Dec-01 | 10,000 | 19,200 | 2,210 | 11,600 | 43,010 | BDL | 682 |
| | 5-Mar-02 | 7,880 | 12,890 | 1,860 | 12,650 | 35,280 | 14,530 | 2,010 |
| | 6-Jun-02 | 2,520 | 2,700 | 483 | 3,620 | 9,323 | 3,850 | 497 |
| | 17-Sep-02 | 5,750 | 3,480 | 1,480 | 6,170 | 16,880 | 3,140 | 555 |
| | 12-Dec-02 | 5,100 | 2,300 | 1,690 | 7,080 | 16,170 | 1,640 | 319 |
| | 31-Mar-03 | 1,900 | BDL | 406 | 2,395 | 4,701 | 1,430 | BDL |
| | 16-Jul-03 | NS | NS | NS | NS | NS | NS | NS |
| | 20-Aug-03 | 4,670 | 1,840 | 1,210 | 4,770 | 12,490 | 5,200 | 253 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 5 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-5 | 1-Dec-97 | 5,930 | 47,600 | 2,100 | 12,600 | 68,230 | BDL | 125 |
| | 5-Aug-99 | 6,400 | 61,600 | 2,460 | 12,100 | 82,560 | 410 | 335 |
| | 26-Apr-00 | 6,680 | 48,300 | 2,390 | 9,610 | 66,980 | 681 | 609 |
| | 1-Aug-00 | 4,250 | 40,300 | 1,960 | 12,530 | 59,040 | 258 | 396 |
| | 13-Dec-00 | 4,530 | 38,100 | 2,520 | 14,640 | 59,790 | 381 | 4,770 |
| | 6-Feb-01 | 5,070 | 30,800 | 2,200 | 12,500 | 50,570 | 225 | 678 |
| | 5-Jun-01 | 6,070 | 52,000 | 2,900 | 13,720 | 74,690 | 228 | 342 |
| | 13-Sep-01 | 4,990 | 7,210 | 3,340 | 17,900 | 33,440 | 60 7 | 2,900 |
| | 7-Dec-01 | 3,520 | 38,600 | 1,700 | 11,490 | 55,310 | BDL | 408 |
| | 5-Mar-02 | 3,160 | 21,300 | 3,260 | 18,490 | 46,210 | 171 | 342 |
| | 6-Jun-02 | 3,820 | 26,700 | 2,570 | 14,620 | 47,710 | 199 | 397 |
| | 17-Sep-02 | 4,480 | 42,800 | 2,820 | 15,100 | 65,200 | 117 | 209 |
| | 12-Dec-02 | 110 | 5,390 | 1,340 | 5,900 | 12,740 | 13.8 | 287 |
| | 31-Mar-03 | 75.7 | 3,760 | 796 | 4,520 | 9,152 | 87 4 | BDL |
| | 16-Jul-03 | 84 6 | 4,960 | 1,330 | 4,880 | 11,255 | 45.0 | 71.7 |
| | 20-Aug-03 | 120 | 4,830 | 1,460 | 5,180 | 11,590 | 172 | 144 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-6 | 1-Dec-97 | 5.5 | 137 | 6 0 | 149 | 297.5 | BDL | BDL |
| | 5-Aug-99 | 4 1 | 1 1 | 3 7 | 16 7 | 25.6 | 5 | BDL |
| | 26-Apr-00 | 13.0 | 19 2 | 15 | 48 | 95 2 | 27 2 | 6.44 |
| | 1-Aug-00 | 117 | 1820 | 128 | 877 | 2942 | 10 7 | 32 2 |
| | 13-Dec-00 | 47 9 | 460 | 35 4 | 332 | 875 | 14.8 | 7.2 |
| | 6-Feb-01 | 47 4 | 143 | 47 6 | 219.2 | 457 | 17 8 | 22 6 |
| | 5-Jun-01 | 9 3 | 44.5 | 23 5 | 141.3 | 219 | 7 5 | BDL |
| | 13-Sep-01 | 18 1 | 36.6 | 24 7 | 119 0 | 198 | 8 35 | 1 06 |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | 5 23 | BDL |
| | 5-Mar-02 | 79.8 | 765 | 114 | 1,242 | 2,201 | 35 1 | 75.8 |
| | 6-Jun-02 | 55 1 | 629 | 91 8 | 959 | 1,735 | 25 9 | 5 10 |
| | 17-Sep-02 | 11.5 | 115 | 25.4 | 258 | 410 | 2 70 | 7 77 |
| | 12-Dec-02 | 11.1 | 206 | 26 2 | 236 | 479 | 4 04 | 51.6 |
| | 31-Mar-03 | 2 22 | BDL | 1 50 | 16 2 | 19.9 | 2 84 | BDL |
| | 16-Jul-03 | 19.0 | 38 3 | 37 0 | 204 | 298 4 | 12.4 | BDL |
| | 20-Aug-03 | 30 1 | 416 | 80.0 | 439 | 965.1 | 40 2 | BDL |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-7 | 1-Dec-97 | 1.1 | 1.7 | BDL | 1.1 | 3.9 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 41 | <1 |
| | 26-Apr-00 | 2 13 | 13.5 | BDL | 1.59 | 17 2 | 68 9 | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 53.8 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 52.9 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 18 7 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | 10 6 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | 6 16 | BDL | BDL | 6 16 | 1 68 | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 10 0 | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | 10.5 | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | 3.60 | 3.60 | 567 | BDL |
| | 16-Jul-03 | BDL | BDL | BDL | BDL | BDL | 72 5 | BDL |
| | 20-Aug-03 | BDL | BDL | BDL | BDL | BDL | 54 9 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-8 | 1-Dec-97 | BDL | 2.4 | 1.2 | 5.4 | 9 0 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 1.58 | 8.53 | BDL | BDL | 10 1 | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | 2.95 | BDL | BDL | 2 95 | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 16-Jul-03 | BDL | BDL | BDL | BDL | BDL | 1 71 | BDL |
| | 20-Aug-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-9 | 1-Dec-97 | 77 | 14,000 | 2,390 | 20,700 | 37,167 | 114 | 384 |
| | 5-Aug-99 | 110 | 4,280 | 2,450 | 17,000 | 23,840 | 150 | <500 |
| | 26-Apr-00 | 163 | 2,640 | 3,520 | 14,760 | 21,083 | BDL | 2,090 |
| | 1-Aug-00 | 187 | 18,400 | 1,010 | 16,070 | 35,667 | BDL | 909 |
| | 13-Dec-00 | 9 14 | 657 | 108 | 1,340 | 2,114 | 26.0 | 47 |
| | 6-Feb-01 | 10 6 | 254 | 181 | 2,907 | 3,353 | 16 9 | 179 |
| | 5-Jun-01 | 27 7 | 402 | 139 | 1,798 | 2,367 | 17.2 | 66.6 |
| | 13-Sep-01 | 15 0 | 133 | 710 | 7,690 | 8,548 | 13 0 | 186 |
| | 7-Dec-01 | 34.4 | 35.5 | 28 9 | 713 | 812 | BDL | 20 6 |
| | 5-Mar-02 | 25.5 | 29 8 | 157 | 2,144 | 2,356 | BDL | 49.0 |
| | 6-Jun-02 | 13 2 | 24.6 | 105 | 1,420 | 1,563 | 3.17 | 44.5 |
| | 17-Sep-02 | 13.3 | 21 0 | 111 | 1,532 | 1,677 | 2 71 | 41.5 |
| | 12-Dec-02 | 8.14 | BDL | 21.7 | 483 | 513 | BDL | 19.1 |
| | 31-Mar-03 | 2 16 | 4.80 | 23 7 | 421 | 451 | BDL | BDL |
| | 16-Jul-03 | BDL | 3 02 | 28.9 | 366 | 398 | BDL | 37.3 |
| | 20-Aug-03 | BDL | 5.94 | 46 0 | 525 | 577 | 1.19 | 15.1 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-10 | 1-Dec-97 | 6,220 | 46,300 | 2,320 | 14,800 | 69,640 | 938 | 542 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 8,020 | 32,900 | 856 | 8,280 | 50,056 | 8,780 | 327 |
| | 13-Sep-01 | 9,870 | 47,700 | 1,190 | 20,400 | 79,160 | 12,500 | 356 |
| | 7-Dec-01 | 5,590 | 56,000 | 8,150 | 61,700 | 131,440 | 1,050 | 2,540 |
| | 5-Mar-02 | 2.06 | 72 2 | 5 80 | 190 1 | 270 | 1,110 | 13.7 |
| | 6-Jun-02 | BDL | 57.8 | BDL | 165 0 | 223 | 3,780 | 27.0 |
| | 17-Sep-02 | 36 3 | 75 9 | 7 38 | 308 | 428 | 6,850 | 11.4 |
| | 12-Dec-02 | 159 | 428 | 26 3 | 637 | 1,250 | BDL | 24.6 |
| | 31-Mar-03 | 4,489 | 19,300 | 769 | 6,020 | 30,578 | 13,400 | BDL |
| | 16-Jul-03 | 6,670 | 27,500 | 2,040 | 11,550 | 47,760 | 8,440 | 813 |
| | 20-Aug-03 | 6,050 | 20,470 | 2,350 | 12,650 | 41,520 | 6,300 | 471 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-11 | 1-Dec-97 | 1.4 | 3 4 | BDL | 4 7 | 9.5 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 7 | <5 |
| | 26-Apr-00 | 1 18 | 3 96 | BDL | BDL | 5 1 | 4.69 | 9.98 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | 2 51 | 91 0 | 15 0 | 104 | 212.9 | 26 3 | 17.2 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 39 5 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | 4.88 | 9.52 | 14 4 | 266 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | 1 32 | 1.32 | 358 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 1070 | BDL |
| | 6-Jun-02 | 1.84 | BDL | BDL | 1 02 | 2.86 | 2,220 | BDL |
| | 17-Sep-02 | 98 7 | BDL | BDL | 19.9 | 118.59 | 3,780 | BDL |
| | 12-Dec-02 | 23 5 | BDL | BDL | 8.39 | 31.89 | BDL | BDL |
| | 31-Mar-03 | 229 | 26 0 | 2 00 | 48 1 | 305 | 4,340 | BDL |
| | 16-Jul-03 | 624 | 10 0 | 2 20 | 171 | 807 | 7,150 | 87.9 |
| | 20-Aug-03 | 684 | 3 80 | 1.81 | 140 | 830 | 8,630 | 60.9 |
| SSTL | | <1 | <1 | <1 | <1 | - | 7 | <5 |
| MW-12 | 1-Dec-97 | 7,970 | 382 | 266 | 1,540 | 10,158 | 99,900 | 119 |
| | 5-Aug-99 | 5,000 | 260 | <200 | <200 | 5,260 | 41,200 | <1000 |
| | 26-Apr-00 | 135 | 4 51 | BDL | 11 0 | 151 | 6,800 | 18.2 |
| | 1-Aug-00 | 1670 | 17 1 | 4 33 | 114 9 | 1806 | 44,200 | BDL |
| | 13-Dec-00 | 119 | 9 1 | 2 11 | 26 7 | 157 | 4,230 | 31 7 |
| | 6-Feb-01 | 32.5 | 9 3 | 1 51 | 13.8 | 57 | 1,570 | 10 6 |
| | 5-Jun-01 | 61 0 | BDL | BDL | 2 1 | 63 | 1,960 | 17 2 |
| | 13-Sep-01 | 329 | 4 55 | 2 96 | 29 27 | 366 | 2,860 | 60.1 |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 906 | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 613 | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | 1.30 | 1 30 | 479 | BDL |
| | 16-Jul-03 | 3 17 | BDL | BDL | BDL | 3.17 | 793 | BDL |
| | 20-Aug-03 | 3 48 | BDL | BDL | BDL | 3 48 | 592 | BDL |
| SSTL | | 5 | 260 | <200 | <200 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-13 | 1-Dec-97 | BDL | 1 4 | BDL | 1.6 | 3 | 82 3 | BDL |
| | 5-Aug-99 | 3 | <1 | <1 | <1 | 3 | 604 | <5 |
| | 26-Apr-00 | 188 | 149 | BDL | BDL | 337 | 3,150 | BDL |
| | 1-Aug-00 | 207 | 5.74 | BDL | 32.8 | 245 | 3,641 | 24 3 |
| | 13-Dec-00 | 29 9 | 3.81 | 1.0 | 76.6 | 111 | 4,350 | 29.8 |
| | 6-Feb-01 | 377 | 12.10 | 2.8 | 105.2 | 497 | 5,200 | 54.9 |
| | 5-Jun-01 | 259 | 5 87 | 1 8 | 112.8 | 380 | 8,530 | 23.2 |
| | 13-Sep-01 | 374 | 7.44 | 4.52 | 127 5 | 513 | 7,150 | 24.7 |
| | 7-Dec-01 | 15 4 | BDL | BDL | 8.10 | 24 | 1,130 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 103 | BDL |
| | 6-Jun-02 | 3 24 | BDL | BDL | 6.25 | 9.49 | 6,360 | 1 42 |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | 561 | BDL |
| | 12-Dec-02 | 17 4 | BDL | BDL | 29.3 | 46.7 | BDL | BDL |
| MW-13R | 31-Mar-03 | 328 | 9.18 | BDL | 89.1 | 426 | 10,400 | 26 0 |
| | 16-Jul-03 | 522 | 13.4 | 5.39 | 143 | 684 | 11,600 | 66.4 |
| | 20-Aug-03 | 435 | 8 07 | BDL | 93.3 | 536 | 11,100 | 41.8 |
| SSTL | | 3 | 1 | 1 | 1 | -- | 40 | 5 |
| MW-14 | 1-Dec-97 | 1 1 | 1.4 | BDL | 2.7 | 5 | 76.5 | BDL |
| | 5-Aug-99 | 57 | 7 | 1 | 23 | 88 | 606 | 5 |
| | 26-Apr-00 | BDL | 1.38 | BDL | BDL | 1.38 | 1 11 | BDL |
| | 1-Aug-00 | 138 | 4 04 | BDL | 39.04 | 181 08 | 35 3 | 13.0 |
| | 13-Dec-00 | BDL | BDL | BDL | 2.13 | 2.13 | 129 | 2.33 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 11.1 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | 54 9 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 1.53 | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 16-Jul-03 | BDL | BDL | BDL | BDL | BDL | 1 67 | BDL |
| | 20-Aug-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | 7 | 1 | 23 | - | 40 | 5 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-15 | 1-Dec-97 | 1.0 | 1 6 | BDL | 2.5 | 5 | BDL | BDL |
| | 5-Aug-99 | 3 | 6 | 1 | 6 | 16 | 27 | <5 |
| | 26-Apr-00 | 1 01 | 1 32 | BDL | BDL | 2.33 | 2 82 | 5 66 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 2 77 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 16-Jul-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 3 | 6 | 1 | 6 | - | 27 | <5 |
| MW-16 | 1-Dec-97 | BDL | 1 2 | BDL | 1.3 | 2 5 | BDL | BDL |
| | 5-Aug-99 | 2 2 | 8 8 | 1.6 | 7 1 | 19 7 | 4 | BDL |
| | 26-Apr-00 | 2.17 | 1.27 | BDL | BDL | 3 4 | 10 1 | BDL |
| | 1-Aug-00 | 5.02 | 3.01 | BDL | 3.5 | 11.5 | 16.1 | 1.35 |
| | 13-Dec-00 | 10.7 | BDL | BDL | 2 66 | 13 4 | 30 6 | 1 96 |
| | 6-Feb-01 | 6 25 | BDL | BDL | BDL | 6 25 | 32 7 | BDL |
| | 5-Jun-01 | 22.3 | BDL | BDL | 1 30 | 23.6 | 78.8 | BDL |
| | 13-Sep-01 | 18 9 | BDL | BDL | BDL | BDL | 35.6 | BDL |
| | 7-Dec-01 | 15.7 | BDL | BDL | 1.01 | 16.7 | 25 0 | BDL |
| | 5-Mar-02 | 15.1 | BDL | BDL | BDL | 15.1 | 104 | BDL |
| | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | 2 60 | BDL | 9.03 | BDL | 11.6 | 14 0 | BDL |
| | 31-Mar-03 | 1.62 | BDL | BDL | BDL | 1 62 | 7 76 | BDL |
| | 16-Jul-03 | 2 95 | BDL | BDL | BDL | 2.95 | 10.9 | BDL |
| | 20-Aug-03 | 2 36 | 4.53 | BDL | 1.50 | 8.39 | 6.88 | BDL |
| DMW-17 | 1-Dec-97 | 1 6 | 3.8 | 2.3 | 12.7 | 20.3 | BDL | BDL |
| | 5-Aug-99 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 26-Apr-00 | 1.06 | 1 24 | BDL | BDL | 2 3 | 8 97 | BDL |
| | 1-Aug-00 | BDL | 3.02 | BDL | BDL | 3.02 | 7.75 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 6 98 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 5.34 | BDL |
| | 5-Jun-01 | BDL | 2.0 | BDL | BDL | 2.0 | 23 8 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 3.42 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 6.82 | 1.1 |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | 10.1 | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 16-Jul-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 20-Aug-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| CP-WW | 1-Dec-97 | BDL | 1.2 | BDL | BDL | 1 2 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 2 96 | 1 09 | BDL | BDL | 4 1 | 315 | BDL |
| | 1-Aug-00 | 3.23 | 2 56 | BDL | 1 09 | 7 | 224 | BDL |
| | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| | 17-Sep-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | NS | NS | NS | NS | NS | NS | NS |
| | 16-Jul-03 | NS | NS | NS | NS | NS | NS | NS |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |
| CLS-WW | 1-Dec-97 | 81.3 | 1.1 | BDL | 9 6 | 92 | 34.5 | BDL |
| | 5-Aug-99 | 81 | 1 | <1 | 10 | 92 | 35 | <5 |
| | 26-Apr-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 16-Jul-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 20-Aug-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | <1 | <1 | 10 | - | 35 | <5 |

Notes:
All results reported in parts per billion (ug/L) unless otherwise noted
SSTL = Site specific target levels referenced in bid
FP = Free Product; NS = Not Sampled
BDL = Below detecatable Levels
Total BTEX = Summation of benzene, toluene, ethylbenzene and xylenes
MTBE = Methyl-tert-buytl-ether

# ATTACHMENT 3
# LABORATORY ANALYTICAL REPORT

RECEIVED AUG 2 8 2003

ACCESS ANALYTICAL, INC.

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71162
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-IR
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C ) | | | MEDF | 10 | | | |
| Methyl-Tert-Butyl Ether | 11200 | ug/L | 5030/8260B | 10 000 | 08/23/2003 | 08/23/2003 | 15.59PMD |
| Benzene | 6660 | ug/L | 5030/8260B | 10 000 | 08/23/2003 | 08/23/2003 | 15 59PMD |
| Toluene | 11100 | ug/L | 5030/8260B | 10 000 | 08/23/2003 | 08/23/2003 | 15 59PMD |
| Ethylbenzene | 1900 | ug/L | 5030/8260B | 10.000 | 08/23/2003 | 08/23/2003 | 15 59PMD |
| m & p-Xylene | 6200 | ug/L | 5030/8260B | 10 000 | 08/23/2003 | 08/23/2003 | 15 59PMD |
| o-Xylene | 3020 | ug/L | 5030/8260B | 10.000 | 08/23/2003 | 08/23/2003 | 15 59PMD |
| Total Xylene | 9220 | ug/L | 5030/8260B | 10 000 | 08/23/2003 | 08/23/2003 | 15 59PMD |
| Naphthalene | 167 | ug/L | 5030/8260B | 10 000 | 08/23/2003 | 08/23/2003 | 15 59PMD |
| SURROGATE Toluene-D8 | 98.50% | | | | | | |
| SURROGATE Bromofluorobenzene | 87.20% | | | | | | |

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71162
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-IR
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 87.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.
* UNABLE TO RUN LOWER DUE TO MATRIX.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71163
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-2
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph + MTBE in Water by GC/MS (S C.) | | | MEDF | 10 | | | |
| Methyl-Tert-Butyl-Ether | 1170 | ug/L | 5030/8260B | 10 000 | 08/23/2003 | 08/23/2003 | 16:19PMD |
| Benzene | 1350 | ug/L | 5030/8260B | 10 000 | 08/23/2003 | 08/23/2003 | 16:19PMD |
| Toluene | 167 | ug/L | 5030/8260B | 10 000 | 08/23/2003 | 08/23/2003 | 16:19PMD |
| Ethylbenzene | 70.2 | ug/L | 5030/8260B | 10 000 | 08/23/2003 | 08/23/2003 | 16:19PMD |
| m & p-Xylene | 131 | ug/L | 5030/8260B | 10 000 | 08/23/2003 | 08/23/2003 | 16:19PMD |
| o-Xylene | 81 6 | ug/L | 5030/8260B | 10 000 | 08/23/2003 | 08/23/2003 | 16:19PMD |
| Total Xylene | 212.6 | ug/L | 5030/8260B | 10 000 | 08/23/2003 | 08/23/2003 | 16:19PMD |
| Naphthalene | 96.6 | ug/L | 5030/8260B | 10 000 | 08/23/2003 | 08/23/2003 | 16:19PMD |
| SURROGATE Toluene-D8 | 96.00% | | | | | | |
| SURROGATE Bromofluorobenzene | 93.20% | | | | | | |

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71163
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-2
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE Dibromofluoromethane | 91.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.
* UNABLE TO RUN LOWER DUE TO MATRIX.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71164
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-3
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C ) | | | MEDF | 100 | | | |
| Methyl-Tert-Butyl-Ether | 6990 | ug/L | 5030/8260B | 100 000 | 08/23/2003 | 08/23/2003 | 16 39PMD |
| Benzene | 9210 | ug/L | 5030/8260B | 100 000 | 08/23/2003 | 08/23/2003 | 16 39PMD |
| Toluene | 37400 | ug/L | 5030/8260B | 100 000 | 08/23/2003 | 08/23/2003 | 16 39PMD |
| Ethylbenzene | 3140 | ug/L | 5030/8260B | 100.000 | 08/23/2003 | 08/23/2003 | 16 39PMD |
| m & p-Xylene | 11300 | ug/L | 5030/8260B | 100 000 | 08/23/2003 | 08/23/2003 | 16:39PMD |
| o-Xylene | 5490 | ug/L | 5030/8260B | 100 000 | 08/23/2003 | 08/23/2003 | 16 39PMD |
| Total Xylene | 16790 | ug/L | 5030/8260B | 100 000 | 08/23/2003 | 08/23/2003 | 16 39PMD |
| Naphthalene | 443 | ug/L | 5030/8260B | 100 000 | 08/23/2003 | 08/23/2003 | 16 39PMD |
| SURROGATE. Toluene-D8 | 96.75% | | | | | | |
| SURROGATE Bromofluorobenzene | 96.80% | | | | | | |

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71164
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-3
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 93.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.
* UNABLE TO RUN LOWER DUE TO MATRIX.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71165
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-4
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C.) | | | MEDF | 100 | | | |
| Methyl-Tert-Butyl-Ether | 5200 | ug/L | 5030/8260B | 100 000 | 08/23/2003 | 08/23/2003 | 16 58AA1 |
| Benzene | 4670 | ug/L | 5030/8260B | 100 000 | 08/23/2003 | 08/23/2003 | 16 58AA1 |
| Toluene | 1840 | ug/L | 5030/8260B | 100 000 | 08/23/2003 | 08/23/2003 | 16 58AA1 |
| Ethylbenzene | 1210 | ug/L | 5030/8260B | 100 000 | 08/23/2003 | 08/23/2003 | 16 58AA1 |
| m & p-Xylene | 2140 | ug/L | 5030/8260B | 100 000 | 08/23/2003 | 08/23/2003 | 16 58AA1 |
| o-Xylene | 2630 | ug/L | 5030/8260B | 100.000 | 08/23/2003 | 08/23/2003 | 16.58AA1 |
| Total Xylene | 4770 | ug/L | 5030/8260B | 100.000 | 08/23/2003 | 08/23/2003 | 16 58AA1 |
| Naphthalene | 253 | ug/L | 5030/8260B | 100 000 | 08/23/2003 | 08/23/2003 | 16 58AA1 |
| SURROGATE: Toluene-D8 | 99.75% | | | | | | |
| SURROGATE: Bromofluorobenzene | 92.00% | | | | | | |

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71165
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-4
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE. Dibromofluoromethane | 91.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.
* UNABLE TO RUN LOWER DUE TO MATRIX.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71166
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-5
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 172 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 17.18AA1 |
| Benzene | 120 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 17 18AA1 |
| Toluene | 4830 | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 17 18AA1 |
| Ethylbenzene | 1460 | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 17 18AA1 |
| m & p-Xylene | 3680 | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 17:18AA1 |
| o-Xylene | 1500 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 17 18AA1 |
| Total Xylene | 5180 | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 17 18AA1 |
| Naphthalene | 144 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 17 18AA1 |
| SURROGATE: Toluene-D8 | 99.75% | | | | | | |
| SURROGATE: Bromofluorobenzene | 89.60% | | | | | | |
| SURROGATE: Dibromofluoromethane | 103.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71167
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-6
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 40 2 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 17.37AA1 |
| Benzene | 30 1 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 17 37AA1 |
| Toluene | 416 | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 17 37AA1 |
| Ethylbenzene | 80 0 | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 17 37AA1 |
| m & p-Xylene | 309 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 17 37AA1 |
| o-Xylene | 130 | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 17·37AA1 |
| Total Xylene | 439.0 | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 17 37AA1 |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 17 37AA1 |
| SURROGATE: Toluene-D8 | 106.00% | | | | | | |
| SURROGATE· Bromofluorobenzene | 89.20% | | | | | | |
| SURROGATE· Dibromofluoromethane | 111.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71168
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-7
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 54 9 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 17 57AA1 |
| Benzene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 17 57AA1 |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 17 57AA1 |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 17 57AA1 |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 17 57AA1 |
| o-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 17 57AA1 |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 17 57AA1 |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 17 57AA1 |
| SURROGATE: Toluene-D8 | 98.25% | | | | | | |
| SURROGATE: Bromofluorobenzene | 91.20% | | | | | | |
| SURROGATE: Dibromofluoromethane | 91.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71169
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-8
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 18 16AA1 |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 18 16AA1 |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 18 16AA1 |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 18 16AA1 |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 18 16AA1 |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 18 16AA1 |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 18 16AA1 |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 18 16AA1 |
| SURROGATE: Toluene-D8 | 101.75% | | | | | | |
| SURROGATE: Bromofluorobenzene | 90.40% | | | | | | |
| SURROGATE: Dibromofluoromethane | 92.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD =#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71170
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-9
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 1.19 | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 18 35PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 18 35PMD |
| Toluene | 5 94 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 18 35PMD |
| Ethylbenzene | 46 0 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 18 35PMD |
| m & p-Xylene | 412 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 18.35PMD |
| o-Xylene | 113 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 18·35PMD |
| Total Xylene | 525.0 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 18:35PMD |
| Naphthalene | 15 1 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 18·35PMD |
| SURROGATE: Toluene-D8 | 99.25% | | | | | | |
| SURROGATE· Bromofluorobenzene | 83.60% | | | | | | |
| SURROGATE· Dibromofluoromethane | 102.00% | | | | | | |

REPORT COMMENTS:
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71171
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-10
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C ) | | | MEDF | 10 | | | |
| Methyl-Tert-Butyl-Ether | 6300 | ug/L | 5030/8260B | 10.000 | 08/22/2003 | 08/22/2003 | 17 43AR |
| Benzene | 6050 | ug/L | 5030/8260B | 10.000 | 08/22/2003 | 08/22/2003 | 17 43AR |
| Toluene | 20470 | ug/L | 5030/8260B | 10.000 | 08/22/2003 | 08/22/2003 | 17·43AR |
| Ethylbenzene | 2350 | ug/L | 5030/8260B | 10.000 | 08/22/2003 | 08/22/2003 | 17·43AR |
| m & p-Xylene | 8450 | ug/L | 5030/8260B | 10.000 | 08/22/2003 | 08/22/2003 | 17.43AR |
| o-Xylene | 4200 | ug/L | 5030/8260B | 10.000 | 08/22/2003 | 08/22/2003 | 17.43AR |
| Total Xylene | 12650 | ug/L | 5030/8260B | 10.000 | 08/22/2003 | 08/22/2003 | 17·43AR |
| Naphthalene | 471 | ug/L | 5030/8260B | 10.000 | 08/22/2003 | 08/22/2003 | 17·43AR |
| SURROGATE: Toluene-D8 | 100.75% | | | | | | |
| SURROGATE: Bromofluorobenzene | 109.60% | | | | | | |

Richard Gillespie
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121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71171
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-10
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 97.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.
* UNABLE TO RUN LOWER DUE TO MATRIX.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71172
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-11
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 8630 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 18 55PMD |
| Benzene | 684 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 18 55PMD |
| Toluene | 3 80 | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 18 55PMD |
| Ethylbenzene | 1 81 | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 18 55PMD |
| m & p-Xylene | 35 4 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 18 55PMD |
| o-Xylene | 105 | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 18 55PMD |
| Total Xylene | 140 4 | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 18.55PMD |
| Naphthalene | 60 9 | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 18 55PMD |
| SURROGATE: Toluene-D8 | 92.25% | | | | | | |
| SURROGATE: Bromofluorobenzene | 94.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 90.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
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Company Representative

Richard Gillespie
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121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71174
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-12
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 592 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 19 15PMD |
| Benzene | 3 48 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 19 15PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 19.15PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 19.15PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 19·15PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 19·15PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 19.15PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 19 15PMD |
| SURROGATE: Toluene-D8 | 99.75% | | | | | | |
| SURROGATE: Bromofluorobenzene | 92.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 103.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
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SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
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Company Representative

Richard Gillespie
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121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71175
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-13R
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 11100 | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 19 34PMD |
| Benzene | 435 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 19:34PMD |
| Toluene | 8.07 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 19:34PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 19 34PMD |
| m & p-Xylene | 16.4 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 19 34PMD |
| o-Xylene | 76 9 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 19 34PMD |
| Total Xylene | 93 3 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 19.34PMD |
| Naphthalene | 41 8 | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 19 34PMD |
| SURROGATE: Toluene-D8 | 96.25% | | | | | | |
| SURROGATE: Bromofluorobenzene | 92.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 91.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Richard Gillespie
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121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71176
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-14
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 21:31AA1 |
| Benzene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 21 31AA1 |
| Toluene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 21 31AA1 |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 21 31AA1 |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 21:31AA1 |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 21 31AA1 |
| Total Xylene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 21 31AA1 |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 08/23/2003 | 08/23/2003 | 21 31AA1 |
| SURROGATE: Toluene-D8 | 99.50% | | | | | | |
| SURROGATE. Bromofluorobenzene | 96.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 85.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71177
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-15
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 21 51AA1 |
| Benzene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 21:51AA1 |
| Toluene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 21 51AA1 |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 21 51AA1 |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 21:51AA1 |
| o-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 21:51AA1 |
| Total Xylene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 21:51AA1 |
| Naphthalene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 21:51AA1 |
| SURROGATE: Toluene-D8 | 100.25% | | | | | | |
| SURROGATE: Bromofluorobenzene | 93.20% | | | | | | |
| SURROGATE: Dibromofluoromethane | 91.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71178
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-16
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph + MTBE in Water by GC/MS (S C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 6.88 | ug/L | 5030/8260B | 1 000 | 08/22/2003 | 08/22/2003 | 18 05AR |
| Benzene | 2 36 | ug/L | 5030/8260B | 1 000 | 08/22/2003 | 08/22/2003 | 18 05AR |
| Toluene | 4.53 | ug/L | 5030/8260B | 1 000 | 08/22/2003 | 08/22/2003 | 18 05AR |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1 000 | 08/22/2003 | 08/22/2003 | 18:05AR |
| m & p-Xylene | 1.50 | ug/L | 5030/8260B | 1 000 | 08/22/2003 | 08/22/2003 | 18.05AR |
| o-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 08/22/2003 | 08/22/2003 | 18 05AR |
| Total Xylene | 1.5 | ug/L | 5030/8260B | 1 000 | 08/22/2003 | 08/22/2003 | 18.05AR |
| Naphthalene | BDL | ug/L | 5030/8260B | 1 000 | 08/22/2003 | 08/22/2003 | 18 05AR |
| SURROGATE: Toluene-D8 | 98.50% | | | | | | |
| SURROGATE. Bromofluorobenzene | 113.20% | | | | | | |
| SURROGATE Dibromofluoromethane | 92.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71179
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: MW-17
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 11 53AR |
| Benzene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 11 53AR |
| Toluene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 11 53AR |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 11 53AR |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 11 53AR |
| o-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 11 53AR |
| Total Xylene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 11 53AR |
| Naphthalene | BDL | ug/L | 5030/8260B | 1 000 | 08/23/2003 | 08/23/2003 | 11 53AR |
| SURROGATE: Toluene-D8 | 96.50% | | | | | | |
| SURROGATE Bromofluorobenzene | 110.00% | | | | | | |
| SURROGATE: Dibromofluoromethane | 90.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


August 26, 2003
Report # 308001093
Order # 71180
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE 12335 Crawfords

Sample I.D.: CLS-WW
Collected: 08/20/03 00:00
Received: 08/22/03 10:00
Collected by: D.Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1 000 | 08/22/2003 | 08/22/2003 | 18.50AR |
| Benzene | BDL | ug/L | 5030/8260B | 1 000 | 08/22/2003 | 08/22/2003 | 18 50AR |
| Toluene | BDL | ug/L | 5030/8260B | 1 000 | 08/22/2003 | 08/22/2003 | 18 50AR |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1 000 | 08/22/2003 | 08/22/2003 | 18 50AR |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 08/22/2003 | 08/22/2003 | 18:50AR |
| o-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 08/22/2003 | 08/22/2003 | 18 50AR |
| Total Xylene | BDL | ug/L | 5030/8260B | 1 000 | 08/22/2003 | 08/22/2003 | 18:50AR |
| Naphthalene | BDL | ug/L | 5030/8260B | 1 000 | 08/22/2003 | 08/22/2003 | 18·50AR |
| SURROGATE Toluene-D8 | 100.00% | | | | | | |
| SURROGATE Bromofluorobenzene | 116.00% | | | | | | |
| SURROGATE Dibromofluoromethane | 93.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: CT.=#PH0217, LA.=#9601, MD.=#271, MA.=#M-FL535
SC.=#96023, TN.=#TN02826,P.R.=FL-00535,AL=41180
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

# Access Analytical - Chain of Custody Record

Laboratory ID: _____

Project Submission #: IV 0308-1093 71162-71180 RUSH # _____ PO #: _____

Company Name: H2O Environmental

Address: 121 Centre Pl. Dr. #2

City: Irmo State: SC Zip: 29063

Project Name: DHE 1035 Crawford

Report To: E. Gallipeau

Sampled By (print): D Burrell

Preservative: (*see codes below) 1

‡ REQUESTED LAB ANALYSIS: ‡

STEX MTBE

ACCESS ANALYTICAL, INC.

2348 Lake Murray Blvd
Irmo SC 29063

Phone (803) 781-4243
Fax 781-4303
Toll Free (888) 313-4243
www.accessanalytical.com

| Sample Label | Date Collected | Time Collected | Matrix | # of Cont | Lab # | NOTES / COMMENTS |
|---|---|---|---|---|---|---|
| MW-1R | 2-20 | | GW | 2 | 71162 | |
| MW-6 | | | | | 71163 | |
| MW-3 | | | | | 71164 | |
| MW-4 | | | | | 71165 | |
| MW-5 | | | | | 71166 | |
| MW-10 | | | | | 71167 | |
| TMW-1 | | | | | 71168 | |
| TMW-2 | | | | | 71169 | |
| TMW-4 | | | | | 71170 | |
| TMW-10 | | | | | 71171 | |

Turnaround Time:

- Std. (5-7 Bus. days)
- RUSH*

*Date Required: (For rush work, results faxed by end of business day on date required)

Sample Received in Ice? Yes / No

Project Location: SC / NC / Other (specify)

| Relinquished By | Date | Time | Received By |
|---|---|---|---|
| Dave Burrell | 2-20 | 1500 | Cheryl Bass |
| Cheryl Bass | 2/21/03 | 700 | [illegible] |
| [illegible] | 2/22/03 | 1000 | NEC VACEA STL |

Preservative Codes (please circle appropriate #'s): 0 None 1 HCl 2 HNO3 3 H2SO4 4 NaOH 5 Na2S2O3 6 NaHSO4 Other Specify

Pg 1 of 2

Access Analytical, Inc.
See Reverse for Terms and Conditions

Original Copy - Returned w/Report
Yellow Copy - Access File Copy
Pink Copy - Client Copy

# Access Analytical - Chain of Custody Record

Project Submission #: 318-1093    RUSH # ______    Laboratory ID: ______    PO #: ______

ACCESS ANALYTICAL, INC.
1238 Lake Murray Blvd
Irmo SC 29063
Phone (803) 781-4243
Fax 781-4303
Toll Free (888) 315-4243
www.accessanalyticalinc.com

Company Name: RC Environmental
Address: 101 Customers Dr. #2
City: Irmo State: SC Zip: 29063
Project Name: D-E- 235 Crawford's
Report To: R [illegible]
Sampled By (print): D Burritt

Preservative (*see codes below): 1
REQUESTED LAB ANALYSIS: BTEX Napth MTBE

| Sample Label | Date Collected | Time Collected | Matrix | # of Cont | BTEX Napth MTBE | | | | NOTES / COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| MW-11 | 8-20 | | GW | 2 | | | 71172 | | |
| MW-12 | | | | | | | 71174 | | |
| MW-13R | | | | | | | 71175 | | |
| MW-14 | | | | | | | 71176 | | |
| MW-15 | | | | | | | 71177 | | |
| MW-16 | | | | | | | 71178 | | |
| MW-17 | | | | | | | 71179 | | |
| [illegible] | | | | | | | 71180 | | |
| [illegible] | NS | | NS | NS | NS | | | | |

Turnaround Time:
___ Std. (5-7 Bus. days)
___RUSH*
*Date Required:___
(For rush work, results faxed by end of business day on date required)

Samples Rec'd on Ice: ✓ Yes ___ No

Project Location: ✓ SC ___ NC ___ Other (specify)

| Relinquished By: | Date | Time: | Received By: |
|---|---|---|---|
| D Burritt | 8-20 | 1700 | [illegible] |
| [illegible] | [illegible] | 1330 | [illegible] |
| [illegible] | | | |

Preservative Codes (please correspond # to field for each analysis field): 0 None, 1 HCl, 2 HNO3, 3 H2SO4, 4 NaOH, 5 Na2S2O3, 6 NaHSO4, Other Specify

Pg 1 of 2

Access Analytical, Inc.
See Reverse for Terms and Conditions

Original Copy - Returned w/Report
Yellow Copy - Access File Copy
Pink Copy - Client Copy

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

*Promoting and protecting the health of the public and the environment.*

BRYAN SHANE
MIDLANDS ENVIRONMENTAL CONSULTANTS INC
P O BOX 854
LEXINGTON SC 29071

APR 22 2011

Re: Bid # IFB-34007-6/3/08-EMW; PO# 4500011317
Notice to Proceed

Dear Mr. Shane:

Based on the award of the referenced bid package, enclosed are the information packets to conduct assessments at several facilities. The packets contain the necessary approval for work to begin. The facilities have been assigned Cost Agreement (CA) numbers as listed below. Please reference the CA numbers and Purchase Order # 4500011317 on the appropriate invoices submitted for payment against the facilities. As specified in the referenced bid, **the completed invoice forms and associated reports (include contract certification number) are expected on or before the designated due date (see below).**

| UST Permit# | Facility | County | Release # | Work Scope | Due Date* | CA # | Approved Amt |
|---|---|---|---|---|---|---|---|
| 06157 | Weed's Landing | Lexington | 1 | Monitoring Well Installation | 60 Days | 41467 | $5,795.00 |
| 05882 | BankAir Courier Inc | Lexington | 1 | Sampling/Surveying Monitoring Wells | 60 Days | 41438 | $4,080.00 |
| 15930 | Lloyd Rollins Service Station | Lancaster | 1 | Monitoring Well Installation | 60 Days | 41370 | $1,750.00 |
| 12335 | Crawford's Country Store | Abbeville | 1 | Monitoring Well Installation | 60 Days | 41318 | $11,485.00 |

DOCKET
UST
5 Tech

| UST Permit# | Facility | County | Release # | Work Scope | Due Date* | CA # | Approved Amt |
|---|---|---|---|---|---|---|---|
| 02462 | Paxville Sites | Clarendon | 1 | Monitoring Well Installation | 60 Days | 41288 | $9,820.00 |
| 07704 | Pitt Stop 40 | Richland | 1 | Monitoring Well Repair | 60 Days | 41268 | $300.00 |
| 16093 | Frye Enterprises | Jasper | 1 | Monitoring Well Installation | 60 Days | 40610 | $3,864.00 |

*From receipt of letter

Midland's Environmental Consultants, Inc. will perform services at the sites on behalf of the site's UST owners; however, payments will be made from the SUPERB Account. The site's UST owners have no obligation for payment for this scope of work. **Please note, if there are any changes in the established cost agreement amounts (e.g., additional water supply wells sampled, additional well footage, etc.) contact the site's project manager for technical and/or financial approval. Failure to do so prior to submittal of invoice may result in delay of payment.**

The Bureau grants pre-approval for transportation of drums of virgin petroleum contaminated soil and drums of groundwater from the referenced site to a permitted treatment facility. The contaminated soil and/or groundwater must be properly stored in labeled 55-gallon drums or equivalent containers.

The contaminated soil and/or groundwater must be accepted by the approved treatment facility. There can be no spillage or leakage in transport. A copy of the disposal manifest from the receiving facility that clearly designates the quantity received must be included as an appendix to the final report. Please note, transportation of waste oil contaminated soil must receive pre-approval from the Division of Waste Assessment & Emergency Response.

Please provide this office with a schedule of drilling dates and coordinate all work with me before commencing work at the facility. If you have any questions or need further assistance, please contact me at (803) 896-6629.

Sincerely,

Andrew McCormick, Hydrogeologist
Assessment Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

enc.: Monitoring Well Approvals (MWA)
Approved Cost Agreements (ACA)
Information Packets

cc: Andrew McCormick, UST Management Division (w/out enc)
Technical Files (w/ copy of MWA, ACA, & Site Map)

# Approved Cost Agreement 41318

Facility: 12335 CRAWFORDS STORE
PADGETJP
PO Number:

| Task / Description | Categories | Item | Description | Qty / Pct | Unit Price | Amount |
|---|---|---|---|---|---|---|
| 03 COMPREHENSIVE SURVEY | | | | | | |
| | | | COMPREHENSIVE SURVEY | 1.0000 | 700.00 | 700.00 |
| 04 MOB/DEMOB | | | | | | |
| | | A | EQUIPMENT | 1.0000 | 100.00 | 100.00 |
| | | B | PERSONNEL | 4.0000 | 100.00 | 400.00 |
| 09 WELL INSTALLATION | | | | | | |
| | | B | WATER TABLE (DRILLED) | 180.0000 | 20.00 | 3,600.00 |
| 10 SAMPLE COLLECTION | | | | | | |
| | | A | GROUND WATER | 7.0000 | 25.00 | 175.00 |
| | | C | WATER SUPPLY | 3.0000 | 25.00 | 75.00 |
| | | D | GROUNDWATER NO-PURGE | 18.0000 | 25.00 | 450.00 |
| 11 ANALYSES | | | | | | |
| | GW GROUNDWATER | A | BTEX+NAPTH+MTBE | 39.0000 | 30.00 | 1,170.00 |
| | | BB | 1,2-DCA | 39.0000 | 25.00 | 975.00 |
| | | E | LEAD | 36.0000 | 10.00 | 360.00 |
| | | F | EDB | 39.0000 | 28.00 | 1,092.00 |
| | | P | 8 OXYGENATES | 39.0000 | 42.00 | 1,638.00 |
| 17 DISPOSAL | | | | | | |
| | | A1 | WASTEWATER - PURGING/SAMPLING | 1.0000 | 50.00 | 50.00 |
| | | C | SOIL (TREATMENT/DISPOSAL) | 12.0000 | 50.00 | 600.00 |
| 23 EFR | | | | | | |
| | | D | SITE RECONNAISSANCE | 1.0000 | 100.00 | 100.00 |
| | | | | **Total Amount** | | 11,485.00 |

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

*Promoting and protecting the health of the public and the environment.*

# Monitoring Well Approval

Approval is hereby granted to: **Midlands Environmental Consultants, Inc.**

On behalf of: **Mr. Frank Crawford**

Facility: **Crawford's Country Store**
**5870 SC-28 North, Abbeville, SC**

UST Permit #: **12335**

County: **Abbeville**

This approval is for the installation of six shallow monitoring wells. The wells are to be installed in the approved locations in accordance with the South Carolina Well Standards, R.61-71, and applicable guidance documents.

***Please note that R.61-71 requires the following :***

1. All wells shall be drilled, constructed, and abandoned by a South Carolina certified well driller per R.61-71.D.1.

2. All monitoring wells shall be labeled as required by R.61-71.H.2.c.

3. A Water Well Record Form or other form provided or approved by the Department shall be completed and submitted to the Department within 30 days after well completion or abandonment unless another schedule has been approved by the Department. The form should contain the "as-built" construction details and all other information required by R.61-71.H.1.f

4. All analytical data and water levels obtained from each monitoring well shall be submitted to the Department within 30 days of receipt of laboratory results unless another schedule has been approved by the Department as required by R.61-71.H.1.d.

5. If any of the information provided to the Department changes, notification to the project manager (tel:803-896-6633 or e-mail: ridglect@dhec.sc.gov) shall be provided a minimum of twenty-four (24) hours prior to well construction as required by R.61-71.H.1.a.

6. All temporary monitoring wells shall be abandoned within 5 days of borehole completion using appropriate methods as required by R.61-71.H.4.c. All other wells shall be properly developed per R.61-71.H.2.d.

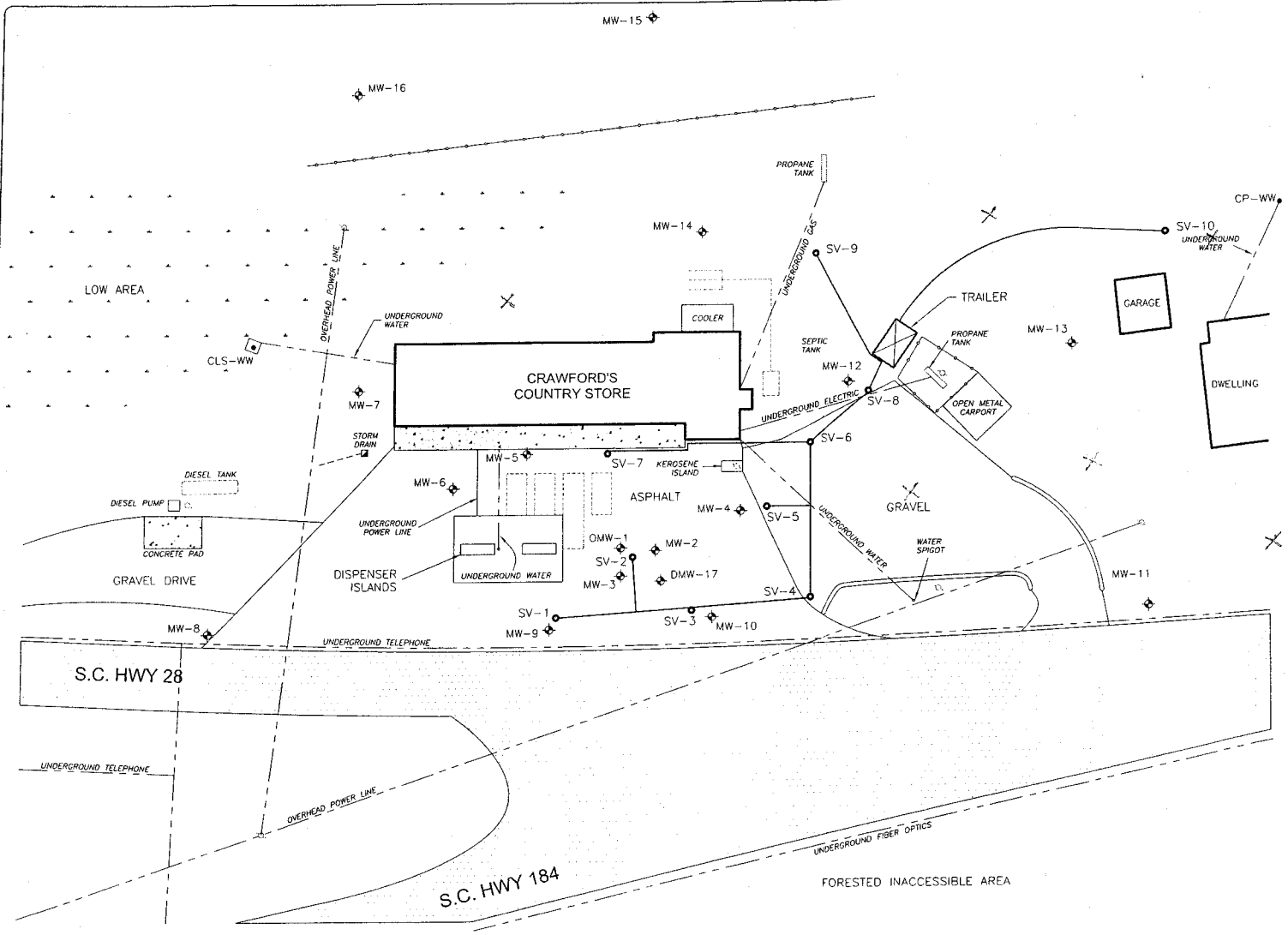
7. Departmental approval is required prior to abandonment of all monitoring wells as required by R.61-71.H.1.a.

This approval is pursuant to the provisions of Section 44-55-40 of the 1976 South Carolina Code of Laws and R.61-71 of the South Carolina Well Standards and Regulations, dated April 26, 2002. A copy of this approval should be on the site during well installation.

**Date of Issue:** 3/17/2011 **Approval:** 24166

doc 00.00

Joel P. Padgett, P.G., Geologist/Hydrologist
Corrective Action Section
UST Management Division
Bureau of Land and Waste Management




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

X - Proposed shallow MW

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No. 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO.: DHE-12335

DRAWING DATE: 08/24/2000

DRAWN BY: J.Driscoll

FIGURE NO.: 1

FIGURE TITLE: REMEDIAL SYSTEM AS-BUILT

RECEIVED

MAR 16 2004

UNDERGROUND STORAGE
TANK PROGRAM

March 12, 2004

Ms. Patricia Hydrick, Hydrogeologist
Underground Storage Tank Program
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

RE: 15th Quarterly Report
Crawford's Country Store
5870 Hwy 28 North
Antreville, South Carolina
SCDHEC Site ID # 12335

Dear Ms. Hydrick:

On February 4, 2000, the South Carolina Department of Health and Environmental Control (SCDHEC) provided notice to proceed to $H_2O$ Environmental, Inc. ($H_2O$) to perform Corrective Action at Crawford's Country Store located at 5870 Highway 28 North, Antreville, South Carolina. See Figure 1, Attachment 1 for a layout of the site and remediation system The objective of the project is to reduce the Chemicals of Concern (COC) in monitoring wells OMW-1, MW-2 through MW-5, MW-7 through MW-15, DMW-17, CP-WW and CLS-WW to the site specific target levels (SSTLs). A chronological summary of site activities is provided below:

| | |
|---|---|
| 2/4/00 | SCDHEC awarded Bid Number SB-9570-12/02/99-TC |
| 3/02/00 | Corrective Action Plan/Engineering Report submitted to SCDHEC |
| 4/18/00 | CAP/ER approved |
| 4/26/00 | Initial groundwater sampling event |
| 5/17/00 | Initial groundwater results submitted |
| 5/22/00-5/31/00 | System installed |
| 5/31/00 | System was inspected and approved Todd Adams of SCDHEC |
| 5/31/00 | Invoice submitted for payment of 40% of the contract amount |
| 6/14/00 | System start-up |
| 8/01/00 | 1st quarter sampling event |
| 8/28/99 | 1st quarter report submitted |
| 9/13/00 | Free product recovery from OMW-1, MW-2 and MW-3 |
| 12/13/00 | 2nd quarter sampling event |
| 2/16/01 | 2nd quarter report submitted |
| 2/6/01 | 3rd quarter sampling event |
| 3/15/01 | 3rd quarter report submitted |

UST
DOCKETING

**$H_2O$ ENVIRONMENTAL, INC.**
SCIENTISTS & ENGINEERS

130 Centrum Drive, Suite 3B • Irmo, South Carolina 29063 • 803•749•4080 • Fax 803•749•9911

| | |
|---|---|
| 6/5/01 | 4th quarter sampling event |
| 7/31/01 | 4th quarter report submitted |
| 9/13/01 | 5th quarter sampling event |
| 10/18/01 | 5th quarter report submitted |
| 12/7/01 | 6th quarter sampling event |
| 2/4/02 | 6th quarter report submitted |
| 3/5/02 | 7th quarter sampling event |
| 4/26/02 | 7th quarter report submitted |
| 6/6/02 | 8th quarter sampling event |
| 7/10/02 | 8th quarter report submitted |
| 9/17/02 | 9th quarter sampling event |
| 10/28/02 | 9th quarter report submitted |
| 12/12/02 | 10th quarter sampling event |
| 2/6/03 | 10th quarter report submitted |
| 3/31/03 | 11th quarter sampling event |
| 5/14/03 | 11th quarter report submitted |
| 7/16/03 | 12th quarter sampling event |
| 7/31/03 | 12th quarter report submitted |
| 8/20/03 | 13th quarter sampling event |
| 9/30/03 | 13th quarter report submitted |
| 12/22/03 | 14th quarter sampling event |
| 1/29/04 | 14th quarter report submitted |
| 2/18/04 | 15th quarter sampling event |

An air injection/vapor extraction system was installed in May 2000 and put in operation in June 2000. The system consists of ten air injection/vapor extraction wells SV-1 through SV-10. In order to target the source area, $H_2O$ is rotating air sparging in injection/vapor extraction wells SV-1 through SV-10 and extracting vapor from injection/vapor extraction wells SV-1 through SV-8. Refer to Figure 1, Attachment 1 for a map illustrating the system layout. The following table summarizes the general operating characteristics of the system.

| **Summary of System Operating Characteristics** | | | | |
|---|---|---|---|---|
| Well ID | Activity | PSI | CFM | IWG |
| SV-1 - SV-8 | Vapor Extraction | -- | -- | 55 |
| SV-1 - SV-10 | Air Sparging | 10 | 6 | -- |

An air sample was collected from the effluent of the vapor extraction system on August 1, 2000. Based on the review of the laboratory analysis, it is estimated that contaminant emissions will not exceed 1,000 pounds per month. An air sample was not collected this quarter because the OVA field screening results were below detection limits.

On February 18, 2004, $H_2O$ Environmental Inc. personnel gauged and collected groundwater samples from monitoring wells OMW-1, MW-1R, MW-2 through MW-12, MW-13R, MW-14 through MW-17, and water well CLS-WW at the site. Water well CP-WW located at the Green residence was not operational at the time of the sampling event and a groundwater sample could not be collected. A new water well has been installed and is currently being used by the Green residence. The new water well was designated CP-WW2. The sample collected from water well CP-WW2 was from an indoor sink, which may be a post filtered sample if there is a carbon unit on this water well. The groundwater samples were analyzed for Benzene, Toluene, Ethylbenzene, total Xylenes (BTEX), Methyl-Tert-Butyl Ether (MTBE), and Naphthalene. In addition, the groundwater samples were analyzed for the following natural attenuation parameters: ferrous iron, nitrate, sulfate, and methane.

A review of the groundwater elevation data indicated a groundwater flow direction to the south-southeast. Table 1, Attachment 2, summarizes field data collected during monitoring well purging. The groundwater elevations are summarized on Table 2, Attachment 2, and illustrated on Figure 2, Attachment 1. The groundwater quality for Chemicals of Concern is summarized on Table 3, Attachment 2, and illustrated on Figure 3, Attachment 1. A copy of the laboratory analytical report is provided in Attachment 3. Groundwater generated during well purging was either placed in on-site 55-gallon drums or discharged on site as warranted by the data. Any disposal manifests will be forwarded to DHEC upon receipt.

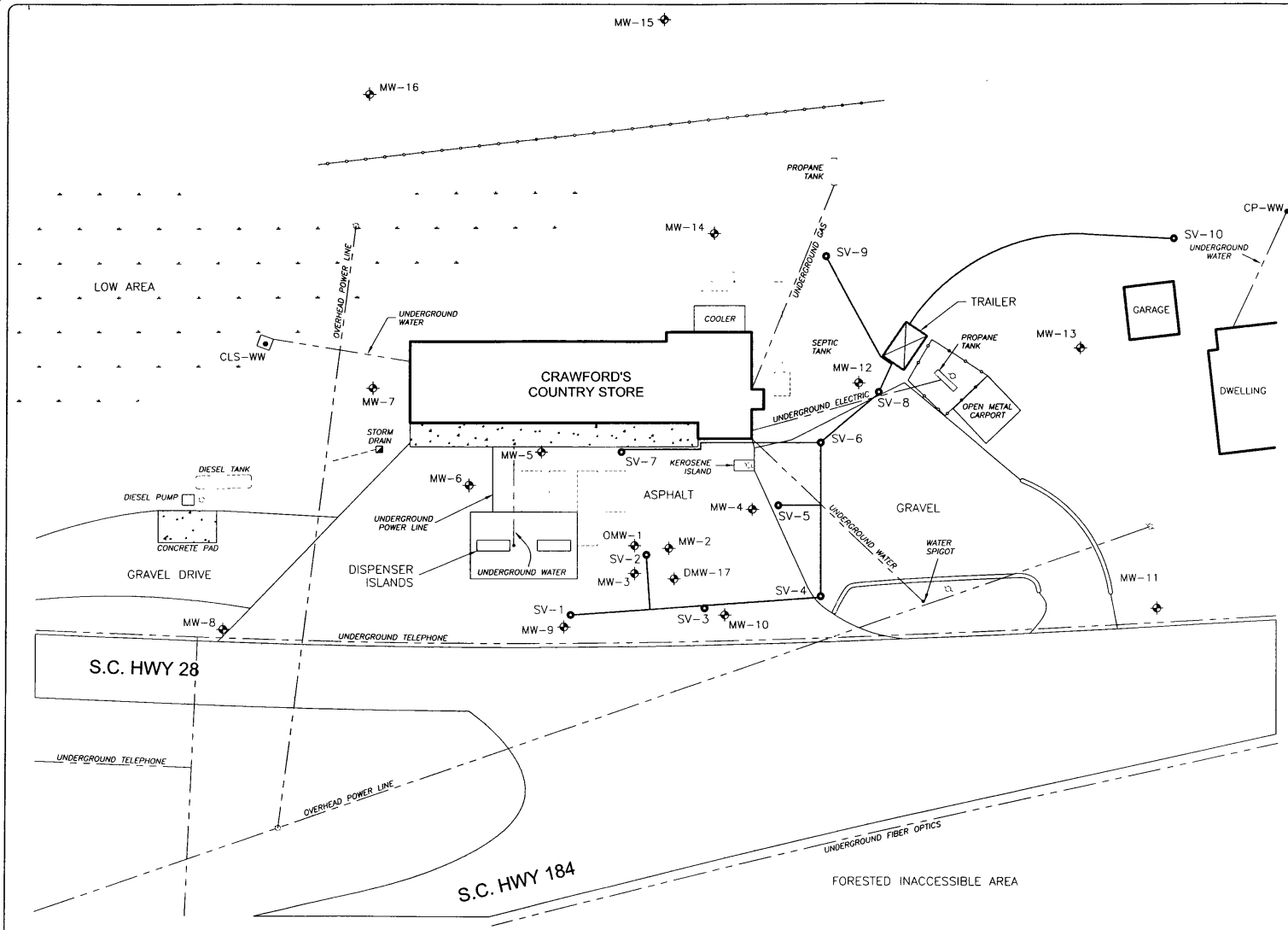
Based on the groundwater quality, $H_2O$ is shutting down the remediation system pending system evaluation. If you have any questions or comments please do not hesitate to contact me at (803) 749-4080.

Sincerely,

**$H_2O$ Environmental, Inc.**
Class I Site Rehabilitation Contractor No. 32

Richard D. Gillespie, P.G.
Senior Geologist 3-12-04
License Number 2199

# ATTACHMENT 1
# FIGURES




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

FIGURE TITLE: REMEDIAL SYSTEM AS-BUILT

PREPARED FOR: South Carolina Department of Health and Environmental Control

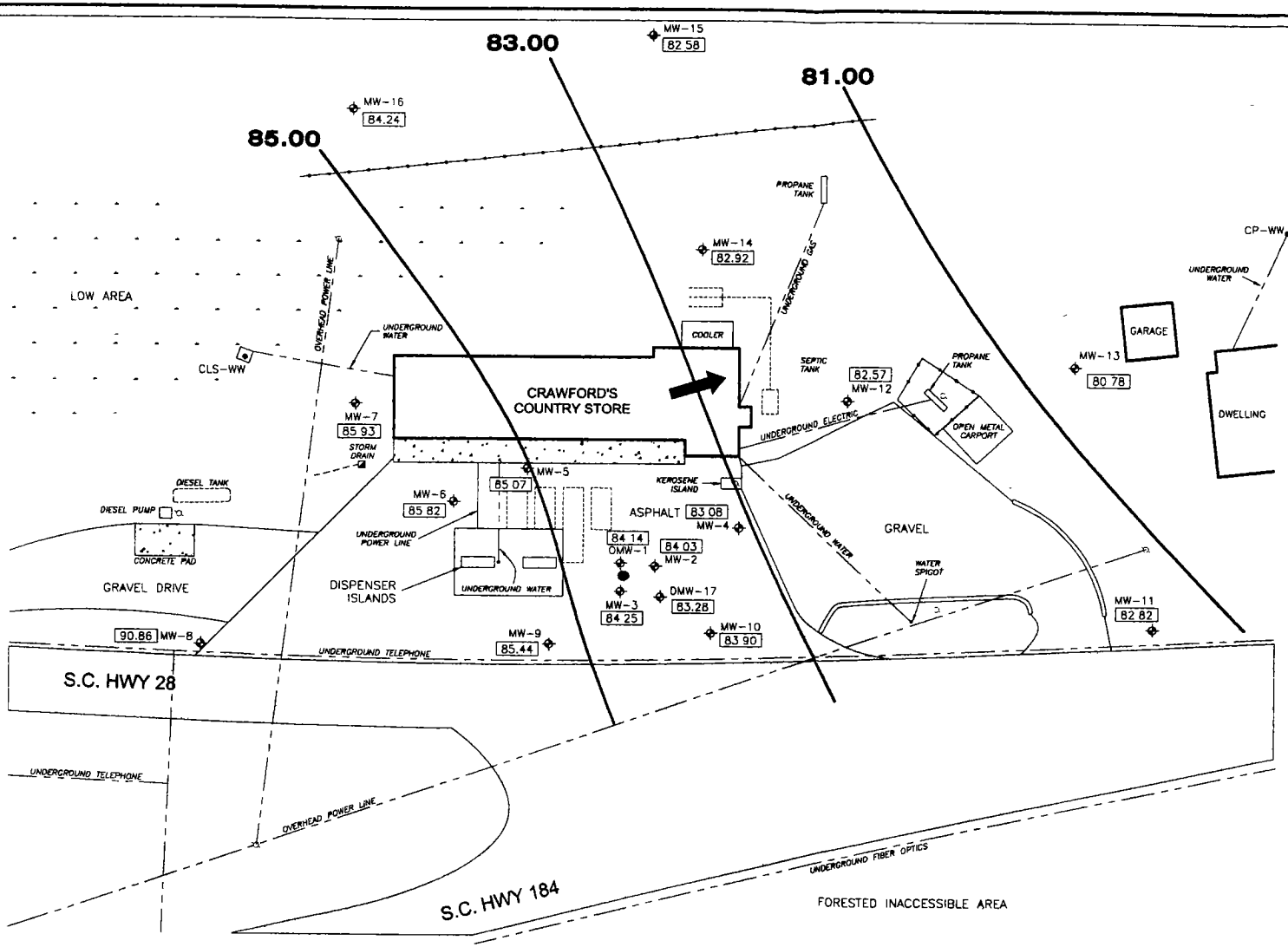
SITE ADDRESS: Crawford's Country Store - SCDHEC Site No 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 08/24/2000

DRAWN BY: J.Driscoll

FIGURE NO: 1




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| 0.00 | WATER TABLE ELEVATION (ft.) |
| 0.00 | WATER TABLE CONTOUR (ft) |
| | GROUND WATER FLOW DIRECTION |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

FIGURE TITLE: GROUND WATER FLOW AND ELEVATION MAP - APRIL 2000

PREPARED FOR: South Carolina Department of Health and Environmental Control

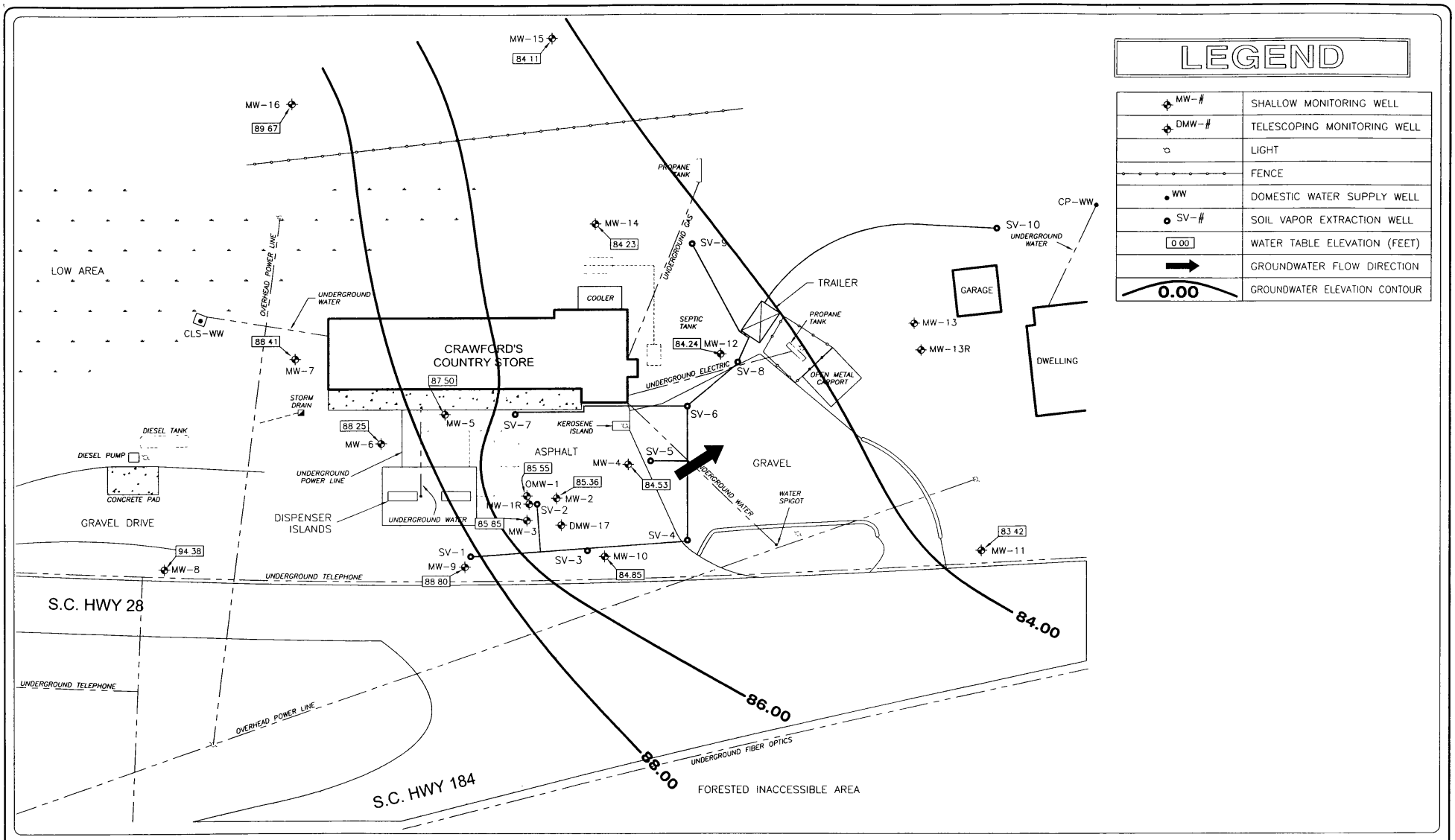
SITE ADDRESS: Crawford's Country Store - SCDHEC Site No 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 05/12/2000

DRAWN BY: J.Driscoll

FIGURE NO: [redacted]




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |
| 0.00 | WATER TABLE ELEVATION (FEET) |
| | GROUNDWATER FLOW DIRECTION |
| 0.00 | GROUNDWATER ELEVATION CONTOUR |

H2 ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No 12335
5870 Hwy 28 N
Abbeville, South Carolina

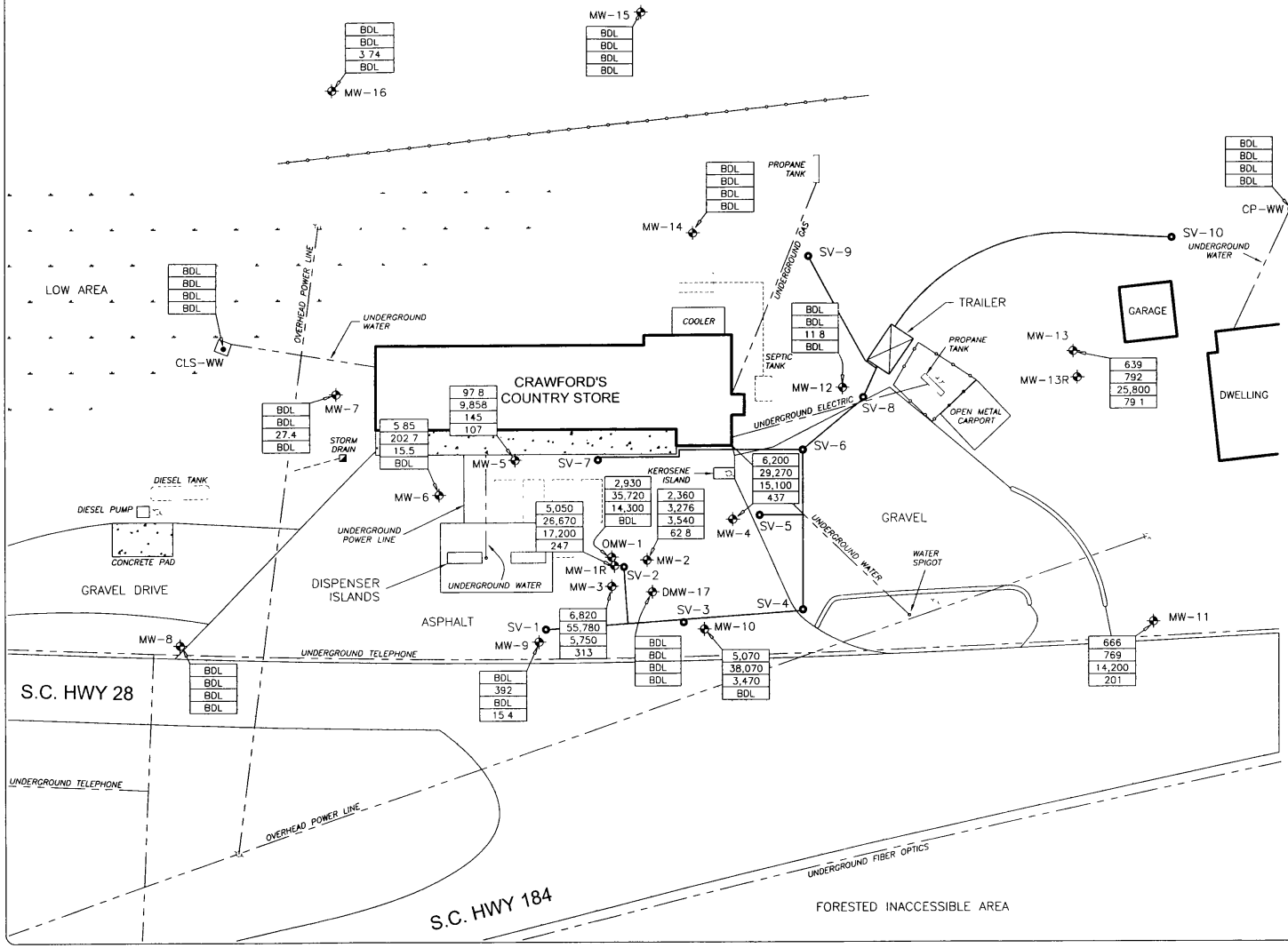
PROJECT NO: DHE-12335

DRAWING DATE: 3/8/2004

DRAWN BY: JJD

FIGURE NO: 2

FIGURE TITLE: GROUNDWATER FLOW MAP - 2/18/2004




# LEGEND

| | |
|---|---|
| MW-# | SHALLOW MONITORING WELL |
| DMW-# | TELESCOPING MONITORING WELL |
| | LIGHT |
| | FENCE |
| WW | DOMESTIC WATER SUPPLY WELL |
| SV-# | SOIL VAPOR EXTRACTION WELL |

| | |
|---|---|
| BDL | BENZENE |
| BDL | TOTAL BTEX |
| BDL | MTBE |
| BDL | NAPHTHALENE |

All results reported in parts per billion (ug/L)
BDL = Below detectable levels

H2O ENVIRONMENTAL, INC.
ASSESSMENT & REMEDIATION SPECIALISTS

SCALE: 40' 0 20' 40' 80'

NORTH

FIGURE TITLE: GROUNDWATER QUALITY MAP - 2/18/2004

PREPARED FOR: South Carolina Department of Health and Environmental Control

SITE ADDRESS: Crawford's Country Store - SCDHEC Site No 12335
5870 Hwy 28 N
Abbeville, South Carolina

PROJECT NO: DHE-12335

DRAWING DATE: 3/8/2004

DRAWN BY: JJD

FIGURE NO: 3

# ATTACHMENT 2
# TABLES

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 8/5/1999 | 17.95 | 22' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15 68 | 22' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 21 50 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 21 46 | 22' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 19.89 | 22' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17 18 | 22' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 18 74 | 22' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21 75 | 22' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 19 77 | 22' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 16 59 | 22' | 2" | 2.6 | NM | NM | NM | NM |
| | 9/17/2002 | 19 97 | 22' | 2" | 1.0 | NM | NM | 0.93 | 25 1 |
| | 2/18/2004 | 14 27 | 22' | 2" | 3 8 | 6.3 | 282 | 1 35 | 18 3 |
| MW-1R | 12/12/2002 | 17 44 | 22' | 2" | 2 2 | NM | 0.82 | 3 87 | 18.7 |
| | 3/31/2003 | 14 02 | 22' | 2" | 3 9 | 6.5 | NM | 2.68 | 20 0 |
| | 7/16/2003 | 9 21 | 22' | 2" | 6.3 | 6.4 | 385 | 257 | 19.3 |
| | 8/20/2003 | 8 65 | 22' | 2" | 6 5 | 6.1 | 363 | 8.25 | 26 6 |
| | 12/22/2003 | 15 47 | 22' | 2" | 3 2 | 8 0 | 336 | 1.48 | 21.2 |
| | 2/18/2004 | 14 09 | 22' | 2" | 3.9 | 6.1 | 317 | 1.68 | 19 1 |
| MW-2 | 8/5/1999 | 19 19 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 22.30 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 21 36 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 18 89 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17 42 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 19.03 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21 98 | 25' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 19.90 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 16.88 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 20.44 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/12/2002 | 17.84 | 25' | 2" | 3.5 | NM | 0.92 | 1.53 | 19.2 |
| | 3/31/2003 | 13.50 | 25' | 2" | 5.6 | 6.3 | NM | 2.30 | 19.2 |
| | 7/16/2003 | 12.39 | 25' | 2" | 6.2 | 4.7 | 243 | NM | 18.3 |
| | 8/20/2003 | 12.42 | 25' | 2" | 6.2 | 6.0 | 230 | 1.15 | 23.4 |
| | 12/22/2003 | 15.76 | 25' | 2" | 4.5 | 8.8 | 217 | 1.19 | 21.8 |
| | 2/18/2004 | 14.47 | 25' | 2" | 5.1 | 6.1 | 211 | 2.14 | 19.5 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-3 | 8/5/1999 | 17.96 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15.73 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 20.85 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 22 18 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 19 26 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17 41 | 25' | 2" | NM | NM | NM | NM | NM |
| | 9/13/2001 | 18.80 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/7/2001 | 21 24 | 25' | 2" | NM | NM | NM | NM | NM |
| | 3/5/2002 | 18 69 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | 15.44 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 9/17/2002 | 20.11 | 25' | 2" | 2 4 | NM | NM | 1 21 | 24.3 |
| | 12/12/2002 | 17.45 | 25' | 2" | 3.7 | NM | 0 53 | 2 91 | 19 6 |
| | 3/31/2003 | 13 32 | 25' | 2" | 5 7 | 6 1 | NM | 2 09 | 19.4 |
| | 7/16/2003 | 12 15 | 25' | 2" | 6 3 | 6 1 | 267 | NM | 20.9 |
| | 8/20/2003 | 12 31 | 25' | 2" | 6 2 | 6 1 | 196 | 4.25 | 24 5 |
| | 12/22/2003 | 15.49 | 25' | 2" | 4 7 | 8 3 | 133 | 1 43 | 19.5 |
| | 2/18/2004 | 14 13 | 25' | 2" | 5 3 | 6 0 | 137 | 1.25 | 18.5 |
| MW-4 | 8/5/2000 | 17.59 | 25' | 2" | 3 7 | 4.3 | 75.7 | 2.06 | 21.0 |
| | 4/26/2000 | 16.51 | 25' | 2" | 4 2 | 6 0 | 0.78 | 1.82 | 20.2 |
| | 8/1/2000 | 20 63 | 25' | 2" | 2 1 | 5.4 | 0 52 | 3.91 | 21.9 |
| | 12/13/2000 | 20.81 | 25' | 2" | 2.0 | 5 5 | NM | 1.90 | 18.5 |
| | 2/6/2001 | 19.09 | 25' | 2" | 2.9 | NM | NM | NM | NM |
| | 6/5/2001 | 17.70 | 25' | 2" | 3.6 | 5.3 | NM | 1 80 | 21 8 |
| | 9/13/2001 | 19.16 | 25' | 2" | 2.9 | NM | NM | 2.29 | 22.2 |
| | 12/7/2001 | 21.86 | 25' | 2" | 1.5 | 7.1 | NM | 2 42 | 21.5 |
| | 3/5/2002 | 18 91 | 25' | 2" | 3.0 | 6.9 | NM | 5 40 | 15.3 |
| | 6/6/2002 | 16 93 | 25' | 2" | 3 9 | NM | NM | NM | NM |
| | 9/17/2002 | 20.63 | 25' | 2" | 2 1 | NM | NM | 3 20 | 24 1 |
| | 12/12/2002 | 16.14 | 25' | 2" | 4 3 | NM | 0.79 | 2 32 | 19.4 |
| | 3/31/2003 | 18.91 | 25' | 2" | 3.0 | 6.0 | NM | 2.65 | 17.9 |
| | 7/16/2003 | NM | NM | NM | NM | NM | NM | NM | NM |
| | 8/20/2003 | 12.99 | 25' | 2" | 5.9 | 8.9 | 220 | 2.71 | 21.9 |
| | 12/22/2003 | NM | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/18/2004 | 15.06 | 25' | 2" | 4.9 | 5.6 | 109 | 2.04 | 20.0 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-5 | 8/5/1999 | 15.95 | 25' | 2" | 4.4 | 4.5 | 111.8 | 1 65 | 21 0 |
| | 4/26/2000 | 14.35 | 25' | 2" | 5.2 | 6.2 | 0.92 | 2 73 | 19.4 |
| | 8/1/2000 | 19.18 | 25' | 2" | 2 8 | 5.1 | 0 5 | 1 25 | 20.8 |
| | 12/13/2000 | 19.68 | 25' | 2" | 2 6 | 5 3 | NM | 2.51 | 18 4 |
| | 2/6/2001 | 16.50 | 25' | 2" | 4 2 | NM | NM | NM | NM |
| | 6/5/2001 | 15 51 | 25' | 2" | 4 6 | 4 5 | NM | 1.88 | 21 5 |
| | 9/13/2001 | 17.48 | 25' | 2" | 3 7 | NM | NM | 1 94 | 22 2 |
| | 12/7/2001 | 20.09 | 25' | 2" | 2 4 | 6 9 | NM | 2 16 | 21 8 |
| | 3/5/2002 | 16.15 | 25' | 2" | 4 3 | 6 8 | NM | 3 90 | 18 4 |
| | 6/6/2002 | 15 11 | 25' | 2" | 4 8 | NM | NM | NM | NM |
| | 9/17/2002 | 18 31 | 25' | 2" | 3.3 | NM | NM | 1 72 | 22 9 |
| | 12/12/2002 | 15 09 | 25' | 2" | 4 8 | NM | 0 61 | 1 50 | 20.2 |
| | 3/31/2003 | 11.51 | 25' | 2" | 6 6 | 6 2 | NM | 2 79 | 15.7 |
| | 7/16/2003 | 11 03 | 25' | 2" | 6 8 | 6 2 | 240 | NM | 22.1 |
| | 8/20/2003 | 11.04 | 25' | 2" | 6 8 | 5.8 | 22.0 | 2 11 | 22.0 |
| | 12/22/2003 | 13.43 | 25' | 2" | 5 7 | 7 3 | 212 | 1 47 | 18 6 |
| | 2/18/2004 | 11.92 | 25' | 2" | 6 4 | 6.1 | 255 | 4 47 | 15.3 |
| MW-6 | 8/5/1999 | 15.44 | 25' | 2" | 4.7 | 4.6 | 96 | 2.35 | 22.0 |
| | 4/26/2000 | 13.65 | 25' | 2" | 5 6 | 6 1 | 0.92 | 1.72 | 18.6 |
| | 8/1/2000 | 18.75 | 25' | 2" | 3 1 | 5.0 | 0.48 | 2 23 | 20.4 |
| | 12/13/2000 | 18.23 | 25' | 2" | 3 3 | 5.1 | NM | 1 42 | 18.4 |
| | 2/6/2001 | 15.34 | 25' | 2" | 4.7 | NM | NM | NM | NM |
| | 6/5/2001 | 14.84 | 25' | 2" | 5 0 | 5 6 | NM | 1 44 | 21.8 |
| | 9/13/2001 | 16.96 | 25' | 2" | 3 9 | NM | NM | 1 80 | 20.9 |
| | 12/7/2001 | 19.70 | 25' | 2" | 2 6 | 6.9 | NM | 2 05 | 20.4 |
| | 3/5/2002 | 15.20 | 25' | 2" | 4 8 | 6.7 | NM | 3.64 | 16.1 |
| | 6/6/2002 | 15 51 | 25' | 2" | 4 6 | NM | NM | NM | NM |
| | 9/17/2002 | 17.76 | 25' | 2" | 3 5 | NM | NM | 1 78 | 22.6 |
| | 12/12/2002 | 14.29 | 25' | 2" | 5 2 | NM | 1 32 | 0 51 | 19.1 |
| | 3/31/2003 | 10.77 | 25' | 2" | 7.0 | 6.2 | NM | 5.93 | 15 2 |
| | 7/16/2003 | 10.53 | 25' | 2" | 7 1 | 5.4 | 10 0 | NM | 21.3 |
| | 8/20/2003 | 10.55 | 25' | 2" | 7.1 | 5.3 | 18.0 | 3 27 | 21.7 |
| | 12/22/2003 | 13.13 | 25' | 2" | 5.8 | 6 7 | 104 | 2 51 | 17.0 |
| | 2/18/2004 | 11.22 | 25' | 2" | 6.7 | 5.9 | 103 | 2.07 | 16.9 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-7 | 8/5/1999 | 15.41 | 25' | 2" | 4.7 | 4.6 | 92.8 | 2 74 | 19 0 |
| | 4/26/2000 | 13.54 | 25' | 2" | 5 6 | 6.2 | 0.91 | 2 46 | 17 4 |
| | 8/1/2000 | 18.72 | 25' | 2" | 3.1 | 5.2 | 0 45 | 2 31 | 18.7 |
| | 12/13/2000 | 18 01 | 25' | 2" | 3.4 | 5.6 | NM | 1.96 | 16.5 |
| | 2/6/2001 | 15 41 | 25' | 2" | 4 7 | NM | NM | NM | NM |
| | 6/5/2001 | 14.61 | 25' | 2" | 5 1 | 5 4 | NM | 2 25 | 19 9 |
| | 9/13/2001 | 16.91 | 25' | 2" | 4 0 | NM | NM | 2 50 | 20 9 |
| | 12/7/2001 | 19.64 | 25' | 2" | 2 6 | 7 1 | NM | 2 18 | 19 5 |
| | 3/5/2002 | 14.75 | 25' | 2" | 5.0 | 6 8 | NM | 7 83 | 14 6 |
| | 6/6/2002 | 14.43 | 25' | 2" | 5 2 | NM | NM | NM | NM |
| | 9/17/2002 | 17 34 | 25' | 2" | 3 7 | NM | NM | 1.29 | 21 5 |
| | 12/12/2002 | 13 91 | 25' | 2" | 5.4 | 6.9 | 0 72 | 3 69 | 16 4 |
| | 3/31/2003 | 10 75 | 25' | 2" | 7.0 | 6 6 | NM | 3 45 | 11 7 |
| | 7/16/2003 | 10.92 | 25' | 2" | 6 9 | 3.3 | 683 | NM | 20 5 |
| | 8/20/2003 | 10 55 | 25' | 2" | 7 1 | 6 6 | 590 | 4.23 | 22 9 |
| | 12/22/2003 | 13 09 | 25' | 2" | 5.8 | 6.2 | 120 | 2 05 | 14 9 |
| | 2/18/2004 | 11 06 | 25' | 2" | 6 8 | 5 2 | 94.0 | 5 22 | 15 2 |
| MW-8 | 8/5/2000 | 14.59 | 25' | 2" | 5.1 | 4 9 | 45.4 | 3 01 | 21.0 |
| | 4/26/2000 | 11 56 | 25' | 2" | 6.6 | 6 3 | 0.72 | 2.06 | 18.4 |
| | 8/1/2000 | 19 18 | 25' | 2" | 2.8 | 5.3 | 0.53 | 0 81 | 23 0 |
| | 12/13/2000 | 17.96 | 25' | 2" | 3.4 | 5.4 | NM | 1.93 | 18 7 |
| | 2/6/2001 | 13.34 | 25' | 2" | 5.7 | NM | NM | NM | NM |
| | 6/5/2001 | 13.15 | 25' | 2" | 5 8 | 5.4 | NM | 2.02 | 21 5 |
| | 9/13/2001 | 16 64 | 25' | 2" | 4.1 | NM | NM | 1.56 | 20.3 |
| | 12/7/2001 | 19.73 | 25' | 2" | 2 6 | 6.9 | NM | 1.40 | 20.4 |
| | 3/5/2002 | 11.41 | 25' | 2" | 6.6 | 6.7 | NM | 5 60 | 15 8 |
| | 6/6/2002 | 12 93 | 25' | 2" | 5.9 | NM | NM | NM | NM |
| | 9/17/2002 | 16.72 | 25' | 2" | 4 0 | NM | NM | 1 16 | 23 6 |
| | 12/12/2002 | 11 42 | 25' | 2" | 6.6 | 9.1 | 0.67 | 2.60 | 16 6 |
| | 3/31/2003 | 8.24 | 25' | 2" | 8.2 | 5.3 | NM | 2.81 | 15.3 |
| | 7/16/2003 | 9.18 | 25' | 2" | 7.7 | 5.3 | 216 | NM | 23.0 |
| | 8/20/2003 | 8.45 | 25' | 2" | 8.1 | 4.7 | 196 | 1.71 | 23 4 |
| | 12/22/2003 | 11.15 | 25' | 2" | 6 8 | 6.1 | 112 | 2.21 | 16.6 |
| | 2/18/2004 | 8.04 | 25' | 2" | 8.3 | 5.6 | 199 | 1 86 | 13 7 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-9 | 8/5/2000 | 16.74 | 25' | 2" | 4.0 | 4.9 | 57.2 | 1 47 | 22.0 |
| | 4/26/2000 | 15.09 | 25' | 2" | 4.8 | 5.9 | 0.72 | 1.45 | 20 4 |
| | 8/1/2000 | 21.2 | 25' | 2" | 1 9 | 5.7 | 0.59 | 2.62 | 23.9 |
| | 12/13/2000 | 19.73 | 25' | 2" | 2.6 | 5 4 | NM | 1.12 | 18.6 |
| | 2/6/2001 | 17 54 | 25' | 2" | 3 6 | NM | NM | NM | NM |
| | 6/5/2001 | 16 35 | 25' | 2" | 4 2 | NM | NM | NM | NM |
| | 9/13/2001 | 18 40 | 25' | 2" | 3 2 | 4 4 | NM | 2 91 | 23.5 |
| | 12/7/2001 | 21 00 | 25' | 2" | 2 0 | 6.9 | NM | 3.43 | 22 6 |
| | 3/5/2002 | 17 38 | 25' | 2" | 3.7 | 6.8 | NM | 1.83 | 19 4 |
| | 6/6/2002 | 16 80 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 19 64 | 25' | 2" | 2 6 | NM | NM | 0 97 | 23 7 |
| | 12/12/2002 | 16 29 | 25' | 2" | 4.3 | NM | 0.26 | 1.30 | 19 9 |
| | 3/31/2003 | 11 90 | 25' | 2" | 6.4 | 5.4 | NM | 2 88 | 16.6 |
| | 7/16/2003 | 11 61 | 25' | 2" | 6.5 | 5.4 | 57 | NM | 22 2 |
| | 8/20/2003 | 11.55 | 25' | 2" | 6 6 | 3.5 | 63.0 | 2.23 | 23 9 |
| | 12/22/2003 | 13 49 | 25' | 2" | 5.6 | 6 6 | 102 | 1.49 | 16 0 |
| | 2/18/2004 | 11.73 | 25' | 2" | 6.5 | 5.6 | 78 0 | 2 67 | 18.5 |
| MW-10 | 8/5/1999 | 18.06 | 25' | 2" | NM | NM | NM | NM | NM |
| | 4/26/2000 | 15 75 | 25' | 2" | NM | NM | NM | NM | NM |
| | 8/1/2000 | 20.50 | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/13/2000 | 19.40 | 25' | 2" | NM | NM | NM | NM | NM |
| | 2/6/2001 | 18.84 | 25' | 2" | NM | NM | NM | NM | NM |
| | 6/5/2001 | 17.38 | 25' | 2" | 3.7 | 5.6 | NM | 1.4 | 22 9 |
| | 9/13/2001 | 18 82 | 25' | 2" | 3.0 | 5.2 | NM | 3.20 | 23.2 |
| | 12/7/2001 | 23.90 | 25' | 2" | 0.5 | NM | NM | NM | NM |
| | 3/5/2002 | 19.09 | 25' | 2" | 2.9 | 6.9 | NM | 9 55 | 19 3 |
| | 6/6/2002 | 16.78 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 20.53 | 25' | 2" | 2.2 | NM | NM | 2 90 | 23.3 |
| | 12/12/2002 | 18 00 | 25' | 2" | 3 4 | NM | 0 87 | 4 25 | 18.1 |
| | 3/31/2003 | 13.49 | 25' | 2" | 5.6 | 6.3 | NM | 2.70 | 19.0 |
| | 7/16/2003 | 12.65 | 25' | 2" | 6 0 | 6.3 | 135 | NM | 23 1 |
| | 8/20/2003 | 10.05 | 25' | 2" | 7.3 | 5.2 | 142 | 1.71 | 24.1 |
| | 12/22/2003 | 15.85 | 25' | 2" | 4 5 | 7.9 | 120 | 2 27 | 19 7 |
| | 2/18/2004 | 14.80 | 25' | 2" | 5.0 | 5 8 | 73.0 | 2.03 | 18.5 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-11 | 8/5/1999 | 15.60 | 25' | 2" | 4.6 | 4.8 | 42 7 | 6.38 | 22 0 |
| | 4/26/2000 | 13.65 | 25' | 2" | 5.6 | 6 2 | - 0 6 | 4.48 | 20.8 |
| | 8/1/2000 | 18.61 | 25' | 2" | 3.1 | 5.6 | 0 31 | 4 79 | 21.4 |
| | 12/13/2000 | 19 01 | 25' | 2" | 2.9 | 5 7 | NM | 5.15 | 19.8 |
| | 2/6/2001 | 17.43 | 25' | 2" | 3 7 | NM | NM | NM | NM |
| | 6/5/2001 | 15 96 | 25' | 2" | 4 4 | 5 8 | NM | 6.01 | 21.4 |
| | 9/13/2001 | 17.23 | 25' | 2" | 3 8 | 4 6 | NM | 5 82 | 22 4 |
| | 12/7/2001 | 19.74 | 25' | 2" | 2 6 | 6.8 | NM | 4.76 | 21 7 |
| | 3/5/2002 | 17.12 | 25' | 2" | 3 9 | 6.9 | NM | 7 56 | 15 2 |
| | 6/6/2002 | 15.03 | 25' | 2" | 4 9 | NM | NM | NM | NM |
| | 9/17/2002 | 18.88 | 25' | 2" | 3 0 | NM | NM | 1 68 | 23.2 |
| | 12/12/2002 | 16 13 | 25' | 2" | 4.3 | NM | 0 23 | 2.73 | 18.1 |
| | 3/31/2003 | 11.72 | 25' | 2" | 6 5 | 6.1 | NM | 2 18 | 16.6 |
| | 7/16/2003 | 10.25 | 25' | 2" | 7 2 | 6 0 | 70.0 | NM | 22.5 |
| | 8/20/2003 | 10 77 | 25' | 2" | 7 0 | 5.3 | 82.0 | 1.71 | 21.8 |
| | 12/22/2003 | 14 11 | 25' | 2" | 5 3 | 5 9 | 54.0 | 2.74 | 17 5 |
| | 2/18/2004 | 13.05 | 25' | 2" | 5 8 | 5 5 | 45 0 | 3 45 | 18 7 |
| MW-12 | 8/5/1999 | 17 33 | 25' | 2" | 3 8 | 4.6 | 129.2 | 2.09 | 19.0 |
| | 4/26/2000 | 16.06 | 25' | 2" | 4 4 | 6.3 | 1.03 | 2 9 | 18.5 |
| | 8/1/2000 | 20.15 | 25' | 2" | 2 4 | 4.5 | 0.67 | 5 01 | 19.6 |
| | 12/13/2000 | 23.7 | 25' | 2" | 0.6 | 5.4 | NM | 2.9 | 17.1 |
| | 2/6/2001 | 18.45 | 25' | 2" | 3.2 | NM | NM | NM | NM |
| | 6/5/2001 | 17.26 | 25' | 2" | 3 8 | 10 2 | NM | 2.07 | 19.3 |
| | 9/13/2001 | 18.63 | 25' | 2" | 3.1 | NM | NM | 2.71 | 20 5 |
| | 12/7/2001 | 21.37 | 25' | 2" | 1.8 | 7.2 | NM | 8.00 | 19.9 |
| | 3/5/2002 | 18.65 | 25' | 2" | 3 1 | 6 8 | NM | 8.53 | 15.7 |
| | 6/6/2002 | 16.90 | 25' | 2" | 4.0 | NM | NM | NM | NM |
| | 9/17/2002 | 19.97 | 25' | 2" | 2.5 | 8 0 | NM | 8.07 | 21 7 |
| | 12/12/2002 | 17.33 | 25' | 2" | 3 8 | NM | 0 59 | 7.73 | 15.3 |
| | 3/31/2003 | 13.46 | 25' | 2" | 5.6 | 5.4 | NM | 3.75 | 15.9 |
| | 7/16/2003 | 12.51 | 25' | 2" | 6.1 | 4.6 | 247 | NM | 21.4 |
| | 8/20/2003 | 12.70 | 25' | 2" | 6.0 | 4.9 | 213 | 6.50 | 20.5 |
| | 12/22/2003 | 15.71 | 25' | 2" | 4.5 | 7.3 | 126 | 2.31 | 17.7 |
| | 2/18/2004 | 14.39 | 25' | 2" | 5.2 | 5.6 | 107 | 1.97 | 21 0 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-13 | 8/5/1999 | 21 26 | 25' | 2" | 1.8 | 4 2 | 51 7 | 2 32 | 18.0 |
| | 4/26/2000 | 20.02 | 25' | 2" | 2.4 | 6 3 | 0 62 | 3.00 | 18.5 |
| | 8/1/2000 | 24.05 | 25' | 2" | 0.5 | 5 2 | 0.42 | 2.14 | 19.7 |
| | 12/13/2000 | 24 13 | 25' | 2" | 0 4 | 5 5 | NM | 1 04 | 15.9 |
| | 2/6/2001 | 22.43 | 25' | 2" | 1 3 | NM | NM | NM | NM |
| | 6/5/2001 | 21.34 | 25' | 2" | 1 8 | NM | 5 4 | 2 61 | 19 6 |
| | 9/13/2001 | 22.91 | 25' | 2" | 1 0 | NM | NM | NM | 20 3 |
| | 12/7/2001 | 25.22 | 25 22' | 2" | 0 0 | NM | NM | NM | NM |
| | 3/5/2002 | 22.21 | 25 22' | 2" | 1 5 | 6 9 | NM | 7 99 | 16.4 |
| | 6/6/2002 | 20.82 | 25 22' | 2" | 2 2 | NM | NM | NM | NM |
| | 9/17/2002 | 24.22 | 25 22' | 2" | 0 5 | NM | NM | 4 02 | 22 1 |
| | 12/12/2002 | 21.33 | 25 22' | 2" | 1 9 | NM | 0 31 | 2 85 | 15.9 |
| MW-13R | 3/31/2003 | 17.71 | 25.22' | 2" | 3 7 | 5 5 | NM | 2.19 | 16 6 |
| | 7/16/2003 | 16.89 | 25.22' | 2" | 4.1 | 5 6 | 69 0 | NM | 22 1 |
| | 8/20/2003 | 17 17 | 25.22' | 2" | 3.9 | 7 9 | 300 | 2 65 | 19 6 |
| | 12/22/2003 | NM | 25.22' | 2" | NM | NM | NM | NM | NM |
| | 2/18/2004 | 19 24 | 25 22' | 2" | 2.9 | 5 6 | 111 | 3 75 | 20 1 |
| MW-14 | 8/5/1999 | 7.96 | 25' | 2" | 8 3 | 5 0 | 312 | 0.80 | 19.0 |
| | 4/26/2000 | 6.46 | 25' | 2" | 9.1 | 6 1 | 1 56 | 1.72 | 15 5 |
| | 8/1/2000 | 10.8 | 25' | 2" | 6 9 | 5 4 | 0 93 | 1.43 | 18.8 |
| | 12/13/2000 | 10.8 | 25' | 2" | 6.9 | 5 5 | NM | 1.72 | 14.7 |
| | 2/6/2001 | 8.72 | 25' | 2" | 8.0 | NM | NM | NM | NM |
| | 6/5/2001 | 7.32 | 25' | 2" | 8.6 | 5.8 | NM | 2 08 | 17.4 |
| | 9/13/2001 | 9.31 | 25' | 2" | 7.7 | NM | NM | 1.77 | 21 0 |
| | 12/7/2001 | 11.91 | 25' | 2" | 6.4 | 6.9 | NM | 1.84 | 20.5 |
| | 3/5/2002 | 8.51 | 25' | 2" | 8.1 | 6.9 | NM | 5.90 | 12.2 |
| | 6/6/2002 | 7 41 | 25' | 2" | 8.6 | NM | NM | NM | NM |
| | 9/17/2002 | 9.98 | 25' | 2" | 7.3 | NM | NM | 4 58 | 21.4 |
| | 12/12/2002 | 8.22 | 25' | 2" | 8.2 | NM | 0.48 | 5 50 | 14.6 |
| | 3/31/2003 | 4.25 | 25' | 2" | 10.1 | 5 8 | NM | 1.63 | 13.6 |
| | 7/16/2003 | 3.95 | 25' | 2" | 10.3 | 6.5 | 289 | NM | 23.5 |
| | 8/20/2003 | 3.35 | 25' | 2" | 10.6 | 5.2 | 214 | 2.57 | 23.4 |
| | 12/22/2003 | 6.91 | 25' | 2" | 8.8 | 6 3 | 395 | 1 64 | 14.5 |
| | 2/18/2004 | 5.15 | 25' | 2" | 9.7 | 5.9 | 286 | 5.71 | 10 6 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-15 | 8/5/1999 | 6.28 | 25' | 2" | 9.2 | 4.8 | 86.5 | 0.87 | 18 0 |
| | 4/26/2000 | 4 75 | 25' | 2" | 9.9 | 6.5 | 0.6 | 3.32 | 16 2 |
| | 8/1/2000 | 9.11 | 25' | 2" | 7.8 | 5.5 | 0 41 | 3.17 | 19 5 |
| | 12/13/2000 | 8 57 | 25' | 2" | 8.0 | 5.6 | NM | 1 93 | 15 1 |
| | 2/6/2001 | 6 36 | 25' | 2" | 9.1 | NM | NM | NM | NM |
| | 6/5/2001 | 5 68 | 25' | 2" | 9 4 | 6.1 | NM | 2 41 | 19 2 |
| | 9/13/2001 | 7.61 | 25' | 2" | 8 5 | NM | NM | 2 90 | 21 2 |
| | 12/7/2001 | 9 91 | 25' | 2" | 7 4 | 6.9 | NM | 3 66 | 20 3 |
| | 3/5/2002 | 5.86 | 25' | 2" | 9 4 | 6 6 | NM | 6 50 | 12 6 |
| | 6/6/2002 | NM | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/12/2002 | 4 74 | 25' | 2" | 9 9 | NM | 0 17 | 7 08 | 13 8 |
| | 3/31/2003 | 2 69 | 25' | 2" | 10 9 | 5.9 | NM | 5 45 | 12 6 |
| | 7/16/2003 | 2.15 | 25' | 2" | 11 2 | 8 6 | 117 | NM | 23 4 |
| | 8/20/2003 | 2 22 | 25' | 2" | 11 1 | 5.6 | 116 | 2 42 | 21 9 |
| | 12/22/2003 | 4.01 | 25' | 2" | 10.3 | 8 5 | 75 0 | 4 17 | 13 4 |
| | 2/18/2004 | 3.22 | 25' | 2" | 10.7 | 5.6 | 84 0 | 4 19 | 12 6 |
| MW-16 | 8/5/1999 | 11.22 | 25' | 2" | 6 7 | 4.9 | 49 | 0 79 | 18 0 |
| | 4/26/2000 | 9.50 | 25' | 2" | 7.6 | 6.5 | 0 61 | 1.66 | 15.5 |
| | 8/1/2000 | 14 35 | 25' | 2" | 5.2 | 6.0 | 0.95 | 1 64 | 19 3 |
| | 12/13/2000 | 13.45 | 25' | 2" | 5 6 | 5.8 | NM | 2.27 | 15 6 |
| | 2/6/2001 | 10.89 | 25' | 2" | 6.9 | NM | NM | NM | NM |
| | 6/5/2001 | 10.34 | 25' | 2" | 7.2 | 6.5 | NM | 2.02 | 18.3 |
| | 9/13/2001 | 12 58 | 25' | 2" | 6 1 | NM | NM | 1 87 | 21 5 |
| | 12/7/2001 | 13.41 | 25' | 2" | 5.7 | 6.9 | NM | 4 75 | 19 1 |
| | 3/5/2002 | 8.67 | 25' | 2" | 8.0 | 6.7 | NM | 5.20 | 12.4 |
| | 6/6/2002 | NM | 25' | 2" | NM | NM | NM | NM | NM |
| | 12/12/2002 | 9.58 | 25' | 2" | 7.5 | NM | 0.25 | 3 53 | 14 6 |
| | 3/31/2003 | 7 29 | 25' | 2" | 8 7 | 5.5 | NM | 1 85 | 12 8 |
| | 7/16/2003 | 6.95 | 25' | 2" | 8.8 | 5.9 | 67 0 | NM | 20.4 |
| | 8/20/2003 | 7.03 | 25' | 2" | 8.8 | 5.0 | 72.0 | 2.21 | 22.6 |
| | 12/22/2003 | 8.75 | 25' | 2" | 7.9 | 5.5 | 64 0 | 5.83 | 17 5 |
| | 2/18/2004 | 4.07 | 25' | 2" | 10 2 | 5.7 | 69.0 | 5.42 | 12 8 |

# TABLE 1
# SUMMARY OF GROUND WATER FIELD DATA

Crawford's Country Store
5870 Hwy 28 N
Abbeville, SC
Site ID # 12335

| Well I.D. | Date Sampled | DTW | DTB | Casing Diameter | 3 Well Volumes | pH | Specific Condutivity | Dissolved Oxygen | Temp. C |
|---|---|---|---|---|---|---|---|---|---|
| MW-17 | 8/5/1999 | 16.16 | 75' | 2" | 28.8 | 5.6 | 90 8 | 2.76 | 20 5 |
| | 4/26/2000 | 16.8 | 75' | 2" | 28.5 | 6.4 | 0.86 | 6.1 | 20 8 |
| | 8/1/2000 | 19 27 | 75' | 2" | 27.3 | 6.2 | 0.59 | 3.12 | 22 5 |
| | 12/13/2000 | 19.20 | 75' | 2" | 27 3 | NM | NM | NM | NM |
| | 2/6/2001 | 16.82 | 75' | 2" | 28 5 | NM | NM | NM | NM |
| | 6/5/2001 | 15 52 | 75' | 2" | 29 1 | 7 1 | NM | 2.67 | 21 8 |
| | 9/13/2001 | 17.42 | 75' | 2" | 28 2 | NM | NM | 3 60 | 22 5 |
| | 12/7/2001 | 19 54 | 75' | 2" | 27 1 | 7 1 | NM | 2 73 | 22 5 |
| | 3/5/2002 | NM | 75' | 2" | NM | NM | NM | NM | NM |
| | 6/6/2002 | NM | 75' | 2" | NM | NM | NM | NM | NM |
| | 9/17/2002 | 18 32 | 75' | 2" | 27 7 | NM | NM | 4 12 | 23 1 |
| | 12/12/2002 | 16 66 | 75' | 2" | 28.5 | NM | 0.43 | 3 2 | 19 3 |
| | 3/31/2003 | 13.32 | 75' | 2" | 30.2 | 6.8 | NM | 5.23 | 21 1 |
| | 7/16/2003 | 11.39 | 75' | 2" | 31 1 | 6.7 | 107 | NM | 23 5 |
| | 8/20/2003 | 11 05 | 75' | 2" | 31.3 | 6.2 | 110 | 4 46 | 23 8 |
| | 12/22/2003 | 13.95 | 75' | 2" | 29 9 | 5.2 | 106 | 4.05 | 19 9 |
| | 2/18/2004 | 12 57 | 75' | 2" | 30 5 | 8.4 | 65 0 | 6.61 | 17 5 |

NOTES
NS - Not sampled
Temperature in Degrees Celcius
Dissolved Oxygen in mg/L
Depth to Water and Depth to bottom in units of feet
Well volumes (Gallons)
Specific Conductivity (umhos/cm)

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| OMW-1 | 01-Dec-97 | 99.82 | 17.13 | | 82.69 |
| | 05-Aug-99 | | 17.95 | 1.05 | 81.87 |
| | 26-Apr-00 | | 15 68 | 0.99 | 84.14 |
| | 01-Aug-00 | | 21.50 | 1.40 | 78.32 |
| | 13-Dec-00 | | 21.46 | 1.70 | 78.36 |
| | 06-Feb-01 | | 19.89 | 1.78 | 79 93 |
| | 05-Jun-01 | | 17 18 | 0 19 | 82.64 |
| | 16-Aug-01 | | 18 10 | 0 13 | 81.72 |
| | 13-Sep-01 | | 18 74 | 0.02 | 81.08 |
| | 26-Sep-01 | | 19.31 | 0.07 | 80 51 |
| | 27-Sep-01 | | 19 32 | 0 01 | 80.50 |
| | 19-Oct-01 | | 19 93 | 0 02 | 79.89 |
| | 09-Nov-01 | | 21 00 | 0 39 | 78 82 |
| | 21-Nov-01 | | 21.63 | 1 28 | 78.19 |
| | 05-Dec-01 | | 21.65 | 0.96 | 78 17 |
| | 07-Dec-01 | | 21 75 | 0 76 | 78.07 |
| | 10-Dec-01 | | 21.65 | 0.01 | 78 17 |
| | 11-Dec-01 | | 21 65 | sheen | 78.17 |
| | | | 21.61 | 0.40 | 78.21 |
| | 07-Jan-02 | | 21 76 | 0 40 | 78.06 |
| | 04-Feb-02 | | 21 45 | 1.31 | 78.37 |
| | 05-Mar-02 | | 19 77 | 0 17 | 80 05 |
| | 19-Apr-02 | | 16 65 | 0 01 | 83 17 |
| | 17-May-02 | | 15.76 | 0.01 | 84 06 |
| | 24-May-02 | | 15 86 | sheen | 83.96 |
| | 28-May-02 | | 16.09 | sheen | 83 73 |
| | 30-May-02 | | 19.11 | sheen | 80.71 |
| | 06-Jun-02 | | 16.59 | | 83.23 |
| | 17-Sep-02 | | 19.97 | | 79.85 |
| | 18-Feb-04 | | 14 27 | | 85 55 |
| MW-1R | 12-Dec-02 | NM | 17.44 | | NM |
| | 31-Mar-03 | | 14 02 | | NM |
| | 16-Jul-03 | | 9 21 | | NM |
| | 20-Aug-03 | | 8.65 | | NM |
| | 22-Dec-03 | | 15.47 | | NM |
| | 18-Feb-04 | | 14.09 | | NM |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-2 | 01-Dec-97 | 99.83 | 17.43 | | 82.40 |
| | 05-Aug-99 | | 19.19 | 2.29 | 80.64 |
| | 26-Apr-00 | | 15.80 | 2.18 | 84.03 |
| | 01-Aug-00 | | 22.30 | 2.10 | 77.53 |
| | 13-Dec-00 | | 21 36 | 0.84 | 78.47 |
| | 06-Feb-01 | | 18.89 | sheen | 80.94 |
| | 05-Jun-01 | | 17 42 | sheen | 82.41 |
| | 16-Aug-01 | | 18.35 | | 81.48 |
| | 13-Sep-01 | | 19 03 | | 80.80 |
| | 26-Sep-01 | | 19.42 | sheen | 80.41 |
| | 27-Sep-01 | | 19.69 | 0.01 | 80.14 |
| | 19-Oct-01 | | 20.22 | | 79.61 |
| | 09-Nov-01 | | 21 02 | 0.01 | 78 81 |
| | 21-Nov-01 | | 20.70 | sheen | 79.13 |
| | 05-Dec-01 | | 21 59 | 0 63 | 78.24 |
| | 07-Dec-01 | | 21.98 | 0.02 | 77.85 |
| | 10-Dec-01 | | 22.00 | 0.01 | 77.83 |
| | 11-Dec-01 | | 21 91 | sheen | 77.92 |
| | | | 21.73 | 0.02 | 78.10 |
| | 07-Jan-02 | | 22 34 | 0.22 | 77.49 |
| | 04-Feb-02 | | 20 50 | 0.15 | 79.33 |
| | 05-Mar-02 | | 19.90 | sheen | 79.93 |
| | 19-Apr-02 | | 17 03 | 0.01 | 82.80 |
| | 17-May-02 | | 16 25 | 0 01 | 83.58 |
| | 24-May-02 | | 16 28 | 0 01 | 83 55 |
| | 28-May-02 | | 16.49 | sheen | 83.34 |
| | 30-May-02 | | 19.50 | | 80.33 |
| | 06-Jun-02 | | 16.88 | | 82.95 |
| | 17-Sep-02 | | 20.44 | 0.05 | 79.39 |
| | 12-Dec-02 | | 17.84 | | 81.99 |
| | 31-Mar-03 | | 13.50 | | 86.33 |
| | 16-Jul-03 | | 12.39 | | 87.44 |
| | 20-Aug-03 | | 12 42 | | 87.41 |
| | 22-Dec-03 | | 15.76 | | 84.07 |
| | 18-Feb-04 | | 14.47 | | 85.36 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-3 | 01-Dec-97 | 99.98 | 17.00 | | 82.98 |
| | 05-Aug-99 | | 17.96 | 1.01 | 82.02 |
| | 26-Apr-00 | | 15.73 | 0 68 | 84.25 |
| | 01-Aug-00 | | 20.85 | 0.78 | 79 13 |
| | 13-Dec-00 | | 22.18 | 2 22 | 77.80 |
| | 06-Feb-01 | | 19.26 | 0 96 | 80 72 |
| | 05-Jun-01 | | 17.41 | 0 40 | 82 57 |
| | 16-Aug-01 | | 18 19 | 0 09 | 81 79 |
| | 13-Sep-01 | | 18.80 | 0 02 | 81 18 |
| | 26-Sep-01 | | 19.25 | sheen | 80 73 |
| | 27-Sep-01 | | 19 32 | 0 04 | 80.66 |
| | 19-Oct-01 | | 20.04 | 0 06 | 79 94 |
| | 09-Nov-01 | | 20.86 | sheen | 79.12 |
| | 21-Nov-01 | | 20.59 | sheen | 79.39 |
| | 05-Dec-01 | | 21.10 | sheen | 78 88 |
| | 07-Dec-01 | | 21 24 | sheen | 78 74 |
| | 10-Dec-01 | | 21.62 | 0 01 | 78.36 |
| | 11-Dec-01 | | 21.65 | sheen | 78.33 |
| | | | 22.01 | 0 56 | 77.97 |
| | 07-Jan-02 | | 22.87 | 1 15 | 77.11 |
| | 04-Feb-02 | | 21.20 | 0 75 | 78 78 |
| | 05-Mar-02 | | 18 69 | 0 27 | 81.29 |
| | 19-Apr-02 | | 16.60 | sheen | 83 38 |
| | 17-May-02 | | 15 78 | 0 01 | 84.20 |
| | 24-May-02 | | 15.88 | sheen | 84.10 |
| | 28-May-02 | | 16.12 | sheen | 83.86 |
| | 30-May-02 | | 12.14 | | 87.84 |
| | 06-Jun-02 | | 15.44 | | 84.54 |
| | 17-Sep-02 | | 20.11 | | 79.87 |
| | 12-Dec-02 | | 17 45 | | 82 53 |
| | 31-Mar-03 | | 13 32 | | 86 66 |
| | 16-Jul-03 | | 12.15 | | 87 83 |
| | 20-Aug-03 | | 12.31 | | 87.67 |
| | 22-Dec-03 | | 15 49 | | 84 49 |
| | 18-Feb-04 | | 14.13 | | 85.85 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-4 | 01-Dec-97 | 99.59 | 17.60 | | 81.99 |
| | 05-Aug-99 | | 17.59 | | 82.00 |
| | 26-Apr-00 | | 16.51 | | 83.08 |
| | 01-Aug-00 | | 20.63 | | 78.96 |
| | 13-Dec-00 | | 20.81 | | 78.78 |
| | 06-Feb-01 | | 19.09 | | 80.50 |
| | 05-Jun-01 | | 17 70 | | 81 89 |
| | 13-Sep-01 | | 19.16 | | 80 43 |
| | 07-Dec-01 | | 21 86 | | 77 73 |
| | 05-Mar-02 | | 18.91 | | 80.68 |
| | 06-Jun-02 | | 16.93 | | 82 66 |
| | 17-Sep-02 | | 20.63 | | 78 96 |
| | 12-Dec-02 | | 16.14 | | 83 45 |
| | 31-Mar-03 | | 18.91 | | 80.68 |
| | 16-Jul-03 | | NM | | NM |
| | 20-Aug-03 | | 12.99 | | 86.60 |
| | 22-Dec-03 | | NM | | NM |
| | 18-Feb-04 | | 15.06 | | 84.53 |
| MW-5 | 01-Dec-97 | 99.42 | 15 04 | | 84.38 |
| | 05-Aug-99 | | 15 95 | | 83 47 |
| | 26-Apr-00 | | 14.35 | | 85 07 |
| | 01-Aug-00 | | 19 18 | | 80 24 |
| | 13-Dec-00 | | 19.68 | | 79 74 |
| | 06-Feb-01 | | 16.50 | | 82 92 |
| | 05-Jun-01 | | 15 51 | | 83 91 |
| | 13-Sep-01 | | 17.48 | | 81 94 |
| | 07-Dec-01 | | 20.09 | | 79.33 |
| | 05-Mar-02 | | 16.15 | | 83 27 |
| | 06-Jun-02 | | 15 11 | | 84 31 |
| | 17-Sep-02 | | 18 31 | | 81 11 |
| | 12-Dec-02 | | 15.09 | | 84 33 |
| | 31-Mar-03 | | 11.51 | | 87 91 |
| | 16-Jul-03 | | 11 03 | | 88 39 |
| | 20-Aug-03 | | 11.04 | | 88 38 |
| | 22-Dec-03 | | 13 43 | | 85 99 |
| | 18-Feb-04 | | 11.92 | | 87 50 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-6 | 01-Dec-97 | 99.47 | 14.37 | | 85.10 |
| | 05-Aug-99 | | 15.44 | | 84.03 |
| | 26-Apr-00 | | 13.65 | | 85.82 |
| | 01-Aug-00 | | 18.75 | | 80.72 |
| | 13-Dec-00 | | 18.23 | | 81.24 |
| | 06-Feb-01 | | 15.34 | | 84.13 |
| | 05-Jun-01 | | 14.84 | | 84.63 |
| | 13-Sep-01 | | 16.96 | | 82.51 |
| | 07-Dec-01 | | 19.70 | | 79.77 |
| | 05-Mar-02 | | 15.20 | | 84.27 |
| | 06-Jun-02 | | 15.51 | | 83 96 |
| | 17-Sep-02 | | 17.76 | | 81.71 |
| | 12-Dec-02 | | 14.29 | | 85 18 |
| | 31-Mar-03 | | 10.77 | | 88.70 |
| | 16-Jul-03 | | 10 53 | | 88.94 |
| | 20-Aug-03 | | 10.04 | | 89.43 |
| | 22-Dec-03 | | 13.13 | | 86.34 |
| | 18-Feb-04 | | 11.22 | | 88.25 |
| MW-7 | 01-Dec-97 | 99 47 | 13 96 | | 85.51 |
| | 05-Aug-99 | | 15.41 | | 84.06 |
| | 26-Apr-00 | | 13 54 | | 85 93 |
| | 01-Aug-00 | | 18 72 | | 80.75 |
| | 13-Dec-00 | | 18 01 | | 81 46 |
| | 06-Feb-01 | | 15 41 | | 84.06 |
| | 05-Jun-01 | | 14 61 | | 84.86 |
| | 13-Sep-01 | | 16.91 | | 82.56 |
| | 07-Dec-01 | | 19.64 | | 79.83 |
| | 05-Mar-02 | | 14 75 | | 84.72 |
| | 06-Jun-02 | | 14.43 | | 85.04 |
| | 17-Sep-02 | | 17 34 | | 82.13 |
| | 12-Dec-02 | | 13.91 | | 85.56 |
| | 31-Mar-03 | | 10.75 | | 88.72 |
| | 16-Jul-03 | | 10.92 | | 88.55 |
| | 20-Aug-03 | | 10 55 | | 88 92 |
| | 22-Dec-03 | | 13 09 | | 86.38 |
| | 18-Feb-04 | | 11.06 | | 88.41 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-8 | 01-Dec-97 | 102.42 | 12.53 | | 89.89 |
| | 05-Aug-99 | | 14.59 | | 87.83 |
| | 26-Apr-00 | | 11.56 | | 90.86 |
| | 01-Aug-00 | | 19.18 | | 83.24 |
| | 13-Dec-00 | | 17.96 | | 84.46 |
| | 06-Feb-01 | | 13 34 | | 89.08 |
| | 05-Jun-01 | | 13.15 | | 89.27 |
| | 13-Sep-01 | | 16 64 | | 85.78 |
| | 07-Dec-01 | | 19 73 | | 82.69 |
| | 05-Mar-02 | | 11.41 | | 91.01 |
| | 06-Jun-02 | | 12 93 | | 89.49 |
| | 17-Sep-02 | | 16.72 | | 85.70 |
| | 12-Dec-02 | | 11 42 | | 91.00 |
| | 31-Mar-03 | | 8.24 | | 94.18 |
| | 16-Jul-03 | | 9 18 | | 93 24 |
| | 20-Aug-03 | | 8.45 | | 93.97 |
| | 22-Dec-03 | | 11 15 | | 91.27 |
| | 18-Feb-04 | | 8 04 | | 94.38 |
| MW-9 | 01-Dec-97 | 100 53 | 16 17 | | 84.36 |
| | 05-Aug-99 | | 16 74 | | 83.79 |
| | 26-Apr-00 | | 15 09 | | 85.44 |
| | 01-Aug-00 | | 21 20 | | 79 33 |
| | 13-Dec-00 | | 19.73 | | 80 80 |
| | 06-Feb-01 | | 17.54 | | 82.99 |
| | 05-Jun-01 | | 16 35 | | 84 18 |
| | 13-Sep-01 | | 18 40 | | 82.13 |
| | 07-Dec-01 | | 21 00 | | 79.53 |
| | 05-Mar-02 | | 17 38 | | 83.15 |
| | 06-Jun-02 | | 16 80 | | 83.73 |
| | 17-Sep-02 | | 19.64 | | 80.89 |
| | 12-Dec-02 | | 16 29 | | 84 24 |
| | 31-Mar-03 | | 11 90 | | 88.63 |
| | 16-Jul-03 | | 11 61 | | 88.92 |
| | 20-Aug-03 | | 11 55 | | 88 98 |
| | 22-Dec-03 | | 13 49 | | 87.04 |
| | 18-Feb-04 | | 11.73 | | 88.80 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-10 | 01-Dec-97 | 99.65 | 17.40 | | 82.25 |
| | 05-Aug-99 | | 18.06 | 1 01 | 81.59 |
| | 26-Apr-00 | | 15.75 | 1 65 | 83.90 |
| | 01-Aug-00 | | 20.50 | 0.03 | 79 15 |
| | 13-Dec-00 | | 19.40 | 0 01 | 80.25 |
| | 06-Feb-01 | | 18 84 | sheen | 80 81 |
| | 05-Jun-01 | | 17.38 | | 82 27 |
| | 16-Aug-01 | | 18.15 | | 81 50 |
| | 13-Sep-01 | | 18.82 | | 80 83 |
| | 07-Dec-01 | | 23 90 | | 75.75 |
| | 11-Dec-01 | | 21 88 | | 77 77 |
| | 04-Feb-02 | | 20 65 | | 79 00 |
| | 05-Mar-02 | | 19.09 | | 80 56 |
| | 06-Jun-02 | | 16.78 | | 82.87 |
| | 17-Sep-02 | | 20.53 | | 79 12 |
| | 12-Dec-02 | | 18.00 | | 81 65 |
| | 31-Mar-03 | | 13 49 | | 86 16 |
| | 16-Jul-03 | | 12.65 | | 87 00 |
| | 20-Aug-03 | | 10.05 | | 89.60 |
| | 22-Dec-03 | | 15 85 | | 83.80 |
| | 18-Feb-04 | | 14.80 | | 84 85 |
| MW-11 | 01-Dec-97 | 96.47 | 15.74 | | 80 73 |
| | 05-Aug-99 | | 15 60 | | 80.87 |
| | 26-Apr-00 | | 13 65 | | 82 82 |
| | 01-Aug-00 | | 18.61 | | 77 86 |
| | 13-Dec-00 | | 19.01 | | 77 46 |
| | 06-Feb-01 | | 17 43 | | 79.04 |
| | 05-Jun-01 | | 15.96 | | 80 51 |
| | 13-Sep-01 | | 17 23 | | 79 24 |
| | 07-Dec-01 | | 19 74 | | 76 73 |
| | 05-Mar-02 | | 17.12 | | 79 35 |
| | 06-Jun-02 | | 15.03 | | 81.44 |
| | 17-Sep-02 | | 18.88 | | 77 59 |
| | 12-Dec-02 | | 16.13 | | 80 34 |
| | 31-Mar-03 | | 11 72 | | 84 75 |
| | 16-Jul-03 | | 10 25 | | 86 22 |
| | 20-Aug-03 | | 10 77 | | 85 70 |
| | 22-Dec-03 | | 14.11 | | 82 36 |
| | 18-Feb-04 | | 13.05 | | 83 42 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-12 | 01-Dec-97 | 98.63 | 17.03 | | 81.60 |
| | 05-Aug-99 | | 17.33 | | 81.30 |
| | 26-Apr-00 | | 16.06 | | 82.57 |
| | 01-Aug-00 | | 20.15 | | 78.48 |
| | 13-Dec-00 | | 23.70 | | 74.93 |
| | 06-Feb-01 | | 18.45 | | 80.18 |
| | 05-Jun-01 | | 17.26 | | 81 37 |
| | 13-Sep-01 | | 18.63 | | 80.00 |
| | 07-Dec-01 | | 21.37 | | 77 26 |
| | 05-Mar-02 | | 18.65 | | 79 98 |
| | 06-Jun-02 | | 16.90 | | 81 73 |
| | 17-Sep-02 | | 19.97 | | 78.66 |
| | 12-Dec-02 | | 17.33 | | 81 30 |
| | 31-Mar-03 | | 13.46 | | 85.17 |
| | 16-Jul-03 | | 12.51 | | 86 12 |
| | 20-Aug-03 | | 12.70 | | 85 93 |
| | 22-Dec-03 | | 15.71 | | 82.92 |
| | 18-Feb-04 | | 14.39 | | 84 24 |
| MW-13 | 01-Dec-97 | 100.80 | 21.05 | | 79 75 |
| | 05-Aug-99 | | 21.26 | | 79 54 |
| | 26-Apr-00 | | 20 02 | | 80.78 |
| | 01-Aug-00 | | 24.05 | | 76 75 |
| | 13-Dec-00 | | 24.13 | | 76 67 |
| | 06-Feb-01 | | 22 43 | | 78 37 |
| | 05-Jun-01 | | 21 34 | | 79 46 |
| | 13-Sep-01 | | 22.91 | | 77 89 |
| | 07-Dec-01 | | 25 22 | | 75.58 |
| | 05-Mar-02 | | 22 21 | | 78 59 |
| | 06-Jun-02 | | 20 82 | | 79 98 |
| | 17-Sep-02 | | 24 22 | | 76 58 |
| | 12-Dec-02 | | 21.33 | | 79 47 |
| MW-13R | 31-Mar-03 | NM | 17.71 | | NM |
| | 16-Jul-03 | | 16.89 | | NM |
| | 20-Aug-03 | | 17.17 | | NM |
| | 22-Dec-03 | | NM | | NM |
| | 18-Feb-04 | | 19.24 | | NM |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-14 | 01-Dec-97 | 89.38 | 7.27 | | 82.11 |
| | 05-Aug-99 | | 7.96 | | 81.42 |
| | 26-Apr-00 | | 6.46 | | 82.92 |
| | 11-Aug-00 | | 10.80 | | 78.58 |
| | 13-Dec-00 | | 10.80 | | 78.58 |
| | 06-Feb-01 | | 8.72 | | 80.66 |
| | 05-Jun-01 | | 7.32 | | 82.06 |
| | 13-Sep-01 | | 9.31 | | 80.07 |
| | 07-Dec-01 | | 11.91 | | 77.47 |
| | 05-Mar-02 | | 8.51 | | 80 87 |
| | 06-Jun-02 | | 7 41 | | 81 97 |
| | 17-Sep-02 | | 9.98 | | 79.40 |
| | 12-Dec-02 | | 8 22 | | 81 16 |
| | 31-Mar-03 | | 4.25 | | 85.13 |
| | 16-Jul-03 | | 3 95 | | 85 43 |
| | 20-Aug-03 | | 3.35 | | 86.03 |
| | 22-Dec-03 | | 6.91 | | 82.47 |
| | 18-Feb-04 | | 5.15 | | 84.23 |
| MW-15 | 01-Dec-97 | 87 33 | 5 10 | | 82 23 |
| | 05-Aug-99 | | 6.28 | | 81 05 |
| | 26-Apr-00 | | 4 75 | | 82 58 |
| | 01-Aug-00 | | 9.11 | | 78 22 |
| | 13-Dec-00 | | 8 57 | | 78 76 |
| | 06-Feb-01 | | 6.36 | | 80 97 |
| | 05-Jun-01 | | 5.68 | | 81 65 |
| | 13-Sep-01 | | 7.61 | | 79.72 |
| | 07-Dec-01 | | 9.91 | | 77.42 |
| | 05-Mar-02 | | 5.86 | | 81 47 |
| | 06-Jun-02 | | NM | | NM |
| | 12-Dec-02 | | 4 74 | | 82.59 |
| | 31-Mar-03 | | 2.69 | | 84.64 |
| | 16-Jul-03 | | 2 15 | | 85 18 |
| | 20-Aug-03 | | 2 22 | | 85 11 |
| | 22-Dec-03 | | 4 01 | | 83 32 |
| | 18-Feb-04 | | 3 22 | | 84 11 |

# TABLE 2

## SUMMARY OF GROUNDWATER ELEVATIONS

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well Identification | Date Measured | Casing Elevation | Depth to Groundwater | Product Thickness | Water Table Elevation |
|---|---|---|---|---|---|
| MW-16 | 01-Dec-97 | 93.74 | 9.69 | | 84.05 |
| | 05-Aug-99 | | 11.22 | | 82.52 |
| | 26-Apr-00 | | 9.50 | | 84.24 |
| | 01-Aug-00 | | 14.35 | | 79.39 |
| | 13-Dec-00 | | 13.45 | | 80.29 |
| | 06-Feb-01 | | 10.89 | | 82.85 |
| | 05-Jun-01 | | 10 34 | | 83 40 |
| | 13-Sep-01 | | 12.58 | | 81.16 |
| | 07-Dec-01 | | 13.41 | | 80.33 |
| | 05-Mar-02 | | 8.67 | | 85.07 |
| | 06-Jun-02 | | NM | | NM |
| | 12-Dec-02 | | 9.58 | | 84.16 |
| | 31-Mar-03 | | 7 29 | | 86.45 |
| | 16-Jul-03 | | 6 95 | | 86.79 |
| | 20-Aug-03 | | 7 03 | | 86.71 |
| | 22-Dec-03 | | 8.75 | | 84.99 |
| | 18-Feb-04 | | 4.07 | | 89.67 |
| DMW-17 | 01-Dec-97 | 100 08 | 15 53 | | 84.55 |
| | 05-Aug-99 | | 16.16 | | 83.92 |
| | 26-Apr-00 | | 16.80 | | 83.28 |
| | 01-Aug-00 | | 19.27 | | 80.81 |
| | 13-Dec-00 | | 19 20 | | 80.88 |
| | 06-Feb-01 | | 16.82 | | 83 26 |
| | 05-Jun-01 | | 15.52 | | 84 56 |
| | 13-Sep-01 | | 17.42 | | 82 66 |
| | 07-Dec-01 | | 19.54 | | 80.54 |
| | 05-Mar-02 | | NM | | NM |
| | 06-Jun-02 | | NM | | NM |
| | 17-Sep-02 | | 18 32 | | 81 76 |
| | 12-Dec-02 | | 16.66 | | 83 42 |
| | 31-Mar-03 | | 13.32 | | 86.76 |
| | 16-Jul-03 | | 11 39 | | 88 69 |
| | 20-Aug-03 | | 11 05 | | 89 03 |
| | 22-Dec-03 | | 13 95 | | 86 13 |
| | 18-Feb-04 | | 12 57 | | 87 51 |

**Notes:**
TOC - Top-of-Casing elevation refrenced to common datum
NM - Not measured
All measurments in units of feet.
- = No Data

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| OMW-1 | 1-Dec-97 | 14.9 | 85.5 | 5.2 | 24.8 | 130 | 96 | BDL |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 1,570 | 19,000 | 474 | 4,050 | 25,094 | 33,900 | 1,440 |
| | 17-Sep-02 | 2,940 | 25,200 | 1,330 | 9,580 | 39,050 | 30,600 | 620 |
| | 18-Feb-04 | 2,930 | 24,300 | 1,140 | 7,350 | 35,720 | 14,300 | BDL |
| MW-1R | 12-Dec-02 | 6,590 | 23,500 | 3,670 | 20,480 | 54,240 | 18,200 | 8,330 |
| | 31-Mar-03 | 7,830 | 19,300 | 1,680 | 8,600 | 37,410 | 5,850 | 49 4 |
| | 16-Jul-03 | 7,070 | 13,400 | 1,450 | 7,310 | 29,230 | 7,160 | 52 1 |
| | 20-Aug-03 | 6,660 | 11,100 | 1,900 | 9,220 | 28,880 | 11,200 | 167 |
| | 22-Dec-03 | 9,360 | 221,665 | 1,665 | 7,719 | 240,409 | 14,990 | 351 |
| | 18-Feb-04 | 5,050 | 13,800 | 1,390 | 6,430 | 26,670 | 17,200 | 247 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-2 | 1-Dec-97 | 9,900 | 42,300 | 2,040 | 12,100 | 66,340 | 242,000 | 71 2 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 4,400 | 7,570 | 2,890 | 6,790 | 21,650 | 9,490 | 592 |
| | 13-Sep-01 | 2,280 | 9,780 | 1,630 | 7,650 | 21,340 | 1,750 | 399 |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 3,660 | 2,070 | 858 | 2,788 | 9,376 | 8,390 | 294 |
| | 17-Sep-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | 5,120 | 2,180 | 1,180 | 1,691 | 10,171 | 11,000 | 363 |
| | 31-Mar-03 | 3,800 | 288 | 427 | 90.7 | 4,606 | 2,430 | 217 |
| | 16-Jul-03 | 1,460 | 132 | 52.0 | 101.2 | 1,745 | 1,190 | 13.5 |
| | 20-Aug-03 | 1,350 | 167 | 70.2 | 212.6 | 1,800 | 1,170 | 96.6 |
| | 22-Dec-03 | 1,053 | 34.1 | 11.7 | 39.5 | 1,138 | 844 | 18 3 |
| | 18-Feb-04 | 2,360 | 473 | 248 | 195 | 3,276 | 3,540 | 62.8 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-3 | 1-Dec-97 | 9,820 | 54,500 | 2,160 | 11,900 | 78,380 | 81,200 | 445 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Jun-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Sep-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 7-Dec-01 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | 8,770 | 34,700 | 2,610 | 14,760 | 60,840 | 8,940 | 503 |
| | 17-Sep-02 | 8,710 | 41,300 | 2,950 | 17,070 | 70,030 | 9,540 | 669 |
| | 12-Dec-02 | 6,360 | 44,900 | 3,640 | 23,760 | 78,660 | 12,600 | 1,330 |
| | 31-Mar-03 | 4,830 | 16,600 | 1,160 | 7,430 | 30,020 | 3,990 | 609 |
| | 16-Jul-03 | 8,660 | 41,000 | 2,760 | 16,950 | 69,370 | 6,630 | 129 |
| | 20-Aug-03 | 9,210 | 37,400 | 3,140 | 16,790 | 66,540 | 6,990 | 443 |
| | 22-Dec-03 | 9,475 | 51,250 | 1,873 | 10,409 | 73,007 | 5,703 | 394 |
| | 18-Feb-04 | 6,820 | 31,900 | 2,460 | 14,600 | 55,780 | 5,750 | 313 |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |
| MW-4 | 1-Dec-97 | 8,140 | 21,000 | 1,510 | 11,500 | 42,150 | 215,000 | 813 |
| | 5-Aug-99 | 14,200 | 34,600 | 2,750 | 15,900 | 67,450 | 109,000 | <5 |
| | 26-Apr-00 | 13,400 | 33,200 | 3,420 | 13,270 | 63,290 | 102,000 | 1,060 |
| | 1-Aug-00 | 10,100 | 23,300 | 1,740 | 11,410 | 46,550 | 109,000 | 559 |
| | 13-Dec-00 | 6,730 | 16,300 | 635 | 4,170 | 27,835 | 32,300 | 742 |
| | 6-Feb-01 | 5,860 | 13,500 | 1,080 | 7,230 | 27,670 | 26,100 | 210 |
| | 5-Jun-01 | 3,570 | 10,900 | 965 | 9,510 | 24,945 | 5,730 | 302 |
| | 13-Sep-01 | 5,910 | 14,900 | 1,050 | 7,100 | 28,960 | 5,980 | 384 |
| | 7-Dec-01 | 10,000 | 19,200 | 2,210 | 11,600 | 43,010 | BDL | 682 |
| | 5-Mar-02 | 7,880 | 12,890 | 1,860 | 12,650 | 35,280 | 14,530 | 2,010 |
| | 6-Jun-02 | 2,520 | 2,700 | 483 | 3,620 | 9,323 | 3,850 | 497 |
| | 17-Sep-02 | 5,750 | 3,480 | 1,480 | 6,170 | 16,880 | 3,140 | 555 |
| | 12-Dec-02 | 5,100 | 2,300 | 1,690 | 7,080 | 16,170 | 1,640 | 319 |
| | 31-Mar-03 | 1,900 | BDL | 406 | 2,395 | 4,701 | 1,430 | BDL |
| | 16-Jul-03 | NS | NS | NS | NS | NS | NS | NS |
| | 20-Aug-03 | 4,670 | 1,840 | 1,210 | 4,770 | 12,490 | 5,200 | 253 |
| | 18-Feb-04 | 6,200 | 10,200 | 2,100 | 10,770 | 29,270 | 15,100 | 437 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 5 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-5 | 1-Dec-97 | 5,930 | 47,600 | 2,100 | 12,600 | 68,230 | BDL | 125 |
| | 5-Aug-99 | 6,400 | 61,600 | 2,460 | 12,100 | 82,560 | 410 | 335 |
| | 26-Apr-00 | 6,680 | 48,300 | 2,390 | 9,610 | 66,980 | 681 | 609 |
| | 1-Aug-00 | 4,250 | 40,300 | 1,960 | 12,530 | 59,040 | 258 | 396 |
| | 13-Dec-00 | 4,530 | 38,100 | 2,520 | 14,640 | 59,790 | 381 | 4,770 |
| | 6-Feb-01 | 5,070 | 30,800 | 2,200 | 12,500 | 50,570 | 225 | 678 |
| | 5-Jun-01 | 6,070 | 52,000 | 2,900 | 13,720 | 74,690 | 228 | 342 |
| | 13-Sep-01 | 4,990 | 7,210 | 3,340 | 17,900 | 33,440 | 60.7 | 2,900 |
| | 7-Dec-01 | 3,520 | 38,600 | 1,700 | 11,490 | 55,310 | BDL | 408 |
| | 5-Mar-02 | 3,160 | 21,300 | 3,260 | 18,490 | 46,210 | 171 | 342 |
| | 6-Jun-02 | 3,820 | 26,700 | 2,570 | 14,620 | 47,710 | 199 | 397 |
| | 17-Sep-02 | 4,480 | 42,800 | 2,820 | 15,100 | 65,200 | 117 | 209 |
| | 12-Dec-02 | 110 | 5,390 | 1,340 | 5,900 | 12,740 | 13 8 | 287 |
| | 31-Mar-03 | 75 7 | 3,760 | 796 | 4,520 | 9,152 | 87 4 | BDL |
| | 16-Jul-03 | 84 6 | 4,960 | 1,330 | 4,880 | 11,255 | 45.0 | 71.7 |
| | 20-Aug-03 | 120 | 4,830 | 1,460 | 5,180 | 11,590 | 172 | 144 |
| | 22-Dec-03 | 75.7 | 5,738 | 1,233 | 4,731 | 11,778 | 135 | 122 |
| | 18-Feb-04 | 97.8 | 4,160 | 1,160 | 4,440 | 9,858 | 145 | 107 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-6 | 1-Dec-97 | 5.5 | 137 | 6 0 | 149 | 297.5 | BDL | BDL |
| | 5-Aug-99 | 4 1 | 1 1 | 3.7 | 16.7 | 25 6 | 5 | BDL |
| | 26-Apr-00 | 13 0 | 19.2 | 15 | 48 | 95.2 | 27.2 | 6.44 |
| | 1-Aug-00 | 117 | 1820 | 128 | 877 | 2942 | 10 7 | 32.2 |
| | 13-Dec-00 | 47.9 | 460 | 35.4 | 332 | 875 | 14.8 | 7.2 |
| | 6-Feb-01 | 47.4 | 143 | 47 6 | 219 2 | 457 | 17.8 | 22 6 |
| | 5-Jun-01 | 9.3 | 44 5 | 23.5 | 141.3 | 219 | 7.5 | BDL |
| | 13-Sep-01 | 18.1 | 36.6 | 24.7 | 119.0 | 198 | 8 35 | 1.06 |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | 5.23 | BDL |
| | 5-Mar-02 | 79.8 | 765 | 114 | 1,242 | 2,201 | 35.1 | 75.8 |
| | 6-Jun-02 | 55.1 | 629 | 91.8 | 959 | 1,735 | 25 9 | 5 10 |
| | 17-Sep-02 | 11.5 | 115 | 25.4 | 258 | 410 | 2.70 | 7.77 |
| | 12-Dec-02 | 11 1 | 206 | 26 2 | 236 | 479 | 4 04 | 51.6 |
| | 31-Mar-03 | 2.22 | BDL | 1.50 | 16.2 | 19.9 | 2.84 | BDL |
| | 16-Jul-03 | 19 0 | 38.3 | 37.0 | 204 | 298 4 | 12 4 | BDL |
| | 20-Aug-03 | 30.1 | 416 | 80.0 | 439 | 965.1 | 40.2 | BDL |
| | 22-Dec-03 | 10 2 | 39.1 | 15.7 | 87 | 152.2 | 10 4 | 1.1 |
| | 18-Feb-04 | 5.85 | 102 | 14.5 | 80.3 | 202.7 | 15.5 | BDL |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-7 | 1-Dec-97 | 1 1 | 1 7 | BDL | 1.1 | 3.9 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 41 | <1 |
| | 26-Apr-00 | 2 13 | 13 5 | BDL | 1 59 | 17 2 | 68.9 | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 53.8 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 52 9 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 18.7 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | 10.6 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | 6.16 | BDL | BDL | 6.16 | 1.68 | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 10 0 | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | 10.5 | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | 3 60 | 3 60 | 567 | BDL |
| | 16-Jul-03 | BDL | BDL | BDL | BDL | BDL | 72.5 | BDL |
| | 20-Aug-03 | BDL | BDL | BDL | BDL | BDL | 54 9 | BDL |
| | 22-Dec-03 | BDL | BDL | BDL | BDL | BDL | 27 5 | BDL |
| | 18-Feb-04 | BDL | BDL | BDL | BDL | BDL | 27 4 | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| MW-8 | 1-Dec-97 | BDL | 2 4 | 1 2 | 5.4 | 9 0 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 1.58 | 8 53 | BDL | BDL | 10 1 | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | 2 95 | BDL | BDL | 2.95 | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 16-Jul-03 | BDL | BDL | BDL | BDL | BDL | 1.71 | BDL |
| | 20-Aug-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 22-Dec-03 | BDL | BDL | BDL | BDL | BDL | BDL | 2.9 |
| | 18-Feb-04 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | <1 | <1 | <1 | <1 | <1 | <1 | <1 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-9 | 1-Dec-97 | 77 | 14,000 | 2,390 | 20,700 | 37,167 | 114 | 384 |
| | 5-Aug-99 | 110 | 4,280 | 2,450 | 17,000 | 23,840 | 150 | <500 |
| | 26-Apr-00 | 163 | 2,640 | 3,520 | 14,760 | 21,083 | BDL | 2,090 |
| | 1-Aug-00 | 187 | 18,400 | 1,010 | 16,070 | 35,667 | BDL | 909 |
| | 13-Dec-00 | 9 14 | 657 | 108 | 1,340 | 2,114 | 26 0 | 47 |
| | 6-Feb-01 | 10 6 | 254 | 181 | 2,907 | 3,353 | 16 9 | 179 |
| | 5-Jun-01 | 27.7 | 402 | 139 | 1,798 | 2,367 | 17 2 | 66 6 |
| | 13-Sep-01 | 15 0 | 133 | 710 | 7,690 | 8,548 | 13 0 | 186 |
| | 7-Dec-01 | 34 4 | 35 5 | 28 9 | 713 | 812 | BDL | 20.6 |
| | 5-Mar-02 | 25 5 | 29.8 | 157 | 2,144 | 2,356 | BDL | 49 0 |
| | 6-Jun-02 | 13.2 | 24.6 | 105 | 1,420 | 1,563 | 3 17 | 44.5 |
| | 17-Sep-02 | 13.3 | 21.0 | 111 | 1,532 | 1,677 | 2 71 | 41.5 |
| | 12-Dec-02 | 8 14 | BDL | 21 7 | 483 | 513 | BDL | 19.1 |
| | 31-Mar-03 | 2.16 | 4.80 | 23 7 | 421 | 451 | BDL | BDL |
| | 16-Jul-03 | BDL | 3.02 | 28.9 | 366 | 398 | BDL | 37.3 |
| | 20-Aug-03 | BDL | 5.94 | 46 0 | 525 | 577 | 1 19 | 15.1 |
| | 22-Dec-03 | BDL | BDL | 8 6 | 278 | 286 | BDL | 19.6 |
| | 18-Feb-04 | BDL | BDL | 9 87 | 382 | 392 | BDL | 15.4 |
| SSTL | | 5 | 1000 | 700 | 10000 | - | 40 | 25 |
| MW-10 | 1-Dec-97 | 6,220 | 46,300 | 2,320 | 14,800 | 69,640 | 938 | 542 |
| | 5-Aug-99 | 226,000 | 301,000 | 280,000 | 278,000 | 1,085,000 | 5,110,000 | 2,000 |
| Free Product | 26-Apr-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 1-Aug-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| Free Product | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Jun-01 | 8,020 | 32,900 | 856 | 8,280 | 50,056 | 8,780 | 327 |
| | 13-Sep-01 | 9,870 | 47,700 | 1,190 | 20,400 | 79,160 | 12,500 | 356 |
| | 7-Dec-01 | 5,590 | 56,000 | 8,150 | 61,700 | 131,440 | 1,050 | 2,540 |
| | 5-Mar-02 | 2.06 | 72.2 | 5.80 | 190 1 | 270 | 1,110 | 13.7 |
| | 6-Jun-02 | BDL | 57.8 | BDL | 165 0 | 223 | 3,780 | 27.0 |
| | 17-Sep-02 | 36.3 | 75.9 | 7 38 | 308 | 428 | 6,850 | 11.4 |
| | 12-Dec-02 | 159 | 428 | 26.3 | 637 | 1,250 | BDL | 24.6 |
| | 31-Mar-03 | 4,489 | 19,300 | 769 | 6,020 | 30,578 | 13,400 | BDL |
| | 16-Jul-03 | 6,670 | 27,500 | 2,040 | 11,550 | 47,760 | 8,440 | 813 |
| | 20-Aug-03 | 6,050 | 20,470 | 2,350 | 12,650 | 41,520 | 6,300 | 471 |
| | 22-Dec-03 | 7,370 | 35,660 | 2,230 | 12,650 | 57,910 | 4,720 | BDL |
| | 18-Feb-04 | 5,070 | 20,300 | 1,940 | 10,760 | 38,070 | 3,470 | BDL |
| SSTL | | 5 | 1,000 | 700 | 10,000 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-11 | 1-Dec-97 | 1 4 | 3.4 | BDL | 4.7 | 9.5 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | 7 | <5 |
| | 26-Apr-00 | 1.18 | 3 96 | BDL | BDL | 5 1 | 4 69 | 9.98 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | 2 51 | 91.0 | 15 0 | 104 | 212 9 | 26 3 | 17 2 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 39.5 | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | 4 88 | 9 52 | 14 4 | 266 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | 1 32 | 1 32 | 358 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 1070 | BDL |
| | 6-Jun-02 | 1.84 | BDL | BDL | 1 02 | 2.86 | 2,220 | BDL |
| | 17-Sep-02 | 98 7 | BDL | BDL | 19 9 | 118 59 | 3,780 | BDL |
| | 12-Dec-02 | 23.5 | BDL | BDL | 8.39 | 31 89 | BDL | BDL |
| | 31-Mar-03 | 229 | 26.0 | 2.00 | 48 1 | 305 | 4,340 | BDL |
| | 16-Jul-03 | 624 | 10.0 | 2.20 | 171 | 807 | 7,150 | 87.9 |
| | 20-Aug-03 | 684 | 3.80 | 1.81 | 140 | 830 | 8,630 | 60.9 |
| | 22-Dec-03 | 905 | 2.30 | 1.20 | 112 | 1020 | 10,399 | 59.8 |
| | 18-Feb-04 | 666 | BDL | BDL | 103 | 769 | 14,200 | 201 |
| SSTL | | <1 | <1 | <1 | <1 | - | 7 | <5 |
| MW-12 | 1-Dec-97 | 7,970 | 382 | 266 | 1,540 | 10,158 | 99,900 | 119 |
| | 5-Aug-99 | 5,000 | 260 | <200 | <200 | 5,260 | 41,200 | <1000 |
| | 26-Apr-00 | 135 | 4.51 | BDL | 11.0 | 151 | 6,800 | 18.2 |
| | 1-Aug-00 | 1670 | 17.1 | 4 33 | 114.9 | 1806 | 44,200 | BDL |
| | 13-Dec-00 | 119 | 9.1 | 2.11 | 26.7 | 157 | 4,230 | 31.7 |
| | 6-Feb-01 | 32 5 | 9 3 | 1.51 | 13.8 | 57 | 1,570 | 10 6 |
| | 5-Jun-01 | 61.0 | BDL | BDL | 2.1 | 63 | 1,960 | 17 2 |
| | 13-Sep-01 | 329 | 4.55 | 2.96 | 29.27 | 366 | 2,860 | 60 1 |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 906 | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 613 | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | 1.30 | 1 30 | 479 | BDL |
| | 16-Jul-03 | 3.17 | BDL | BDL | BDL | 3.17 | 793 | BDL |
| | 20-Aug-03 | 3.48 | BDL | BDL | BDL | 3.48 | 592 | BDL |
| | 22-Dec-03 | BDL | BDL | BDL | BDL | BDL | 1,129 | BDL |
| | 18-Feb-04 | BDL | BDL | BDL | BDL | BDL | 11 8 | BDL |
| SSTL | | 5 | 260 | <200 | <200 | - | 40 | 25 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-13 | 1-Dec-97 | BDL | 1 4 | BDL | 1.6 | 3 | 82.3 | BDL |
| | 5-Aug-99 | 3 | <1 | <1 | <1 | 3 | 604 | <5 |
| | 26-Apr-00 | 188 | 149 | BDL | BDL | 337 | 3,150 | BDL |
| | 1-Aug-00 | 207 | 5.74 | BDL | 32.8 | 245 | 3,641 | 24 3 |
| | 13-Dec-00 | 29 9 | 3 81 | 1.0 | 76 6 | 111 | 4,350 | 29.8 |
| | 6-Feb-01 | 377 | 12 10 | 2 8 | 105 2 | 497 | 5,200 | 54 9 |
| | 5-Jun-01 | 259 | 5 87 | 1 8 | 112 8 | 380 | 8,530 | 23 2 |
| | 13-Sep-01 | 374 | 7 44 | 4.52 | 127 5 | 513 | 7,150 | 24 7 |
| | 7-Dec-01 | 15 4 | BDL | BDL | 8.10 | 24 | 1,130 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | 103 | BDL |
| | 6-Jun-02 | 3 24 | BDL | BDL | 6 25 | 9.49 | 6,360 | 1 42 |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | 561 | BDL |
| | 12-Dec-02 | 17 4 | BDL | BDL | 29 3 | 46.7 | BDL | BDL |
| MW-13R | 31-Mar-03 | 328 | 9 18 | BDL | 89 1 | 426 | 10,400 | 26 0 |
| | 16-Jul-03 | 522 | 13 4 | 5.39 | 143 | 684 | 11,600 | 66.4 |
| | 20-Aug-03 | 435 | 8.07 | BDL | 93.3 | 536 | 11,100 | 41.8 |
| | 18-Feb-04 | 639 | 6 12 | 1.03 | 146 | 792 | 25,800 | 79.1 |
| SSTL | | 3 | 1 | 1 | 1 | -- | 40 | 5 |
| MW-14 | 1-Dec-97 | 1 1 | 1.4 | BDL | 2.7 | 5 | 76.5 | BDL |
| | 5-Aug-99 | 57 | 7 | 1 | 23 | 88 | 606 | 5 |
| | 26-Apr-00 | BDL | 1 38 | BDL | BDL | 1.38 | 1.11 | BDL |
| | 1-Aug-00 | 138 | 4 04 | BDL | 39.04 | 181.08 | 35 3 | 13.0 |
| | 13-Dec-00 | BDL | BDL | BDL | 2.13 | 2.13 | 129 | 2 33 |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 11.1 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | 54.9 | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 1.53 | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 16-Jul-03 | BDL | BDL | BDL | BDL | BDL | 1 67 | BDL |
| | 20-Aug-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 22-Dec-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 18-Feb-04 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | 7 | 1 | 23 | - | 40 | 5 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| MW-15 | 1-Dec-97 | 1 0 | 1 6 | BDL | 2 5 | 5 | BDL | BDL |
| | 5-Aug-99 | 3 | 6 | 1 | 6 | 16 | 27 | <5 |
| | 26-Apr-00 | 1 01 | 1 32 | BDL | BDL | 2.33 | 2.82 | 5.66 |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | 2.77 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 16-Jul-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 22-Dec-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 18-Feb-04 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 3 | 6 | 1 | 6 | - | 27 | <5 |
| MW-16 | 1-Dec-97 | BDL | 1 2 | BDL | 1 3 | 2 5 | BDL | BDL |
| | 5-Aug-99 | 2 2 | 8 8 | 1 6 | 7.1 | 19.7 | 4 | BDL |
| | 26-Apr-00 | 2 17 | 1 27 | BDL | BDL | 3.4 | 10 1 | BDL |
| | 1-Aug-00 | 5 02 | 3 01 | BDL | 3 5 | 11.5 | 16 1 | 1.35 |
| | 13-Dec-00 | 10 7 | BDL | BDL | 2.66 | 13.4 | 30.6 | 1.96 |
| | 6-Feb-01 | 6 25 | BDL | BDL | BDL | 6.25 | 32.7 | BDL |
| | 5-Jun-01 | 22 3 | BDL | BDL | 1 30 | 23.6 | 78.8 | BDL |
| | 13-Sep-01 | 18 9 | BDL | BDL | BDL | BDL | 35 6 | BDL |
| | 7-Dec-01 | 15 7 | BDL | BDL | 1 01 | 16.7 | 25.0 | BDL |
| | 5-Mar-02 | 15.1 | BDL | BDL | BDL | 15.1 | 104 | BDL |
| | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | 2.60 | BDL | 9 03 | BDL | 11.6 | 14.0 | BDL |
| | 31-Mar-03 | 1 62 | BDL | BDL | BDL | 1.62 | 7.76 | BDL |
| | 16-Jul-03 | 2 95 | BDL | BDL | BDL | 2.95 | 10.9 | BDL |
| | 20-Aug-03 | 2 36 | 4 53 | BDL | 1.50 | 8.39 | 6.88 | BDL |
| | 22-Dec-03 | BDL | BDL | BDL | BDL | BDL | 2.80 | BDL |
| | 18-Feb-04 | BDL | BDL | BDL | BDL | BDL | 3 74 | BDL |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| DMW-17 | 1-Dec-97 | 1.6 | 3 8 | 2.3 | 12.7 | 20.3 | BDL | BDL |
| | 5-Aug-99 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 26-Apr-00 | 1.06 | 1.24 | BDL | BDL | 2 3 | 8 97 | BDL |
| | 1-Aug-00 | BDL | 3 02 | BDL | BDL | 3.02 | 7 75 | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | 6 98 | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | 5.34 | BDL |
| | 5-Jun-01 | BDL | 2 0 | BDL | BDL | 2 0 | 23 8 | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | 3 42 | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | 6 82 | 1.1 |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | 10 1 | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 16-Jul-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 20-Aug-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 22-Dec-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 18-Feb-04 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |
| CP-WW | 1-Dec-97 | BDL | 1 2 | BDL | BDL | 1 2 | BDL | BDL |
| | 5-Aug-99 | <1 | <1 | <1 | <1 | <1 | <1 | <1 |
| | 26-Apr-00 | 2.96 | 1.09 | BDL | BDL | 4.1 | 315 | BDL |
| | 1-Aug-00 | 3.23 | 2.56 | BDL | 1.09 | 7 | 224 | BDL |
| | 13-Dec-00 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Feb-01 | NS | NS | NS | NS | NS | NS | NS |
| | 5-Mar-02 | NS | NS | NS | NS | NS | NS | NS |
| | 6-Jun-02 | NS | NS | NS | NS | NS | NS | NS |
| | 17-Sep-02 | NS | NS | NS | NS | NS | NS | NS |
| | 12-Dec-02 | NS | NS | NS | NS | NS | NS | NS |
| | 16-Jul-03 | NS | NS | NS | NS | NS | NS | NS |
| CP-WW2 | 18-Feb-04 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 1 | 1 | 1 | 1 | - | 1 | 1 |

# TABLE 3
## SUMMARY OF GROUNDWATER QUALITY

Crawford's Country Store
5870 Hwy 28 N
Abbeville, South Carolina
Site ID # 12335

| Well ID | Date | Benzene | Toluene | Ethylbenzene | Xylenes | Total BTEX | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|---|
| CLS-WW | 1-Dec-97 | 81 3 | 1.1 | BDL | 9 6 | 92 | 34 5 | BDL |
| | 5-Aug-99 | 81 | 1 | <1 | 10 | 92 | 35 | <5 |
| | 26-Apr-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 1-Aug-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Dec-00 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Feb-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Jun-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 13-Sep-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 7-Dec-01 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 5-Mar-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 6-Jun-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 17-Sep-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 12-Dec-02 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 31-Mar-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 16-Jul-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 20-Aug-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 22-Dec-03 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| | 18-Feb-04 | BDL | BDL | BDL | BDL | BDL | BDL | BDL |
| SSTL | | 5 | <1 | <1 | 10 | - | 35 | <5 |

Notes:
All results reported in parts per billion (ug/L) unless otherwise noted.

SSTL = Site specific target levels referenced in bid

FP = Free Product, NS = Not Sampled

BDL = Below detecatable Levels

Total BTEX = Summation of benzene, toluene, ethylbenzene and xylenes

MTBE = Methyl-tert-buytl-ether

# ATTACHMENT 3
# LABORATORY ANALYTICAL REPORT

ACCESS ANALYTICAL, INC.

RECEIVED MAR 0 1 2004

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063

Page 1
February 24, 2004
Report # 402001021
Order # 14424
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: OMW-1
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | BDL | mg/L | 300.0 | 0.50 | 02/20/2004 | 02/20/2004 | 13:28RZ |
| Sulfate | 4 13 | mg/L | 300.0 | 1 0 | 02/20/2004 | 02/20/2004 | 13:28RZ |
| Ferrous, Iron (Fe2+) | (Q)4 2 | mg/L | SM3500-Fe D | 0 03 | 02/20/2004 | 02/20/2004 | 16:00EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C ) | | | MEDF | 100 | | | |
| Methyl-Tert-Butyl-Ether | 14300 | ug/L | 5030/8260B | 100 000 | 02/21/2004 | 02/21/2004 | 15 48PMD |
| Benzene | 2930 | ug/L | 5030/8260B | 100 000 | 02/21/2004 | 02/21/2004 | 15:48PMD |
| Toluene | 24300 | ug/L | 5030/8260B | 100 000 | 02/21/2004 | 02/21/2004 | 15.48PMD |
| Ethylbenzene | 1140 | ug/L | 5030/8260B | 100 000 | 02/21/2004 | 02/21/2004 | 15·48PMD |
| m & p-Xylene | 4930 | ug/L | 5030/8260B | 100 000 | 02/21/2004 | 02/21/2004 | 15·48PMD |
| o-Xylene | 2420 | ug/L | 5030/8260B | 100 000 | 02/21/2004 | 02/21/2004 | 15·48PMD |
| Total Xylene | 7350 | ug/L | 5030/8260B | 100 000 | 02/21/2004 | 02/21/2004 | 15 48PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 100.000 | 02/21/2004 | 02/21/2004 | 15 48PMD |
| SURROGATE· Toluene-D8 | 109.50% | | | | | | |
| SURROGATE Bromofluorobenzene | 122.40% | | | | | | |

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14424
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: OMW-1
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 112.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: FL=E86349, AL=41180,CT=PH0217, MD.=#271, MA.=#M-FL535,PR=FL00535 SC=96023,TN=TN02836
*Tests results meet all the requirements of NELAC, unless identified as "certification in-process"
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14425
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-1R
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | BDL | mg/L | 300.0 | 0.50 | 02/20/2004 | 02/20/2004 | 13:28RZ |
| Sulfate | 17.2 | mg/L | 300 0 | 1.0 | 02/20/2004 | 02/20/2004 | 13.28RZ |
| Ferrous, Iron (Fe2+) | (Q)2.5 | mg/L | SM3500-Fe D. | 0.03 | 02/20/2004 | 02/20/2004 | 16.00EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C.) | | | MEDF | 10 | | | |
| Methyl-Tert-Butyl-Ether | 17200 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 | 13:32PMD |
| Benzene | 5050 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 | 13.32PMD |
| Toluene | 13800 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 | 13:32PMD |
| Ethylbenzene | 1390 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 | 13:32PMD |
| m & p-Xylene | 3990 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 | 13:32PMD |
| o-Xylene | 2440 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 | 13 32PMD |
| Total Xylene | 6430 | ug/L | 5030/8260B | 10 000 | 02/21/2004 | 02/21/2004 | 13 32PMD |
| Naphthalene | 247 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 | 13:32PMD |
| SURROGATE: Toluene-D8 | 108.25% | | | | | | |
| SURROGATE: Bromofluorobenzene | 118.40% | | | | | | |

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February 24, 2004
Report # 402001021
Order # 14425
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-1R
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE. Dibromofluoromethane | 107.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Richard Gillespie
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121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14426
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-2
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | BDL | mg/L | 300 0 | 0.50 | 02/20/2004 | 02/20/2004 | 13:28RZ |
| Sulfate | 8.19 | mg/L | 300.0 | 1 0 | 02/20/2004 | 02/20/2004 | 13:29RZ |
| Ferrous, Iron (Fe2+) | (Q)3.2 | mg/L | SM3500-Fe D | 0 03 | 02/20/2004 | 02/20/2004 | 16:00EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 3540 | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 13:09PMD |
| Benzene | 2360 | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 13:09PMD |
| Toluene | 473 | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 13:09PMD |
| Ethylbenzene | 248 | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 13:09PMD |
| m & p-Xylene | 153 | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 13:09PMD |
| o-Xylene | 42.4 | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 13:09PMD |
| Total Xylene | 195 | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 13:09PMD |
| Naphthalene | 62.8 | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 13:09PMD |
| SURROGATE: Toluene-D8 | 108.50% | | | | | | |
| SURROGATE: Bromofluorobenzene | 128.00% | | | | | | |

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February 24, 2004
Report # 402001021
Order # 14426
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-2
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 115.00% | | | | | | |

REPORT COMMENTS:
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Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14427
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-3
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | BDL | mg/L | 300.0 | 0.50 | 02/20/2004 | 02/20/2004 | 13:29RZ |
| Sulfate | 4 44 | mg/L | 300.0 | 1.0 | 02/20/2004 | 02/20/2004 | 13:29RZ |
| Ferrous, Iron (Fe2+) | (Q)1.6 | mg/L | SM3500-Fe D. | 0.03 | 02/20/2004 | 02/20/2004 | 16:00EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C ) | | | MEDF | 10 | | | |
| Methyl-Tert-Butyl-Ether | 5750 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 | 13.55PMD |
| Benzene | 6820 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 | 13:55PMD |
| Toluene | 31900 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 | 13:55PMD |
| Ethylbenzene | 2460 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 | 13:55PMD |
| m & p-Xylene | 9410 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 | 13:55PMD |
| o-Xylene | 5190 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 | 13:55PMD |
| Total Xylene | 14600 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 | 13:55PMD |
| Naphthalene | 313 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 | 13:55PMD |
| SURROGATE: Toluene-D8 | 108.00% | | | | | | |
| SURROGATE: Bromofluorobenzene | 112.80% | | | | | | |

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February 24, 2004
Report # 402001021
Order # 14427
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-3
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 109.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14428
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-4
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | BDL | mg/L | 300.0 | 0.50 | 02/20/2004 | 02/20/2004 13:29 | RZ |
| Sulfate | 3.53 | mg/L | 300.0 | 1.0 | 02/20/2004 | 02/20/2004 13:29 | RZ |
| Ferrous, Iron (Fe2+) | (Q)4.0 | mg/L | SM3500-Fe D | 0.03 | 02/20/2004 | 02/20/2004 16:00 | EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 10 | | | |
| Methyl-Tert-Butyl-Ether | 15100 | ug/L | 5030/8260B | 10 000 | 02/21/2004 | 02/21/2004 14:17 | PMD |
| Benzene | 6200 | ug/L | 5030/8260B | 10 000 | 02/21/2004 | 02/21/2004 14:17 | PMD |
| Toluene | 10200 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 14:17 | PMD |
| Ethylbenzene | 2100 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 14:17 | PMD |
| m & p-Xylene | 5960 | ug/L | 5030/8260B | 10 000 | 02/21/2004 | 02/21/2004 14:17 | PMD |
| o-Xylene | 4810 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 14:17 | PMD |
| Total Xylene | 10770 | ug/L | 5030/8260B | 10 000 | 02/21/2004 | 02/21/2004 14:17 | PMD |
| Naphthalene | 437 | ug/L | 5030/8260B | 10 000 | 02/21/2004 | 02/21/2004 14:17 | PMD |
| SURROGATE: Toluene-D8 | 107.25% | | | | | | |
| SURROGATE: Bromofluorobenzene | 121.20% | | | | | | |

Richard Gillespie
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121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14428
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-4
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 112.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14429
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-5
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | BDL | mg/L | 300.0 | 0.50 | 02/20/2004 | 02/20/2004 13:29 | RZ |
| Sulfate | 4 05 | mg/L | 300.0 | 1.0 | 02/20/2004 | 02/20/2004 13:29 | RZ |
| Ferrous, Iron (Fe2+) | (Q)4.0 | mg/L | SM3500-Fe D. | 0.03 | 02/20/2004 | 02/20/2004 16.00 | EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C ) | | | MEDF | 10 | | | |
| Methyl-Tert-Butyl-Ether | 145 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 14.40 | PMD |
| Benzene | 97.8 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 14 40 | PMD |
| Toluene | 4160 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 14.40 | PMD |
| Ethylbenzene | 1160 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 14:40 | PMD |
| m & p-Xylene | 3040 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 14 40 | PMD |
| o-Xylene | 1400 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 14.40 | PMD |
| Total Xylene | 4440 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 14:40 | PMD |
| Naphthalene | 107 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 14·40 | PMD |
| SURROGATE: Toluene-D8 | 107.00% | | | | | | |
| SURROGATE: Bromofluorobenzene | 124.80% | | | | | | |

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14429
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-5
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 111.25% | | | | | | |

REPORT COMMENTS:
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Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

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121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14435
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-6
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | 0 50 | mg/L | 300.0 | 0.50 | 02/20/2004 | 02/20/2004 | 13:30RZ |
| Sulfate | 19.5 | mg/L | 300.0 | 1.0 | 02/20/2004 | 02/20/2004 | 13:30RZ |
| Ferrous, Iron (Fe2+) | (Q)1.5 | mg/L | SM3500-Fe D. | 0.03 | 02/20/2004 | 02/20/2004 | 16.00EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 15.5 | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 10.53PMD |
| Benzene | 5.85 | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 10:53PMD |
| Toluene | 102 | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 10:53PMD |
| Ethylbenzene | 14.5 | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 10:53PMD |
| m & p-Xylene | 53.9 | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 10:53PMD |
| o-Xylene | 26.4 | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 10:53PMD |
| Total Xylene | 80 3 | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 10:53PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 10:53PMD |
| SURROGATE Toluene-D8 | 109.50% | | | | | | |
| SURROGATE Bromofluorobenzene | 101.20% | | | | | | |

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Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14435
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-6
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 94.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
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Company Representative

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121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14436
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-7
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | BDL | mg/L | 300 0 | 0.50 | 02/20/2004 | 02/20/2004 | 13:30RZ |
| Sulfate | 6.76 | mg/L | 300 0 | 1.0 | 02/20/2004 | 02/20/2004 | 13:30RZ |
| Ferrous, Iron (Fe2+) | (Q)BDL | mg/L | SM3500-Fe D. | 0.03 | 02/20/2004 | 02/20/2004 | 16.00EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 27 4 | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 11:16PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 11 16PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 11:16PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 11:16PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 11:16PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 11·16PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 11·16PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 11·16PMD |
| SURROGATE: Toluene-D8 | 93.75% | | | | | | |
| SURROGATE: Bromofluorobenzene | 132.00% | | | | | | |

Richard Gillespie
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Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14436
STL Miami Cert ID# 96023
NELAP ID# E86349

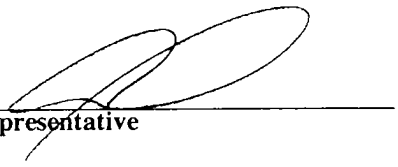
Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-7
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 90.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: FL=E86349, AL=41180,CT=PH0217, MD.=#271, MA.=#M-FL535,PR=FL00535 SC=96023,TN=TN02836
*Tests results meet all the requirements of NELAC, unless identified as "certification in-process"
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.



Company Representative

Richard Gillespie
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121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14437
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-8
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | BDL | mg/L | 300 0 | 0.50 | 02/20/2004 | 02/20/2004 | 13:30RZ |
| Sulfate | 6.97 | mg/L | 300 0 | 1.0 | 02/20/2004 | 02/20/2004 | 13:30RZ |
| Ferrous, Iron (Fe2+) | (Q)0.7 | mg/L | SM3500-Fe D. | 0.03 | 02/20/2004 | 02/20/2004 | 16:00EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 11:39PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 11:39PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 11:39PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 11:39PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 11:39PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 11:39PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 11:39PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 11:39PMD |
| SURROGATE: Toluene-D8 | 100.00% | | | | | | |
| SURROGATE: Bromofluorobenzene | 120.40% | | | | | | |

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February 24, 2004
Report # 402001021
Order # 14437
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-8
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 92.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

Richard Gillespie
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Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14438
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-9
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | 1.72 | mg/L | 300.0 | 0.50 | 02/20/2004 | 02/20/2004 13:30 | RZ |
| Sulfate | 2 57 | mg/L | 300.0 | 1.0 | 02/20/2004 | 02/20/2004 13:30 | RZ |
| Ferrous, Iron (Fe2+) | (Q)BDL | mg/L | SM3500-Fe D. | 0.03 | 02/20/2004 | 02/20/2004 16 00 | EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 12 01 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 12.01 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 12.01 | PMD |
| Ethylbenzene | 9 87 | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 12 01 | PMD |
| m & p-Xylene | 328 | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 12 01 | PMD |
| o-Xylene | 54 0 | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 12 01 | PMD |
| Total Xylene | 382 | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 12 01 | PMD |
| Naphthalene | 15 4 | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 12:01 | PMD |
| SURROGATE: Toluene-D8 | 107.50% | | | | | | |
| SURROGATE: Bromofluorobenzene | 117.60% | | | | | | |

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February 24, 2004
Report # 402001021
Order # 14438
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-9
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 109.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

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Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14439
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-10
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | BDL | mg/L | 300.0 | 0 50 | 02/20/2004 | 02/20/2004 13:31 | RZ |
| Sulfate | 2.57 | mg/L | 300 0 | 1 0 | 02/20/2004 | 02/20/2004 13:31 | RZ |
| Ferrous, Iron (Fe2+) | (Q)4.8 | mg/L | SM3500-Fe D | 0 03 | 02/20/2004 | 02/20/2004 16:00 | EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 100 | | | |
| Methyl-Tert-Butyl-Ether | 3470 | ug/L | 5030/8260B | 100.000 | 02/21/2004 | 02/21/2004 16:11 | PMD |
| Benzene | 5070 | ug/L | 5030/8260B | 100.000 | 02/21/2004 | 02/21/2004 16:11 | PMD |
| Toluene | 20300 | ug/L | 5030/8260B | 100.000 | 02/21/2004 | 02/21/2004 16:11 | PMD |
| Ethylbenzene | 1940 | ug/L | 5030/8260B | 100.000 | 02/21/2004 | 02/21/2004 16:11 | PMD |
| m & p-Xylene | 7400 | ug/L | 5030/8260B | 100.000 | 02/21/2004 | 02/21/2004 16:11 | PMD |
| o-Xylene | 3360 | ug/L | 5030/8260B | 100.000 | 02/21/2004 | 02/21/2004 16:11 | PMD |
| Total Xylene | 10760 | ug/L | 5030/8260B | 100.000 | 02/21/2004 | 02/21/2004 16:11 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 100.000 | 02/21/2004 | 02/21/2004 16:11 | PMD |
| SURROGATE: Toluene-D8 | 108.75% | | | | | | |
| SURROGATE: Bromofluorobenzene | 134.80% | | | | | | |

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February 24, 2004
Report # 402001021
Order # 14439
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-10
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE. Dibromofluoromethane | 106.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

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Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14440
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-11
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | BDL | mg/L | 300.0 | 0.50 | 02/20/2004 | 02/20/2004 13:31 | RZ |
| Sulfate | 2.58 | mg/L | 300.0 | 1.0 | 02/20/2004 | 02/20/2004 13:31 | RZ |
| Ferrous, Iron (Fe2+) | (Q)BDL | mg/L | SM3500-Fe D. | 0 03 | 02/20/2004 | 02/20/2004 16:00 | EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 10 | | | |
| Methyl-Tert-Butyl-Ether | 14200 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 15:03 | PMD |
| Benzene | 666 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 15:03 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 15:03 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 10 000 | 02/21/2004 | 02/21/2004 15:03 | PMD |
| m & p-Xylene | 27.0 | ug/L | 5030/8260B | 10.000 | 02/21/2004 | 02/21/2004 15.03 | PMD |
| o-Xylene | 76.2 | ug/L | 5030/8260B | 10 000 | 02/21/2004 | 02/21/2004 15.03 | PMD |
| Total Xylene | 103 | ug/L | 5030/8260B | 10 000 | 02/21/2004 | 02/21/2004 15:03 | PMD |
| Naphthalene | 201 | ug/L | 5030/8260B | 10 000 | 02/21/2004 | 02/21/2004 15.03 | PMD |
| SURROGATE: Toluene-D8 | 108.50% | | | | | | |
| SURROGATE Bromofluorobenzene | 113.60% | | | | | | |

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Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14440
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-11
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 85.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
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Company Representative

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121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14441
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-12
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | 2.02 | mg/L | 300.0 | 0.50 | 02/20/2004 | 02/20/2004 | 13:31RZ |
| Sulfate | 35.3 | mg/L | 300.0 | 1.0 | 02/20/2004 | 02/20/2004 | 13:31RZ |
| Ferrous, Iron (Fe2+) | (Q)BDL | mg/L | SM3500-Fe D. | 0.03 | 02/20/2004 | 02/20/2004 | 16.00EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 11.8 | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 12:24PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 12.24PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 12:24PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 12:24PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 12:24PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 12:24PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 12:24PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 12:24PMD |
| SURROGATE: Toluene-D8 | 107.00% | | | | | | |
| SURROGATE: Bromofluorobenzene | 120.40% | | | | | | |

Richard Gillespie
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Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14441
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-12
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 104.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Company Representative

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Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14442
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-13R
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | 0 61 | mg/L | 300.0 | 0.50 | 02/20/2004 | 02/20/2004 13 31 | RZ |
| Sulfate | 2.70 | mg/L | 300.0 | 1.0 | 02/20/2004 | 02/20/2004 13:32 | RZ |
| Ferrous, Iron (Fe2+) | (Q)BDL | mg/L | SM3500-Fe D. | 0 03 | 02/20/2004 | 02/20/2004 16:00 | EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 25800 | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 13·44 | PMD |
| Benzene | 639 | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 13·44 | PMD |
| Toluene | 6 12 | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 13·44 | PMD |
| Ethylbenzene | 1 03 | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 13.44 | PMD |
| m & p-Xylene | 26 2 | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 13·44 | PMD |
| o-Xylene | 120 | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 13:44 | PMD |
| Total Xylene | 146 | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 13.44 | PMD |
| Naphthalene | 79 1 | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 13·44 | PMD |
| SURROGATE: Toluene-D8 | 101.50% | | | | | | |
| SURROGATE: Bromofluorobenzene | 122.00% | | | | | | |

Richard Gillespie
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Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14442
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-13R
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 100.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14443
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-14
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | BDL | mg/L | 300.0 | 0.50 | 02/20/2004 | 02/20/2004 | 13.32RZ |
| Sulfate | 6.44 | mg/L | 300.0 | 1 0 | 02/20/2004 | 02/20/2004 | 13·32RZ |
| Ferrous, Iron (Fe2+) | (Q)BDL | mg/L | SM3500-Fe D. | 0 03 | 02/20/2004 | 02/20/2004 | 16·00EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 09.08PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 09 08PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 09·08PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 09:08PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 09:08PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 09:08PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 09 08PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 09:08PMD |
| SURROGATE: Toluene-D8 | 108.50% | | | | | | |
| SURROGATE: Bromofluorobenzene | 133.20% | | | | | | |

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14443
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-14
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 95.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: FL=E86349, AL=41180,CT=PH0217, MD.=#271, MA.=#M-FL535,PR=FL00535 SC=96023,TN=TN02836
*Tests results meet all the requirements of NELAC, unless identified as "certification in-process"
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14444
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-15
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | BDL | mg/L | 300 0 | 0 50 | 02/20/2004 | 02/20/2004 | 13:32RZ |
| Sulfate | 6.75 | mg/L | 300.0 | 1 0 | 02/20/2004 | 02/20/2004 | 13:32RZ |
| Ferrous, Iron (Fe2+) | (Q)0.4 | mg/L | SM3500-Fe D | 0.03 | 02/20/2004 | 02/20/2004 | 16:00EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 09:27PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 09:27PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 09:27PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 09:27PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 09:27PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 09:27PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 09:27PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 09:27PMD |
| SURROGATE. Toluene-D8 | 108.50% | | | | | | |
| SURROGATE. Bromofluorobenzene | 126.80% | | | | | | |

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14444
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-15
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 96.00% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14445
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-16
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | 0 51 | mg/L | 300.0 | 0.50 | 02/20/2004 | 02/20/2004 13:33 | RZ |
| Sulfate | 3.17 | mg/L | 300.0 | 1.0 | 02/20/2004 | 02/20/2004 13:33 | RZ |
| Ferrous, Iron (Fe2+) | (Q)BDL | mg/L | SM3500-Fe D | 0.03 | 02/20/2004 | 02/20/2004 16:00 | EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | 3.74 | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 09:45 | PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 09:45 | PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 09:45 | PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 09:45 | PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 09:45 | PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 09:45 | PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 09:45 | PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 09:45 | PMD |
| SURROGATE: Toluene-D8 | 105.00% | | | | | | |
| SURROGATE: Bromofluorobenzene | 137.60% | | | | | | |

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14445
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: MW-16
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 98.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
Certs: FL=E86349, AL=41180,CT=PH0217, MD.=#271, MA.=#M-FL535,PR=FL00535 SC=96023,TN=TN02836
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Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14446
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: DMW-17
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | BDL | mg/L | 300.0 | 0 50 | 02/20/2004 | 02/20/2004 | 13:33RZ |
| Sulfate | 4.74 | mg/L | 300.0 | 1.0 | 02/20/2004 | 02/20/2004 | 13:33RZ |
| Ferrous, Iron (Fe2+) | (Q)BDL | mg/L | SM3500-Fe D | 0 03 | 02/20/2004 | 02/20/2004 | 16:00EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 10:04PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 10:04PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 10:04PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 10:04PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 10:04PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 10:04PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 10:04PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 10:04PMD |
| SURROGATE: Toluene-D8 | 108.00% | | | | | | |
| SURROGATE: Bromofluorobenzene | 128.80% | | | | | | |

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14446
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: DMW-17
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 98.25% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

Unless otherwise noted in analyst section, all work performed by STL MIAMI.
10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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*Tests results meet all the requirements of NELAC, unless identified as "certification in-process"
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14447
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: CP-WW 2
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | BDL | mg/L | 300.0 | 0.50 | 02/20/2004 | 02/20/2004 | 13:33RZ |
| Sulfate | 7.07 | mg/L | 300.0 | 1.0 | 02/20/2004 | 02/20/2004 | 13.33RZ |
| Ferrous, Iron (Fe2+) | (Q)1 0 | mg/L | SM3500-Fe D. | 0.03 | 02/20/2004 | 02/20/2004 | 16.00EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C ) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 10:22PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 10:22PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 10.22PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 10:22PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 10.22PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 10 22PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 10 22PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1.000 | 02/21/2004 | 02/21/2004 | 10 22PMD |
| SURROGATE: Toluene-D8 | 103.75% | | | | | | |
| SURROGATE: Bromofluorobenzene | 144.00% | | | | | | |

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14447
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: CP-WW2
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 103.50% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14448
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: CLS-WW
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| Nitrate (as N) | BDL | mg/L | 300.0 | 0 50 | 02/20/2004 | 02/20/2004 | 13:33RZ |
| Sulfate | 6.91 | mg/L | 300.0 | 1 0 | 02/20/2004 | 02/20/2004 | 13:33RZ |
| Ferrous, Iron (Fe2+) | (Q)2.5 | mg/L | SM3500-Fe D | 0.03 | 02/20/2004 | 02/20/2004 | 16.00EP |
| 8260B BTEX w/Naph+MTBE in Water by GC/MS (S.C.) | | | MEDF | 1 | | | |
| Methyl-Tert-Butyl-Ether | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 10:40PMD |
| Benzene | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 10:40PMD |
| Toluene | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 10:40PMD |
| Ethylbenzene | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 10:40PMD |
| m & p-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 10:40PMD |
| o-Xylene | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 10:40PMD |
| Total Xylene | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 10:40PMD |
| Naphthalene | BDL | ug/L | 5030/8260B | 1 000 | 02/21/2004 | 02/21/2004 | 10:40PMD |
| SURROGATE Toluene-D8 | 109.00% | | | | | | |
| SURROGATE Bromofluorobenzene | 137.20% | | | | | | |

Richard Gillespie
H2O Environmental Inc
121 Centrum Dr. Ste 2

Irmo, SC 29063


February 24, 2004
Report # 402001021
Order # 14448
STL Miami Cert ID# 96023
NELAP ID# E86349

Site Location/Project
South Carolina
DHE-12335 Crawfords

Sample I.D.: CLS-WW
Collected: 02/18/04 00:00
Received: 02/20/04 10:00
Collected by: D. Burritt

| PARAMETER | RESULT | UNITS | METHOD | DETECTION LIMIT | DATE EXT. | DATE ANALY. | ANALYST |
|---|---|---|---|---|---|---|---|
| SURROGATE: Dibromofluoromethane | 92.75% | | | | | | |

REPORT COMMENTS:
BDL: Indicates Analyte is Below Detection Limit MEDF: Matrix Effected Dilution Factor
Unless otherwise noted, mg/Kg denotes wet weight

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10200 USA Today Way, Miramar Florida 33025. (954) 431-4550 (South Carolina Cert ID# 96023)
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*Tests results meet all the requirements of NELAC, unless identified as "certification in-process"
Unless otherwise noted, samples submitted for EPA 5035 were collected,preserved and analyzed in accordance with all methodology requirements.

Company Representative

# ACCESS ANALYTICAL, INC.

Client: H2O Environmental
Project: DHE - 12335 Crawfords
-- GROUNDWATER SAMPLES --

| SAMPLE I.D. | METHANE (ug/l)* | METHOD | DATE COLLECTED | DATE RECEIVED | DATE ANALYZED |
|---|---|---|---|---|---|
| OMW 01 | 378 | KERR | 02/18/04 | 02/19/04 | 02/23/04 |
| MW 01R | ND | KERR | 02/18/04 | 02/19/04 | 02/23/04 |
| MW 02 | 1,909 | KERR | 02/18/04 | 02/19/04 | 02/23/04 |
| MW 03 | ND | KERR | 02/18/04 | 02/19/04 | 02/23/04 |
| MW 04 | ND | KERR | 02/18/04 | 02/19/04 | 02/23/04 |
| MW 05 | ND | KERR | 02/18/04 | 02/19/04 | 02/23/04 |
| MW 06 | ND | KERR | 02/18/04 | 02/19/04 | 02/23/04 |
| MW 07 | ND | KERR | 02/18/04 | 02/19/04 | 02/23/04 |
| MW 08 | ND | KERR | 02/18/04 | 02/19/04 | 02/23/04 |
| MW 09 | ND | KERR | 02/18/04 | 02/19/04 | 02/23/04 |
| MW 10 | ND | KERR | 02/18/04 | 02/19/04 | 02/23/04 |
| MW 11 | ND | KERR | 02/18/04 | 02/19/04 | 02/23/04 |
| MW 12 | ND | KERR | 02/18/04 | 02/19/04 | 02/23/04 |
| MW 13R | 199 | KERR | 02/18/04 | 02/19/04 | 02/23/04 |
| MW 14 | ND | KERR | 02/18/04 | 02/19/04 | 02/23/04 |
| MW 15 | ND | KERR | 02/18/04 | 02/19/04 | 02/23/04 |
| MW 16 | ND | KERR | 02/18/04 | 02/19/04 | 02/23/04 |
| MW 17 | ND | KERR | 02/18/04 | 02/19/04 | 02/23/04 |
| CPWW | ND | KERR | 02/18/04 | 02/19/04 | 02/23/04 |
| CLS-WW | ND | KERR | 02/18/04 | 02/19/04 | 02/23/04 |

MDL for above samples = 10 ug/L

BDL - denotes 'Not Detected" at or above the lower method detection limit

- Unless otherwise noted in comments section samples listed above analyzed for methane by C.A.L., 3005 Broad River Rd. Columbia, SC 29210.

* - Reported as ug/L - in water phase.

**COMMENTS:**

Company Service Representative

# Access Analytical - Chain of Custody Record

Laboratory ID: _____

Project Submission #: 04/22-1021 · 14424 - 14448 RUSH # _____ PO #: _____

Company Name: H2O Environmental

Address: 121 Centrum Dr #2

City: Irmo State: SC Zip: 29063

Project Name: DHE - 12335 Crawfords

Report To: R. Gillespie

Sampled By (print): D Burritt

| Sample Label | Date Collected | Time Collected | Matrix | # of Cont | Preservative (*see codes below) | ↓ REQUESTED LAB ANALYSIS: ↓ Nitrate/sulfate | Ferrous Iron | Methane* | BTEX, Naph, MTBE | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 0 | 0 | 0 | 1 | | | |
| OMW-1 | 2-18 | | GW | 6 | | ✓ | ✓ | | ✓ | | 14424 | |
| MW-1R | | | | | | | | | | | 14425 | * Methane submitted out |
| MW-2 | | | | | | | | | | | 14426 | |
| MW-3 | | | | | | | | | | | 14427 | |
| MW-4 | | | | | | | | | | | 14428 | |
| MW-5 | | | | | | | | | | | 14429 | Dude 393 |
| MW-6 | | | | | | | | | | | 14435 | |
| MW-7 | | | | | | | | | | | 14436 | |
| MW-8 | | | | | | | | | | | 14437 | |
| MW-9 | | | | | | ✓ | ✓ | ✓ | ✓ | | 14438 | |

ACCESS ANALYTICAL, INC.

Phone (803) 781-4243
1248 Lake Murray Blvd Fax: 781-1303
Irmo, SC 29063 Toll Free (888) 315-4243
www.accessanalyticalinc.com

NOTES / COMMENTS

**Turnaround Time:**

✓ Std. (5-7 Bus. days)
___ RUSH*
*Date Required: _____
(For rush work, results faxed by end of business day on date required)

Samples Rec'd on Ice: ✓ Yes ___ No

Project Location: ✓ SC ___ NC ___ Other _____ (specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| D Burritt | 2/19/04 | 1330 | |
| | 2/19/04 | 1600 | FEDEX |
| FEDEX | 2/20 | 0900 | |

* Preservative Codes (*place corresponding # in block above analysis field*) 0=None, 1=HCL, 2=HNO3, 3=H2SO4, 4=NaOH, 5=Na2S2O3, 6=NaHSO4, Other=Specify



Access Analytical, Inc.
See Reverse for Terms and Conditions

Original Copy - Returned w/Report
Yellow Copy - Access File Copy
Pink Copy - Client Copy

# Access Analytical - Chain of Custody Record

Laboratory ID: _____

Project Submission #: 04/02-1021, 14439-14448 RUSH # _____ PO #: _____

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Company Name: HKO Environmental | | | Preservative (*see codes below) | 1 | 0 | 0 | 0 | | | | |
| Address: 121 Centrum Dr #2 | | | ↓ REQUESTED LAB ANALYSIS: ↓ | MTBE, Dupr, BTEX | NO3+NO2/Sulfate | Methane | Ferrous Iron | | | | |
| City: Irmo State: SC Zip: 29063 | | | | | | | | | | | |
| Project Name: DHE - 12335 Crawfords | | | | | | | | | | | |
| Report To: R. Gillespie | | | | | | | | | | | |
| Sampled By (print): D Burritt | | | | | | | | | | | |
| Sample Label | Date Collected | Time Collected | Matrix | # of Cont | | | | | | 14439 | NOTES / COMMENTS |
| MW-10 | 2-18 | | GW | 6 | | | | | | 14439 | |
| MW-11 | | | | | | | | | | 14440 | |
| MW-12 | | | | | | | | | | 14441 | |
| MW-13R | | | | | | | | | | 14442 | |
| MW-14 | | | | | | | | | | 14443 | |
| MW-15 | | | | | | | | | | 14444 | Quote 393 |
| MW-16 | | | | | | | | | | 14445 | |
| D MW-17 | | | | | | | | | | 14446 | |
| CPWW2 | | | | | | | | | | 14447 | |
| CLS-WW | | | | | | | | | | 14448 | |

ACCESS ANALYTICAL, INC.

1248 Lake Murray Blvd
Irmo, SC 29063

Phone (803) 781-4243
Fax. 781-4303
Toll Free (888) 315-4243
www.accessanalyticalinc.com

**Turnaround Time:**

✓ Std. (5-7 Bus. days)
___RUSH*
*Date Required:_____
(For rush work, results faxed by end of business day on date required)

Samples Recd on Ice? ✓ Yes ___No

Project Location: ✓ SC ___NC ___Other_____(specify)

| Relinquished By: | Date: | Time: | Received By: |
|---|---|---|---|
| D Burritt | 2/19/09 | 1530 | |
| | 2/19/04 | 1600 | FEDEX |
| FEDEX | 2/20 | 1030 | |

* Preservative Codes (place corresponding # in block above analysis field): 0 - None, 1 - HCL, 2 - HNO3, 3 - H2SO4, 4 - NaOH, 5 - Na2S2O3, 6 - NaHSO4, Other - Specify



Access Analytical, Inc.
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D H E C
PROMOTE PROTECT PROSPER
South Carolina Department of Health
and Environmental Control

**UNDERGROUND STORAGE TANK PROGRAM**
**BUREAU OF LAND AND WASTE MANAGEMENT**
**2600 Bull Street, Columbia, South Carolina 29201**
**Telephone: 803-896-6240**

RECEIVED
DEC 0 8 2004
UNDERGROUND STORAGE TANK PROGRAM

**MEMORANDUM**

TO: Dick Environmental Services

FROM: John Abernathy

RE: **NOTICE TO PROCEED**

UST DOCKETING 62 feet

Facility Name: Crawford's Country Store

Permit Number: 12335

County: Abbeville

Work To Be Completed: sample all wells (19 total; 18 Monitoring wells, 1 water supply well) for BTEXMN, Lead and EDB. Notify this office is wells are not found or destroyed.

PACE CA# 22978

Dick CA# 22979

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 10/20/04
**Field Personnel:** TAC
**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 75.0 ° F

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | | serial no. | |
| pH=4.0 | X | standard | X |
| pH=7.0 | | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| | | | |
|---|---|---|---|
| T. Cov. | 10-21-04/1500 | | |
| Relinquished by | Date/Time | Received by | Date/Time |

**Facility Name:** Crawford's Country Store Abbeville
**Site ID#:** 12335 **Monitoring Well#** OMW-1
**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inch

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 16.25 | | feet |
| Total Well Depth (TWD) | 22 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 5.75 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 0.93725 | gallons |
| 3 casing volume (3 X CV)= | 3 | 2.81175 | gallons |

Total Volume of Water Purged Before Sampling 0.0 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) 0.0 w/in the screen | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | | | | | | | |
| pH (s.u.) | | | | | | | | |
| Specific Conductivity (µmhos/cm) | | | | | | | | |
| Water Temperature ( °C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: No vault top screws Sample Time: 1147

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 10/20/04

**Field Personnel:** TAC

**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 75.0 ° F

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | | serial no. | |
| pH=4.0 | X | standard | X |
| pH=7.0 | | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| T. Cov. | 10-21-04/1500 | | |
|---|---|---|---|
| Relinquished by | Date/Time | Received by | Date/Time |

**Facility Name:** Crawford's Country Store Abbeville

**Site ID#:** 12335 **Monitoring Well#** MW-1R

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inch

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 16.12 | | feet |
| Total Well Depth (TWD) | 22 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 5.88 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 0.95844 | gallons |
| 3 casing volume (3 X CV)= | 3 | 2.87532 | gallons |

Total Volume of Water Purged Before Sampling 0.0 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) 0.0 w/in the screen | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | | | | | | | |
| pH (s.u.) | | | | | | | | |
| Specific Conductivity (µmhos/cm) | | | | | | | | |
| Water Temperature ( °C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sheen on sample Sample Time: 1213

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 10/20/04

**Field Personnel:** TAC

**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 75.0 ° F

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | | serial no. | |
| pH=4.0 | X | standard | X |
| pH=7.0 | | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| T. Cov. | 10-21-04/1500 | | |
|---|---|---|---|
| Relinquished by | Date/Time | Received by | Date/Time |

**Facility Name:** Crawford's Country Store Abbeville

**Site ID#:** 12335 **Monitoring Well#** MW-2

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inch

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 16.32 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 8.68 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.41484 | gallons |
| 3 casing volume (3 X CV)= | 3 | 4.24452 | gallons |

Total Volume of Water Purged Before Sampling 0.0 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) 0.0 w/in the screen | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | | | | | | | |
| pH (s.u.) | | | | | | | | |
| Specific Conductivity (µmhos/cm) | | | | | | | | |
| Water Temperature ( °C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: One screw on vault top, sheen on sample Sample Time: 1120

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 10/20/04
**Field Personnel:** TAC
**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 75.0 ° F

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | | serial no. | |
| pH=4.0 | X | standard | X |
| pH=7.0 | | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| | | | |
|---|---|---|---|
| T. Cov. | 10-21-04/1500 | | |
| Relinquished by | Date/Time | Received by | Date/Time |

**Facility Name:** Crawford's Country Store Abbeville
**Site ID#:** 12335 **Monitoring Well#** MW-3
**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inch

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 16.22 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 8.78 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.43114 | gallons |
| 3 casing volume (3 X CV)= | 3 | 4.29342 | gallons |

Total Volume of Water Purged Before Sampling 0.0 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) 0.0 w/in the screen | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | | | | | | | |
| pH (s.u.) | | | | | | | | |
| Specific Conductivity (µmhos/cm) | | | | | | | | |
| Water Temperature ( °C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Well cap locked Sample Time: 1237

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 10/20/04
**Field Personnel:** TAC
**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 75.0 ° F

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | | serial no. | |
| pH=4.0 | X | standard | X |
| pH=7.0 | | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| | | | |
|---|---|---|---|
| T. Cov. | 10-21-04/1500 | | |
| Relinquished by | Date/Time | Received by | Date/Time |

**Facility Name:** Crawford's Country Store Abbeville
**Site ID#:** 12335 **Monitoring Well#** MW-4
**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inch

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 16.80 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 8.2 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.3366 | gallons |
| 3 casing volume (3 X CV)= | 3 | 4.0098 | gallons |

Total Volume of Water Purged Before Sampling 0.0 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) 0.0 w/in the screen | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | | | | | | | |
| pH (s.u.) | | | | | | | | |
| Specific Conductivity (µmhos/cm) | | | | | | | | |
| Water Temperature ( °C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Well cap locked, no vault top screws Sample Time: 1011

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 10/19/04

**Field Personnel:** TAC

**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 75.0 ° F

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | | serial no. | |
| pH=4.0 | X | standard | X |
| pH=7.0 | | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| T. Cov. | 10-21-04/1500 | | |
|---|---|---|---|
| Relinquished by | Date/Time | Received by | Date/Time |

**Facility Name:** Crawford's Country Store Abbeville

**Site ID#:** 12335 **Monitoring Well#** MW-5

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inch

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 14.67 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 10.33 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.68379 | gallons |
| 3 casing volume (3 X CV)= | 3 | 5.05137 | gallons |

Total Volume of Water Purged Before Sampling 0.0 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) 0.0 w/in the screen | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | | | | | | | |
| pH (s.u.) | | | | | | | | |
| Specific Conductivity (µmhos/cm) | | | | | | | | |
| Water Temperature ( °C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 1416

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 10/19/04
**Field Personnel:** TAC
**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 75.0 ° F

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | | serial no. | |
| pH=4.0 | X | standard | X |
| pH=7.0 | | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| T. Cov. | 10-21-04/1500 | | |
|---|---|---|---|
| Relinquished by | Date/Time | Received by | Date/Time |

**Facility Name:** Crawford's Country Store Abbeville
**Site ID#:** 12335 **Monitoring Well#** MW-6
**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inch

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 13.90 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 11.1 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.8093 | gallons |
| 3 casing volume (3 X CV)= | 3 | 5.4279 | gallons |

Total Volume of Water Purged Before Sampling 0.0 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) 0.0 w/in the screen | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | | | | | | | |
| pH (s.u.) | | | | | | | | |
| Specific Conductivity (µmhos/cm) | | | | | | | | |
| Water Temperature ( °C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 1349

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 10/19/04

**Field Personnel:** TAC

**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 75.0 ° F

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | | serial no. | |
| pH=4.0 | X | standard | X |
| pH=7.0 | | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| T. Cov. | 10-21-04/1500 | | |
|---|---|---|---|
| Relinquished by | Date/Time | Received by | Date/Time |

**Facility Name:** Crawford's Country Store Abbeville

**Site ID#:** 12335 **Monitoring Well#** MW-7

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inch

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 13.80 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 11.2 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.8256 | gallons |
| 3 casing volume (3 X CV)= | 3 | 5.4768 | gallons |

Total Volume of Water Purged Before Sampling 0.0 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) 0.0 w/in the screen | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | | | | | | | |
| pH (s.u.) | | | | | | | | |
| Specific Conductivity (µmhos/cm) | | | | | | | | |
| Water Temperature ( °C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Well cap locked Sample Time: 1305

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 10/19/04

**Field Personnel:** TAC

**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 75.0 ° F

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | | serial no. | |
| pH=4.0 | X | standard | X |
| pH=7.0 | | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| T. Cov. | 10-21-04/1500 | | |
|---|---|---|---|
| Relinquished by | Date/Time | Received by | Date/Time |

**Facility Name:** Crawford's Country Store Abbeville

**Site ID#:** 12335 **Monitoring Well#** MW-8

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inch

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 13.89 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 11.11 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.81093 | gallons |
| 3 casing volume (3 X CV)= | 3 | 5.43279 | gallons |

Total Volume of Water Purged Before Sampling 0.0 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) 0.0 w/in the screen | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | | | | | | | |
| pH (s.u.) | | | | | | | | |
| Specific Conductivity (µmhos/cm) | | | | | | | | |
| Water Temperature ( °C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Well cap damaged Sample Time: 1326

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 10/20/04
**Field Personnel:** TAC
**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 75.0 ° F

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | | serial no. | |
| pH=4.0 | X | standard | X |
| pH=7.0 | | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| | | | |
|---|---|---|---|
| T. Cov. | 10-21-04/1500 | | |
| Relinquished by | Date/Time | Received by | Date/Time |

**Facility Name:** Crawford's Country Store Abbeville
**Site ID#:** 12335 **Monitoring Well#** MW-9
**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inch

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 15.36 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 9.64 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.57132 | gallons |
| 3 casing volume (3 X CV)= | 3 | 4.71396 | gallons |

Total Volume of Water Purged Before Sampling 0.0 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) 0.0 w/in the screen | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | | | | | | | |
| pH (s.u.) | | | | | | | | |
| Specific Conductivity (µmhos/cm) | | | | | | | | |
| Water Temperature ( °C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 1056

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 10/20/04

**Field Personnel:** TAC

**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 75.0 ° F

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | | serial no. | |
| pH=4.0 | X | standard | X |
| pH=7.0 | | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| T. Cov. | 10-21-04/1500 | | |
|---|---|---|---|
| Relinquished by | Date/Time | Received by | Date/Time |

**Facility Name:** Crawford's Country Store Abbeville

**Site ID#:** 12335 **Monitoring Well#** MW-10

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inch

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 16.50 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 8.5 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.3855 | gallons |
| 3 casing volume (3 X CV)= | 3 | 4.1565 | gallons |

Total Volume of Water Purged Before Sampling 0.0 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) 0.0 w/in the screen | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | | | | | | | |
| pH (s.u.) | | | | | | | | |
| Specific Conductivity (µmhos/cm) | | | | | | | | |
| Water Temperature ( °C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Mud in vault, no vault top screws Sample Time: 944

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 10/19/04
**Field Personnel:** TAC
**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 75.0 ° F

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | | serial no. | |
| pH=4.0 | X | standard | X |
| pH=7.0 | | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| T. Cov. | 10-21-04/1500 | | |
|---|---|---|---|
| Relinquished by | Date/Time | Received by | Date/Time |

**Facility Name:** Crawford's Country Store Abbeville
**Site ID#:** 12335 **Monitoring Well#** MW-11
**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inch

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 14.82 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 10.18 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.65934 | gallons |
| 3 casing volume (3 X CV)= | 3 | 4.97802 | gallons |

Total Volume of Water Purged Before Sampling 0.0 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) 0.0 w/in the screen | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | | | | | | | |
| pH (s.u.) | | | | | | | | |
| Specific Conductivity (µmhos/cm) | | | | | | | | |
| Water Temperature ( °C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: One screw in vault top Sample Time: 1434

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 10/19/04

**Field Personnel:** TAC

**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 75.0 ° F

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | | serial no. | |
| pH=4.0 | X | standard | X |
| pH=7.0 | | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| | | | |
|---|---|---|---|
| T. Cov. | 10-21-04/1500 | | |
| Relinquished by | Date/Time | Received by | Date/Time |

**Facility Name:** Crawford's Country Store Abbeville

**Site ID#:** 12335 **Monitoring Well#** MW-12

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inch

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 16.20 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 8.8 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 1.4344 | gallons |
| 3 casing volume (3 X CV)= | 3 | 4.3032 | gallons |

Total Volume of Water Purged Before Sampling 0.0 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) 0.0 w/in the screen | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | | | | | | | |
| pH (s.u.) | | | | | | | | |
| Specific Conductivity (µmhos/cm) | | | | | | | | |
| Water Temperature ( °C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Well cap damaged Sample Time: 1451

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 10/19/04

**Field Personnel:** TAC

**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 75.0 ° F

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | | serial no. | |
| pH=4.0 | X | standard | X |
| pH=7.0 | | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| T. Cov. | 10-21-04/1500 | | |
|---|---|---|---|
| Relinquished by | Date/Time | Received by | Date/Time |

**Facility Name:** Crawford's Country Store Abbeville

**Site ID#:** 12335 **Monitoring Well#** MW-13R

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inch

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 20.36 | | feet |
| Total Well Depth (TWD) | 25.22 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 4.86 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 0.79218 | gallons |
| 3 casing volume (3 X CV)= | 3 | 2.37654 | gallons |

Total Volume of Water Purged Before Sampling 0.0 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) 0.0 w/in the screen | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | | | | | | | |
| pH (s.u.) | | | | | | | | |
| Specific Conductivity (µmhos/cm) | | | | | | | | |
| Water Temperature ( °C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 1517

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 10/20/04

**Field Personnel:** TAC

**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 75.0 ° F

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | | serial no. | |
| pH=4.0 | X | standard | X |
| pH=7.0 | | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| | | | |
|---|---|---|---|
| T. Cov. | 10-21-04/1500 | | |
| Relinquished by | Date/Time | Received by | Date/Time |

**Facility Name:** Crawford's Country Store Abbeville

**Site ID#:** 12335 **Monitoring Well#** MW-14

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inch

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 6.76 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 18.24 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 2.97312 | gallons |
| 3 casing volume (3 X CV)= | 3 | 8.91936 | gallons |

Total Volume of Water Purged Before Sampling 5.0 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) 5-gallons | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | 913 | 920 | | | | | |
| pH (s.u.) | | 5.1 | 5.0 | | | | | |
| Specific Conductivity (µmhos/cm) | | 0.20 | 0.20 | | | | | |
| Water Temperature ( °C) | | 18.2 | 18.0 | | | | | |
| Dissolved Oxygen | | 12.0 | 12.0 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: One screw in vault top, purged dry at 5-gallons Sample Time: 923

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 10/20/04

**Field Personnel:** TAC

**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 75.0 ° F

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | | serial no. | |
| pH=4.0 | X | standard | X |
| pH=7.0 | | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| | | | |
|---|---|---|---|
| T. Cov. | 10-21-04/1500 | | |
| Relinquished by | Date/Time | Received by | Date/Time |

**Facility Name:** Crawford's Country Store Abbeville

**Site ID#:** 12335 **Monitoring Well#** MW-15

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inch

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 4.88 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 20.12 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 3.27956 | gallons |
| 3 casing volume (3 X CV)= | 3 | 9.83868 | gallons |

Total Volume of Water Purged Before Sampling 6.0 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) 6-gallons | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | 843 | 850 | | | | | |
| pH (s.u.) | | 6.5 | 6.5 | | | | | |
| Specific Conductivity (µmhos/cm) | | 0.08 | 0.07 | | | | | |
| Water Temperature ( °C) | | 18.0 | 18.1 | | | | | |
| Dissolved Oxygen | | 12.7 | 11.5 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Purged dry at 6-gallons Sample Time: 853

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 10/20/04
**Field Personnel:** TAC
**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 75.0 ° F

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | | serial no. | |
| pH=4.0 | X | standard | X |
| pH=7.0 | | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| T. Cov. | 10-21-04/1500 | | |
|---|---|---|---|
| Relinquished by | Date/Time | Received by | Date/Time |

**Facility Name:** Crawford's Country Store Abbeville
**Site ID#:** 12335 **Monitoring Well#** MW-16
**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inch

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 9.60 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 15.4 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 2.5102 | gallons |
| 3 casing volume (3 X CV)= | 3 | 7.5306 | gallons |

Total Volume of Water Purged Before Sampling 3.0 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) 3-gallons | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | 822 | 829 | | | | | |
| pH (s.u.) | | 5.4 | 5.3 | | | | | |
| Specific Conductivity (µmhos/cm) | | 0.08 | 0.08 | | | | | |
| Water Temperature ( °C) | | 18.1 | 18.0 | | | | | |
| Dissolved Oxygen | | 10.9 | 10.8 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: One screw in vault top, purged dry at 3-gallons Sample Time: 832

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 10/20/04
**Field Personnel:** TAC
**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 75.0 ° F

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | | serial no. | |
| pH=4.0 | X | standard | X |
| pH=7.0 | | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| T. Cov. | 10-21-04/1500 | | |
|---|---|---|---|
| Relinquished by | Date/Time | Received by | Date/Time |

**Facility Name:** Crawford's Country Store Abbeville
**Site ID#:** 12335 **Monitoring Well#** DMW-17
**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inch

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 16.73 | | feet |
| Total Well Depth (TWD) | 75 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 58.27 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 9.49801 | gallons |
| 3 casing volume (3 X CV)= | 3 | 28.49403 | gallons |

Total Volume of Water Purged Before Sampling 15.0 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) 15-gallons | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | 1020 | 1026 | 1032 | | | | |
| pH (s.u.) | | 6.3 | 6.3 | 6.3 | | | | |
| Specific Conductivity (µmhos/cm) | | 0.10 | 0.02 | 0.02 | | | | |
| Water Temperature ( °C) | | 23.0 | 22.3 | 22.3 | | | | |
| Dissolved Oxygen | | 10.7 | 10.6 | 10.6 | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Purged dry at 15-gallons Sample Time: 1035

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 10/20/04

**Field Personnel:** TAC

**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 75.0 ° F

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | | serial no. | |
| pH=4.0 | X | standard | X |
| pH=7.0 | | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| | | | |
|---|---|---|---|
| T. Cov. | 10-21-04/1500 | | |
| Relinquished by | Date/Time | Received by | Date/Time |

**Facility Name:** Crawford's Country Store Abbeville

**Site ID#:** 12335 **Monitoring Well#** WSW-1

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inch

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | | | feet |
| Total Well Depth (TWD) | | | feet |
| Length of the water column (LWC=TWD-DGW) | | 0 | feet |
| 1 casing volume (CV=LWC X C)= | 0.163 | 0 | gallons |
| 3 casing volume (3 X CV)= | 3 | 0 | gallons |

Total Volume of Water Purged Before Sampling _____ gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | | | | | | | |
| pH (s.u.) | | | | | | | | |
| Specific Conductivity (µmhos/cm) | | | | | | | | |
| Water Temperature ( °C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: _____ Sample Time: 1302

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# Chain of Custody / Analytical Request Document

*The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.*

851081

Page: 1 of 2

**Section A** — Required Client Information:
Company: SCDHEC
Address: 2600 Bull Street
Columbia SC
Phone: Fax:

**Section B** — Required Client Information:
Report To: John Abernathy
Copy To:
Invoice To: Finance
PO #: FL6276
Project Name: Crawford's Country Store
Project Number: 12335 22979

Client Information (Check quote/contract):
Requested Due Date: TAT:
*Turn around time less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

**Section C** — To Be Completed by Pace Analytical and Client
Quote Reference:
Project Manager:
Project #:
Profile #:

**Section D** — Required Client Information:

**SAMPLE ID**
One character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX CODE — DRINKING WATER DW; GROUNDWATER GW; SURFACE WATER SW; WASTE WATER WW; PRODUCT P; SOIL SL; OIL OL; WIPE WP; AIR AR; OTHER OT

| ITEM # | SAMPLE ID | MATRIX CODE | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED START DATE | COLLECTED START TIME | COLLECTED END DATE | COLLECTED END TIME | # OF CONTAINERS | SAMPLE TEMP AT COLLECTION | Preservatives: Unpreserved | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | $Na_2S_2O_3$ | Methanol | Other | Requested Analysis: BTEX | Naphthalene | MTBE | EDB | Lead | Remarks / Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | OMW1 | GW | G | | | 10/20/04 | 1147 | 3 | 5 | | | | | | | | | X | X | X | X | Y | |
| 2 | MW1R | GW | G | | | | 1213 | | | | | | | | | | | | | | | | |
| 3 | MW2 | GW | G | | | | 1120 | | | | | | | | | | | | | | | | |
| 4 | MW3 | GW | G | | | | 1237 | | | | | | | | | | | | | | | | |
| 5 | MW4 | GW | G | | | | 1011 | | | | | | | | | | | | | | | | |
| 6 | MW5 | GW | G | | | 10/19/04 | 1416 | | | | | | | | | | | | | | | | |
| 7 | MW6 | GW | G | | | | 1349 | | | | | | | | | | | | | | | | |
| 8 | MW7 | GW | G | | | | 1305 | | | | | | | | | | | | | | | | |
| 9 | MW8 | GW | G | | | | 1326 | | | | | | | | | | | | | | | | |
| 10 | MW9 | GW | G | | | 10/20 | 1056 | | | | | | | | | | | | | | | | |
| 11 | MW10 | GW | G | | | 10/20 | 944 | | | | | | | | | | | | | | | | |
| 12 | MW11 | GW | G | | | 10/19 | 1434 | | | | | | | | | | | | | | | | |

SITE LOCATION: ☐ NC ☒ SC ☐ GA ☐ Other

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☒ UST ☐ RCRA ☐ Other

| RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME |
|---|---|---|---|---|---|
| T.A. Covington III | | | | | |
| Dick Environmental | 10/20/04 | 1500 | | | |
| 2 C. 8 III | | | | | |

**SAMPLER NAME AND SIGNATURE**
PRINT Name of SAMPLER: Thomas A. Covington III
SIGNATURE of SAMPLER: T. A. C. 8 III
DATE Signed (MM / DD / YY): 10/20/04

**SAMPLE CONDITION**

| | |
|---|---|
| Temp in °C | |
| Received on Ice | Y/N |
| Sealed Cooler | Y/N |
| Samples Intact | Y/N |

SAMPLE NOTES:

Additional Comments:

2

SEE REVERSE SIDE FOR INSTRUCTIONS

Form COC01 Rev. 0304

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# Chain of Custody / Analytical Request Document

*The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.*

851082

Page: 2 of 2

**Section A** — Required Client Information:

Company: SCDHEC
Address: 2600 Bull Street
Columbia SC
Phone: Fax:

**Section B** — Required Client Information:

Report To: John Abernathy
Copy To:
Invoice To: Finance
P.O.: 463276
Project Name: Crawford's Country Store
Project Number: 12335 22979

Client Information (Check quote/contract):
Requested Due Date: TAT:

*Turn around time less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

**Section C** — To Be Completed by Pace Analytical and Client

Quote Reference:
Project Manager:
Project #:
Profile #:

**Section D** — Required Client Information:

**SAMPLE ID**

One character per box.
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX — DRINKING WATER (DW), GROUNDWATER (GW), SURFACE WATER (SW), WASTE WATER (WW), PRODUCT (P), SOIL (SL), OIL (OL), WIPE (WP), AIR (AR), OTHER (OT)

| ITEM # | SAMPLE ID | MATRIX CODE | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED START DATE | COLLECTED START TIME | COLLECTED END DATE | COLLECTED END TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives: Unpreserved | H2SO4 | HNO3 | HCl | NaOH | Na2S2O3 | Methanol | Other | Requested Analysis: BTEX, MTBE, EDB, Lead | Remarks / Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW12 | GW | G | | | 10/19/04 | 1451 | | 4 | | | | | | | | | X | |
| 2 | MW13R | | | | | 10/19/04 | 1517 | | | | | | | | | | | X | |
| 3 | MW14 | | | | | 10/20/04 | 923 | | | | | | | | | | | X | |
| 4 | MW15 | | | | | | 853 | | | | | | | | | | | X | |
| 5 | MW16 | | | | | | 832 | | | | | | | | | | | X | |
| 6 | DMW17 | | | | | | 1035 | | | | | | | | | | | X | |
| 7 | WSW1 | | | | | | 1302 | | | | | | | | | | | X | |
| 8 | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | |

SITE LOCATION: ☐ NC ☒ SC ☐ GA ☐ Other

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☒ UST ☐ RCRA ☐ Other

| RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME |
|---|---|---|---|---|---|
| T.A. Covington III | | | | | |
| Dick Environmental | 10/20/04 | 1500 | | | |

**SAMPLE CONDITION**

| | |
|---|---|
| Temp in °C | |
| Received on Ice | Y/N |
| Sealed Cooler | Y/N |
| Samples Intact | Y/N |

**SAMPLE NOTES**

Additional Comments:

2

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Thomas A. Covington III

SIGNATURE of SAMPLER: [signature] DATE Signed (MM / DD / YY): 10/20/04

SEE REVERSE SIDE FOR INSTRUCTIONS

Form COC01 Rev 0304

# US Water Recovery

## Non-Hazardous Wastewater Manifest Number:

1. Generator's EPA ID# (If applicable): Waste ID Number:

2. Generator's Name and Mailing Address:
Dick Environmental Services, LLC
915 Folly Rd Suite O, Box 30
Charleston SC 29412
Phone (843) 402-1508
P O #:

3. Agent of Generator and Mailing Address:
Sani-Tech Environmenth, LCC
P O Box 71619
Charleston, SC 29415
Phone (843) 744-0406
P O #:

4. Transporter Company Name:
Sani-Tech Environmenth, LCC
P O Box 71619
Charleston, SC 29415
Phone (843) 744-0406
Truck & Trailer License Number:

5. Transporter U.S. EPA ID#:

6. Facility Name and Site Address:
U S Water Recovery
435 Old Mt. Holly Rd.
Mt. Holly, SC 29445
Phone: (843) 797-8674
Fax: (843) 797-2126

Mailing Address:
U S Water Recovery
P O Box 70397
North Charleston, SC 29415
Phone: (843) 744-0118
Fax (843) 744-0730

7. Facility U.S. EPA ID#:

Start Level: End Level: Total Gallons: Tank Number

| 8. U.S. DOT Desciption OIL/WATER | Container No. | Container Type | Unit | Quantity |
|---|---|---|---|---|
| a. Non-Hazardous, non-regulated waste water | 6 | Drum | gal | 281.5 |
| Shelton's #13117 (4.5g) | | | | |
| Pineville #11521 (32g), Floyd's #3590 (11.5g) | | | | |
| Electrolux #6829 (16g), Sharon #9395 (5g), Black's Lde #2382 (48.5g) | | | | |
| Strawberry #15549 (16.5g), Handy Pantry #4732 (27g) | | | | |
| Sonny's #12007 (21g), Crawford's #12335 (29g) Ellison's #16090 (24.5g) | | | | |

9. Generator's Certification: I hereby declare that the contents of this consignment are not hazardous by definition or listing and are fully and accurately described above by proper shipping name and are classified, packed, marked and labeled, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations and the laws of the State of South Carolina. I further certify that the contents of this consignment are as represented by the description contained on the Waste Profile Form previously submitted to and approved by the Designated Facility.

Printed/Typed Name: Jed Hcames Signature: Date: 11-29-04

10. Transporter Acknowledgement of Receipt of Materials

Printed/Typed Name: Richard Dewitt Signature: Date: 12-01-04

11. Discrepancy indication space:

12. Facility Owner or Operator: Certification of Receipt of Materials

Printed/Typed Name: Signature: Date:

White - Facility Yellow - Transporter Pink - Generator

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November 05, 2004

RECEIVED
NOV 0 9 2004
UNDERGROUND STORAGE
TANK PROGRAM

Ms. Debra Thoma
SCDHEC
UST Program
2600 Bull Street
Columbia, SC 29201

RE: Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Dear Ms. Thoma:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2004. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report please feel free to contact me.

Sincerely,

Sherri Stabel
Sherri.Stabel@pacelabs.com
Project Manager

Enclosures

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Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

## PARAMETER FOOTNOTES

Dilution factor shown represents the factor applied to the reported result and reporting limit due to changes in sample preparation, dilution of the extract, or moisture content

Inorganic Wet Chemistry and Metals Analyses were performed at our Pace Asheville laboratory and Organic testing was performed at our Pace Charlotte laboratory unless otherwise footnoted.

Method 9071B modified to use ASE.

All pH, Free Chlorine, Total Chlorine and Ferrous Iron analyses conducted outside of EPA recommended immediate hold time.

| | |
|---|---|
| ND | Not detected at or above adjusted reporting limit |
| NC | Not Calculable |
| J | Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit |
| MDL | Adjusted Method Detection Limit |
| (S) | Surrogate |
| [1] | Low surrogate recovery was confirmed as a matrix effect by a second analysis. |



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| | |
|---|---|
| NC Wastewater | 40 |
| NC Drinking Water | 37712 |
| SC Environmental | 99030 |
| FL NELAP | E87648 |

Charlotte Certification IDs

| | |
|---|---|
| NC Wastewater | 12 |
| NC Drinking Water | 37706 |
| SC | 99006 |
| FL NELAP | E87627 |

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# QUALITY CONTROL DATA

Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

QC Batch: 112954 Analysis Method: EPA 8011
QC Batch Method: EPA 504.1 Analysis Description: EDB and DBCP in Water
Associated Lab Samples: 924875909 924875917 924875925 924875933 924875966 924875974 924875982

METHOD BLANK: 924886476
Associated Lab Samples: 924875909 924875917 924875925 924875933 924875966 924875974 924875982

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/l | ND | 0.020 | |
| 1-Chloro-2-bromopropane (S) | % | 99 | | |

LABORATORY CONTROL SAMPLE & LCSD: 924886484 924886492

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | RPD | Footnotes |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/l | 0.2500 | 0.2600 | 0.2650 | 104 | 106 | 2 | |
| 1-Chloro-2-bromopropane (S) | | | | | 99 | 90 | | |

MATRIX SPIKE: 924886500

| Parameter | Units | 924866874 Result | Spike Conc. | MS Result | MS % Rec | Footnotes |
|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/l | 0 | 0.2500 | 0.1617 | 65 | |
| 1-Chloro-2-bromopropane (S) | | | | | 68 | |

SAMPLE DUPLICATE: 924886518

| Parameter | Units | 924866882 Result | DUP Result | RPD | Footnotes |
|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/l | ND | ND | NC | |
| 1-Chloro-2-bromopropane (S) | % | 52 | 56 | | 1 |



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# QUALITY CONTROL DATA

Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

QC Batch: 112991 Analysis Method: EPA 8011
QC Batch Method: EPA 504.1 Analysis Description: EDB and DBCP in Water
Associated Lab Samples: 924875859 924875867 924875875 924875883 924875891 924875941 924875958 924875990 924876006 924876014 924876022 924876030

METHOD BLANK: 924887979
Associated Lab Samples: 924875859 924875867 924875875 924875883 924875891 924875941 924875958 924875990 924876006 924876014 924876022 924876030

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/l | ND | 0.020 | |
| 1-Chloro-2-bromopropane (S) | % | 101 | | |

LABORATORY CONTROL SAMPLE & LCSD: 924887987 924887995

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | RPD | Footnotes |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/l | 0.2500 | 0.2530 | 0.2730 | 101 | 109 | 8 | |
| 1-Chloro-2-bromopropane (S) | | | | | 101 | 102 | | |

MATRIX SPIKE: 924888001

| Parameter | Units | 924875859 Result | Spike Conc. | MS Result | MS % Rec | Footnotes |
|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/l | 3.950 | 0.2500 | 3.458 | 0 | 2 |
| 1-Chloro-2-bromopropane (S) | | | | | 103 | |

SAMPLE DUPLICATE: 924888019

| Parameter | Units | 924875867 Result | DUP Result | RPD | Footnotes |
|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/l | 0.3000 | 0.3200 | 6 | |
| 1-Chloro-2-bromopropane (S) | % | 103 | 104 | | |



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# QUALITY CONTROL DATA

Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

QC Batch: 112801 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: GC/MS VOCs by 8260
Associated Lab Samples: 924875909 924875917

METHOD BLANK: 924878234
Associated Lab Samples: 924875909 924875917

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| Benzene | ug/l | ND | 5.0 | |
| Ethylbenzene | ug/l | ND | 5.0 | |
| Methyl-tert-butyl ether | ug/l | ND | 5.0 | |
| Naphthalene | ug/l | ND | 5.0 | |
| Toluene | ug/l | ND | 5.0 | |
| m&p-Xylene | ug/l | ND | 10. | |
| o-Xylene | ug/l | ND | 5.0 | |
| Toluene-d8 (S) | % | 103 | | |
| 4-Bromofluorobenzene (S) | % | 96 | | |
| Dibromofluoromethane (S) | % | 102 | | |
| 1,2-Dichloroethane-d4 (S) | % | 94 | | |

LABORATORY CONTROL SAMPLE: 924878242

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | Footnotes |
|---|---|---|---|---|---|
| Benzene | ug/l | 50.00 | 38.35 | 77 | |
| Ethylbenzene | ug/l | 50.00 | 39.56 | 79 | |
| Methyl-tert-butyl ether | ug/l | 50.00 | 31.95 | 64 | |
| Naphthalene | ug/l | 50.00 | 43.44 | 87 | |
| Toluene | ug/l | 50.00 | 37.38 | 75 | |
| m&p-Xylene | ug/l | 100.00 | 78.33 | 78 | |
| o-Xylene | ug/l | 50.00 | 36.40 | 73 | |
| Toluene-d8 (S) | | | | 99 | |
| 4-Bromofluorobenzene (S) | | | | 90 | |
| Dibromofluoromethane (S) | | | | 100 | |
| 1,2-Dichloroethane-d4 (S) | | | | 101 | |



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# QUALITY CONTROL DATA

Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 924878259 924878267

| Parameter | Units | 924847692 Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | RPD | Footnotes |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ug/l | 0 | 50.00 | 47.20 | 44.23 | 94 | 88 | 7 | |
| Toluene | ug/l | 0 | 50.00 | 45.31 | 43.33 | 91 | 87 | 4 | |
| Toluene-d8 (S) | | | | | | 102 | 102 | | |
| 4-Bromofluorobenzene (S) | | | | | | 95 | 98 | | |
| Dibromofluoromethane (S) | | | | | | 97 | 92 | | |
| 1,2-Dichloroethane-d4 (S) | | | | | | 88 | 94 | | |



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# QUALITY CONTROL DATA

Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

QC Batch: 112958 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: GC/MS VOCs by 8260
Associated Lab Samples: 924875925 924875933 924875966 924875974

METHOD BLANK: 924886708
Associated Lab Samples: 924875925 924875933 924875966 924875974

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| Benzene | ug/l | ND | 5.0 | |
| Ethylbenzene | ug/l | ND | 5.0 | |
| Methyl-tert-butyl ether | ug/l | ND | 5.0 | |
| Naphthalene | ug/l | ND | 5.0 | |
| Toluene | ug/l | ND | 5.0 | |
| m&p-Xylene | ug/l | ND | 10. | |
| o-Xylene | ug/l | ND | 5.0 | |
| Toluene-d8 (S) | % | 104 | | |
| 4-Bromofluorobenzene (S) | % | 98 | | |
| Dibromofluoromethane (S) | % | 98 | | |
| 1,2-Dichloroethane-d4 (S) | % | 90 | | |

LABORATORY CONTROL SAMPLE: 924886716

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | Footnotes |
|---|---|---|---|---|---|
| Benzene | ug/l | 50.00 | 49.24 | 98 | |
| Ethylbenzene | ug/l | 50.00 | 48.64 | 97 | |
| Methyl-tert-butyl ether | ug/l | 50.00 | 46.86 | 94 | |
| Naphthalene | ug/l | 50.00 | 59.05 | 118 | |
| Toluene | ug/l | 50.00 | 49.05 | 98 | |
| m&p-Xylene | ug/l | 100.00 | 99.37 | 99 | |
| o-Xylene | ug/l | 50.00 | 50.15 | 100 | |
| Toluene-d8 (S) | | | | 106 | |
| 4-Bromofluorobenzene (S) | | | | 97 | |
| Dibromofluoromethane (S) | | | | 98 | |
| 1,2-Dichloroethane-d4 (S) | | | | 98 | |



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# QUALITY CONTROL DATA

Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

MATRIX SPIKE: 924886724

| Parameter | Units | 924875933 Result | Spike Conc. | MS Result | MS % Rec | Footnotes |
|---|---|---|---|---|---|---|
| Benzene | ug/l | 0 | 50.00 | 46.15 | 92 | |
| Toluene | ug/l | 0 | 50.00 | 45.02 | 90 | |
| Toluene-d8 (S) | | | | | 105 | |
| 4-Bromofluorobenzene (S) | | | | | 94 | |
| Dibromofluoromethane (S) | | | | | 92 | |
| 1,2-Dichloroethane-d4 (S) | | | | | 87 | |



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# QUALITY CONTROL DATA

Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

QC Batch: 112982 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: GC/MS VOCs by 8260
Associated Lab Samples: 924875859 924875867 924875875 924875883 924875891 924875941 924875958 924875982 924875990 924876006 924876014 924876022 924876030

METHOD BLANK: 924887664
Associated Lab Samples: 924875859 924875867 924875875 924875883 924875891 924875941 924875958 924875982 924875990 924876006 924876014 924876022 924876030

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| Benzene | ug/l | ND | 5.0 | |
| Ethylbenzene | ug/l | ND | 5.0 | |
| Methyl-tert-butyl ether | ug/l | ND | 5.0 | |
| Naphthalene | ug/l | ND | 5.0 | |
| Toluene | ug/l | ND | 5.0 | |
| m&p-Xylene | ug/l | ND | 10. | |
| o-Xylene | ug/l | ND | 5.0 | |
| Toluene-d8 (S) | % | 104 | | |
| 4-Bromofluorobenzene (S) | % | 94 | | |
| Dibromofluoromethane (S) | % | 102 | | |
| 1,2-Dichloroethane-d4 (S) | % | 96 | | |

LABORATORY CONTROL SAMPLE: 924887672

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | Footnotes |
|---|---|---|---|---|---|
| Benzene | ug/l | 50.00 | 49.61 | 99 | |
| Ethylbenzene | ug/l | 50.00 | 50.23 | 100 | |
| Methyl-tert-butyl ether | ug/l | 50.00 | 39.57 | 79 | |
| Naphthalene | ug/l | 50.00 | 55.05 | 110 | |
| Toluene | ug/l | 50.00 | 48.26 | 96 | |
| m&p-Xylene | ug/l | 100.00 | 98.01 | 98 | |
| o-Xylene | ug/l | 50.00 | 47.22 | 94 | |
| Toluene-d8 (S) | | | | 105 | |
| 4-Bromofluorobenzene (S) | | | | 98 | |
| Dibromofluoromethane (S) | | | | 100 | |
| 1,2-Dichloroethane-d4 (S) | | | | 87 | |



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# QUALITY CONTROL DATA

Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 924887680 924887698

| Parameter | Units | 924876030 Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | RPD | Footnotes |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ug/l | 0 | 50.00 | 44.67 | 41.02 | 89 | 82 | 9 | |
| Toluene | ug/l | 0 | 50.00 | 47.13 | 40.76 | 94 | 82 | 14 | |
| Toluene-d8 (S) | | | | | | 101 | 101 | | |
| 4-Bromofluorobenzene (S) | | | | | | 102 | 98 | | |
| Dibromofluoromethane (S) | | | | | | 95 | 96 | | |
| 1,2-Dichloroethane-d4 (S) | | | | | | 98 | 96 | | |



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# QUALITY CONTROL DATA

Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

QC Batch: 112867 — Analysis Method: EPA 6010
QC Batch Method: EPA 3010 — Analysis Description: Metals by Trace ICP
Associated Lab Samples: 924875859 924875867 924875875 924875883 924875891 924875909 924875917 924875925 924875933 924875941 924875958 924875966 924875974 924875982 924875990 924876006 924876014 924876022 924876030

METHOD BLANK: 924883424
Associated Lab Samples: 924875859 924875867 924875875 924875883 924875891 924875909 924875917 924875925 924875933 924875941 924875958 924875966 924875974 924875982 924875990 924876006 924876014 924876022 924876030

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| Lead | mg/l | 0.0027 | 0.0050 | |

LABORATORY CONTROL SAMPLE: 924883432

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | Footnotes |
|---|---|---|---|---|---|
| Lead | mg/l | 0.5000 | 0.4720 | 94 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 924883440 924883457

| Parameter | Units | 924875909 Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | RPD | Footnotes |
|---|---|---|---|---|---|---|---|---|---|
| Lead | mg/l | 0.00525 | 0.5000 | 0.4820 | 0.4770 | 95 | 94 | 1 | |

SAMPLE DUPLICATE: 924883465

| Parameter | Units | 924875917 Result | DUP Result | RPD | Footnotes |
|---|---|---|---|---|---|
| Lead | mg/l | 0.1200 | 0.1300 | 6 | |



## REPORT OF LABORATORY ANALYSIS

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Asheville Certification IDs
NC Wastewater 40
NC Drinking Water 37712
SC Environmental 99030
FL NELAP E87648

Charlotte Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006
FL NELAP E87627

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**Pace Analytical Services, Inc.**
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

## QUALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines, unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

| | |
|---|---|
| LCS(D) | Laboratory Control Sample (Duplicate) |
| MS(D) | Matrix Spike (Duplicate) |
| DUP | Sample Duplicate |
| ND | Not detected at or above adjusted reporting limit |
| NC | Not Calculable |
| J | Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit |
| MDL | Adjusted Method Detection Limit |
| RPD | Relative Percent Difference |
| (S) | Surrogate |
| [1] | The surrogate and/or spike recovery was outside acceptance limits. |
| [2] | The spike recovery was outside acceptance limits for the MS and/or MSD due to an analyte concentration in the sample at four times greater than the spike concentration. The QC batch was accepted based upon LCS and/or LCSD recoveries within acceptance limits. |



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| | |
|---|---|
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| NC Drinking Water | 37712 |
| SC Environmental | 99030 |
| FL NELAP | E87648 |

Charlotte Certification IDs

| | |
|---|---|
| NC Wastewater | 12 |
| NC Drinking Water | 37706 |
| SC | 99006 |
| FL NELAP | E87627 |

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# CHAIN-OF-CUSTODY / Analytical Request Document

*The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.*

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851081

Page: 1 of 2

**Section A** — Required Client Information:
Company: SCDHEC
Address: 2600 Bull Street
Columbia SC
Phone: Fax:

**Section B** — Required Client Information:
Report To: John Abernathy
Copy To:
Invoice To: Finance
P.O.: 463276
Project Name: Crawford's Country Store
Project Number: 12335 22979

Client Information (Check quote/contract):
Requested Due Date: *TAT:
*Turn around time less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

**Section C** — To Be Completed by Pace Analytical and Client
Quote Reference:
Project Manager: SS
Project #: 9279737
Profile #: 1700-1

**Section D** — Required Client Information:

**SAMPLE ID**
One character per box.
(A–Z, 0-9 / .–)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes

| MATRIX | CODE |
|---|---|
| DRINKING WATER | DW |
| GROUNDWATER | GW |
| SURFACE WATER | SW |
| WASTE WATER | WW |
| PRODUCT | P |
| SOIL | SL |
| OIL | OL |
| WIPE | WP |
| AIR | AR |
| OTHER | OT |

| ITEM # | SAMPLE ID | MATRIX CODE | SAMPLE TYPE G=GRAB C=COMP | COLLECTED START DATE | COLLECTED START TIME | COLLECTED END DATE | COLLECTED END TIME | SAMPLE TEMP AT COLLECTION | Preservatives: Unpreserved | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | $Na_2S_2O_3$ | Methanol | Other | Requested Analysis: BTEX | Naph | MTBE | EDB | Lead | Remarks / Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | OMW1 | GW | G | | | 10/20/04 | 1147 | 30.5 | | | | | | | | | X | X | X | X | X | 924875859 |
| 2 | MW1R | | | | | | 1213 | | | | | | | | | | | | | | | 924875867 |
| 3 | MW2 | | | | | | 1120 | | | | | | | | | | | | | | | 924875875 |
| 4 | MW3 | | | | | | 1237 | | | | | | | | | | | | | | | 924875883 |
| 5 | MW4 | | | | | | 1011 | | | | | | | | | | | | | | | 924875891 |
| 6 | MW5 | | | | | 10/19/04 | 1416 | | | | | | | | | | | | | | | 924875909 |
| 7 | MW6 | | | | | | 1349 | | | | | | | | | | | | | | | 924875917 |
| 8 | MW7 | | | | | | 1305 | | | | | | | | | | | | | | | 924875925 |
| 9 | MW8 | | | | | | 1326 | | | | | | | | | | | | | | | 924875933 |
| 10 | MW9 | | | | | 10/20 | 1056 | | | | | | | | | | | | | | | 924875941 |
| 11 | MW10 | | | | | 10/20 | 944 | | | | | | | | | | | | | | | 924875958 |
| 12 | MW11 | | | | | 10/19 | 1434 | | | | | | | | | | | | | | | 924875966 |

**SITE LOCATION**
☐ NC ☒ SC ☐ GA
☐ Other

**REGULATORY AGENCY**
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☒ UST ☐ RCRA ☐ Other

| RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME |
|---|---|---|---|---|---|
| T.A. Covington III | | | J Elliott | 10/20 | 9:30 |
| Dick Environmental | 10/21/04 | 1500 | | | |
| T. A. C. III | | | | | |
| | | | | | |

**SAMPLE CONDITION**

| | |
|---|---|
| Temp in °C | 2.1 |
| Received on Ice | Y/N |
| Sealed Cooler | Y/N |
| Samples Intact | Y/N |

**SAMPLE NOTES**

**Additional Comments:**
3

**SAMPLER NAME AND SIGNATURE**
PRINT Name of SAMPLER: Thomas A. Covington III
SIGNATURE of SAMPLER: T. A. C. III
DATE Signed: (MM / DD / YY) 10/20/04

**SEE REVERSE SIDE FOR INSTRUCTIONS**

Form COC01 Rev. 0304

## Instructions for completing Chain of Custody (COC)

1. Complete all Client Information at top of sheet: name, address, phone, contact (person to whom report will be sent and contact can be made if questions arise), billing information if different from client, PO#, Project Name and/or Project Number as it will appear on the report.

2. Quote Reference, Project Manager, Project No. and Profile No. will be completed by Pace.

3. A separate COC must be filled out for each day of sample collection.

4. Sampler should print their name in the space provided and sign their name followed by the date of the sampling event.

5. Complete Sample Description as it will appear on the laboratory report; include time of sampling, sample matrix, no. of containers and preservative used.

6. Analysis Requested: Complete analysis on the lines provided and place a check in the column for the samples requiring the analysis. It may be necessary to use the space provided for additional comments or include attachments for extended lists of parameters.

7. Submission of samples to laboratory: Indicate Item Number of those samples being transferred; sign relinquished by, and include your affiliation.

*** IMPORTANT NOTE:**

**Standard Turnaround Time is 2 weeks.** If this does not satisfy your requirements, arrangements must be made prior to samples being submitted to the laboratory. Contact your project manager.

**Special Project Requirements** such as Low Level Detection Limits or level of QC reported must be indicated on the chain of custody. (Use Additional Comments Section.)

# CHAIN-OF-CUSTODY / Analytical Request Document

*The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.*

851082

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**Page: 2 of 2**

**Section A** — Required Client Information:

| | |
|---|---|
| Company | SCDHEC |
| Address | 2600 Bull Street |
| | Columbia SC |
| Phone | Fax |

**Section B** — Required Client Information:

| | |
|---|---|
| Report To: | John Abernathy |
| Copy To: | |
| Invoice To: | Finance |
| P.O. | 463276 |
| Project Name: | Crawford's Country Store |
| Project Number: | 12335 22979 |

Client Information (Check quote/contract):
Requested Due Date: *TAT:

*Turn around time less than 14 days subject to laboratory and contractual obligations and may result in a Rush Turnaround Surcharge.
Turn Around Time (TAT) in calendar days.

**Section C** — To Be Completed by Pace Analytical and Client

| | |
|---|---|
| Quote Reference: | |
| Project Manager: | |
| Project #: | 9279137 |
| Profile #: | |

Requested Analysis: BTEX, Naphs, MTBE, EDB, Lead

**Section D** — Required Client Information:

SAMPLE ID
One character per box. (A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Valid Matrix Codes: MATRIX / CODE — DRINKING WATER DW; GROUNDWATER GW; SURFACE WATER SW; WASTE WATER WW; PRODUCT P; SOIL SL; OIL OL; WIPE WP; AIR AR; OTHER OT

| ITEM # | SAMPLE ID | MATRIX CODE | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED START DATE | COLLECTED START TIME | COLLECTED END DATE | COLLECTED END TIME | SAMPLE TEMP AT COLLECTION | Preservatives: Unpreserved | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | $Na_2S_2O_3$ | Methanol | Other | Remarks / Lab ID |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW12 | SW | | | | 10/19/04 | 1451 | | | | | | | | | | 924875974 |
| 2 | MW13R | | | | | 10/19/04 | 1517 | | | | | | | | | | 924875982 |
| 3 | MW14 | | | | | 10/20/04 | 923 | | | | | | | | | | 924875990 |
| 4 | MW15 | | | | | | 853 | | | | | | | | | | 924876006 |
| 5 | MW16 | | | | | | 832 | | | | | | | | | | 924876014 |
| 6 | DMW17 | | | | | | 1035 | | | | | | | | | | 924876022 |
| 7 | WSW1 | WW | | | | | 1302 | | | | | | | | | | 924876030 |
| 8 | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | |

SITE LOCATION: ☐ NC ☒ SC ☐ GA ☐ Other

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☒ UST ☐ RCRA ☐ Other

| RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME |
|---|---|---|---|---|---|
| T.A. Covington III | | | | | |
| Dick Environmental | 10/21/04 | 1500 | | 10/22 | 930 |

SAMPLE CONDITION

| | |
|---|---|
| Temp in °C | 0.1 |
| Received on Ice | Y/N |
| Sealed Cooler | Y/N |
| Samples Intact | Y/N |

SAMPLE NOTES

Additional Comments:
3

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Thomas A. Covington III
SIGNATURE of SAMPLER:
DATE Signed: (MM / DD / YY) 10/20/04

SEE REVERSE SIDE FOR INSTRUCTIONS

Form COC01 Rev. 0304

## Instructions for completing Chain of Custody (COC)

1. Complete all Client Information at top of sheet: name, address, phone, contact (person to whom report will be sent and contact can be made if questions arise), billing information if different from client, PO#, Project Name and/or Project Number as it will appear on the report.

2. Quote Reference, Project Manager, Project No. and Profile No. will be completed by Pace.

3. A separate COC must be filled out for each day of sample collection.

4. Sampler should print their name in the space provided and sign their name followed by the date of the sampling event.

5. Complete Sample Description as it will appear on the laboratory report; include time of sampling, sample matrix, no. of containers and preservative used.

6. Analysis Requested: Complete analysis on the lines provided and place a check in the column for the samples requiring the analysis. It may be necessary to use the space provided for additional comments or include attachments for extended lists of parameters.

7. Submission of samples to laboratory: Indicate Item Number of those samples being transferred; sign relinquished by, and include your affiliation.

*** IMPORTANT NOTE:**

**Standard Turnaround Time is 2 weeks.** If this does not satisfy your requirements, arrangements must be made prior to samples being submitted to the laboratory. Contact your project manager.

**Special Project Requirements** such as Low Level Detection Limits or level of QC reported must be indicated on the chain of custody. (Use Additional Comments Section.)

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Lab Sample No: 924875859 Project Sample Number: 9279737-001 Date Collected: 10/20/04 11:47
Client Sample ID: OMW1 Matrix: Water Date Received: 10/22/04 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.021 | mg/l | 0.0050 | 1.0 | 11/04/04 18:16 | ALV | 7439-92-1 | | |
| Date Digested | 10/24/04 00:55 | | | | 10/24/04 00:55 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 4.0 | ug/l | 0.20 | 10.0 | 10/26/04 09:08 | JEM | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 105 | % | | 1.0 | 10/26/04 09:08 | JEM | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Benzene | 5900 | ug/l | 250 | 50.0 | 10/26/04 10:39 | DLK | 71-43-2 | | |
| Ethylbenzene | 2200 | ug/l | 250 | 50.0 | 10/26/04 10:39 | DLK | 100-41-4 | | |
| Methyl-tert-butyl ether | 5800 | ug/l | 250 | 50.0 | 10/26/04 10:39 | DLK | 1634-04-4 | | |
| Naphthalene | 450 | ug/l | 250 | 50.0 | 10/26/04 10:39 | DLK | 91-20-3 | | |
| Toluene | 60000 | ug/l | 2500 | 500 | 10/26/04 10:39 | DLK | 108-88-3 | | |
| m&p-Xylene | 9200 | ug/l | 500 | 50.0 | 10/26/04 10:39 | DLK | | | |
| o-Xylene | 4700 | ug/l | 250 | 50.0 | 10/26/04 10:39 | DLK | 95-47-6 | | |
| Toluene-d8 (S) | 104 | % | | 1.0 | 10/26/04 10:39 | DLK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 98 | % | | 1.0 | 10/26/04 10:39 | DLK | 460-00-4 | | |
| Dibromofluoromethane (S) | 98 | % | | 1.0 | 10/26/04 10:39 | DLK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 91 | % | | 1.0 | 10/26/04 10:39 | DLK | 17060-07-0 | | |



# REPORT OF LABORATORY ANALYSIS

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Asheville Certification IDs
NC Wastewater 40
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SC Environmental 99030
FL NELAP E87648

Charlotte Certification IDs
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Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Lab Sample No: 924875867 Project Sample Number: 9279737-002 Date Collected: 10/20/04 12:13
Client Sample ID: MW1R Matrix: Water Date Received: 10/22/04 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0084 | mg/l | 0.0050 | 1.0 | 11/04/04 18:20 | ALV | 7439-92-1 | | |
| Date Digested | 10/24/04 00:55 | | | | 10/24/04 00:55 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 0.30 | ug/l | 0.020 | 1.0 | 10/26/04 09:41 | JEM | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 103 | % | | 1.0 | 10/26/04 09:41 | JEM | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Benzene | 13000 | ug/l | 1200 | 250 | 10/26/04 08:43 | DLK | 71-43-2 | | |
| Ethylbenzene | 2400 | ug/l | 250 | 50.0 | 10/26/04 08:43 | DLK | 100-41-4 | | |
| Methyl-tert-butyl ether | 24000 | ug/l | 1200 | 250 | 10/26/04 08:43 | DLK | 1634-04-4 | | |
| Naphthalene | 370 | ug/l | 250 | 50.0 | 10/26/04 08:43 | DLK | 91-20-3 | | |
| Toluene | 42000 | ug/l | 1200 | 250 | 10/26/04 08:43 | DLK | 108-88-3 | | |
| m&p-Xylene | 6200 | ug/l | 500 | 50.0 | 10/26/04 08:43 | DLK | | | |
| o-Xylene | 3700 | ug/l | 250 | 50.0 | 10/26/04 08:43 | DLK | 95-47-6 | | |
| Toluene-d8 (S) | 103 | % | | 1.0 | 10/26/04 08:43 | DLK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 97 | % | | 1.0 | 10/26/04 08:43 | DLK | 460-00-4 | | |
| Dibromofluoromethane (S) | 99 | % | | 1.0 | 10/26/04 08:43 | DLK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 89 | % | | 1.0 | 10/26/04 08:43 | DLK | 17060-07-0 | | |



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9800 Kincey Avenue, Suite 100
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Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Lab Sample No: 924875875 Project Sample Number: 9279737-003 Date Collected: 10/20/04 11:20
Client Sample ID: MW2 Matrix: Water Date Received: 10/22/04 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0064 | mg/l | 0.0050 | 1.0 | 11/04/04 18:25 | ALV | 7439-92-1 | | |
| Date Digested | 10/24/04 00:55 | | | | 10/24/04 00:55 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 0.057 | ug/l | 0.020 | 1.0 | 10/26/04 10:14 | JEM | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 105 | % | | 1.0 | 10/26/04 10:14 | JEM | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Benzene | 4900 | ug/l | 250 | 50.0 | 10/26/04 09:12 | DLK | 71-43-2 | | |
| Ethylbenzene | 680 | ug/l | 250 | 50.0 | 10/26/04 09:12 | DLK | 100-41-4 | | |
| Methyl-tert-butyl ether | 7500 | ug/l | 250 | 50.0 | 10/26/04 09:12 | DLK | 1634-04-4 | | |
| Naphthalene | 150 | J ug/l | 250 | 50.0 | 10/26/04 09:12 | DLK | 91-20-3 | | |
| Toluene | 1500 | ug/l | 250 | 50.0 | 10/26/04 09:12 | DLK | 108-88-3 | | |
| m&p-Xylene | 230 | J ug/l | 500 | 50.0 | 10/26/04 09:12 | DLK | | | |
| o-Xylene | 220 | J ug/l | 250 | 50.0 | 10/26/04 09:12 | DLK | 95-47-6 | | |
| Toluene-d8 (S) | 103 | % | | 1.0 | 10/26/04 09:12 | DLK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 98 | % | | 1.0 | 10/26/04 09:12 | DLK | 460-00-4 | | |
| Dibromofluoromethane (S) | 100 | % | | 1.0 | 10/26/04 09:12 | DLK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 90 | % | | 1.0 | 10/26/04 09:12 | DLK | 17060-07-0 | | |



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Charlotte Certification IDs
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NC Drinking Water 37706
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FL NELAP E87627

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Lab Sample No: 924875883 Project Sample Number: 9279737-004 Date Collected: 10/20/04 12:37
Client Sample ID: MW3 Matrix: Water Date Received: 10/22/04 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.026 | mg/l | 0.0050 | 1.0 | 11/04/04 18:40 | ALV | 7439-92-1 | | |
| Date Digested | 10/24/04 00:55 | | | | 10/24/04 00:55 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 1.7 | ug/l | 0.10 | 5.0 | 10/26/04 10:30 | JEM | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 107 | % | | 1.0 | 10/26/04 10:30 | JEM | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Benzene | 8200 | ug/l | 2500 | 500 | 10/26/04 08:14 | DLK | 71-43-2 | | |
| Ethylbenzene | 3000 | ug/l | 120 | 25.0 | 10/26/04 08:14 | DLK | 100-41-4 | | |
| Methyl-tert-butyl ether | 4300 | ug/l | 120 | 25.0 | 10/26/04 08:14 | DLK | 1634-04-4 | | |
| Naphthalene | 360 | ug/l | 120 | 25.0 | 10/26/04 08:14 | DLK | 91-20-3 | | |
| Toluene | 46000 | ug/l | 2500 | 500 | 10/26/04 08:14 | DLK | 108-88-3 | | |
| m&p-Xylene | 10000 | ug/l | 250 | 25.0 | 10/26/04 08:14 | DLK | | | |
| o-Xylene | 5000 | ug/l | 120 | 25.0 | 10/26/04 08:14 | DLK | 95-47-6 | | |
| Toluene-d8 (S) | 98 | % | | 1.0 | 10/26/04 08:14 | DLK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 101 | % | | 1.0 | 10/26/04 08:14 | DLK | 460-00-4 | | |
| Dibromofluoromethane (S) | 98 | % | | 1.0 | 10/26/04 08:14 | DLK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 88 | % | | 1.0 | 10/26/04 08:14 | DLK | 17060-07-0 | | |



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Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Lab Sample No: 924875891 Project Sample Number: 9279737-005 Date Collected: 10/20/04 10:11
Client Sample ID: MW4 Matrix: Water Date Received: 10/22/04 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.095 | mg/l | 0.0050 | 1.0 | 11/04/04 18:44 | ALV | 7439-92-1 | | |
| Date Digested | 10/24/04 00:55 | | | | 10/24/04 00:55 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 190 | ug/l | 10. | 500 | 10/26/04 10:47 | JEM | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 117 | % | | 1.0 | 10/26/04 10:47 | JEM | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Benzene | 6100 | ug/l | 250 | 50.0 | 10/26/04 09:41 | DLK | 71-43-2 | | |
| Ethylbenzene | 2400 | ug/l | 250 | 50.0 | 10/26/04 09:41 | DLK | 100-41-4 | | |
| Methyl-tert-butyl ether | 7400 | ug/l | 250 | 50.0 | 10/26/04 09:41 | DLK | 1634-04-4 | | |
| Naphthalene | 620 | ug/l | 250 | 50.0 | 10/26/04 09:41 | DLK | 91-20-3 | | |
| Toluene | 9000 | ug/l | 250 | 50.0 | 10/26/04 09:41 | DLK | 108-88-3 | | |
| m&p-Xylene | 7300 | ug/l | 500 | 50.0 | 10/26/04 09:41 | DLK | | | |
| o-Xylene | 4600 | ug/l | 250 | 50.0 | 10/26/04 09:41 | DLK | 95-47-6 | | |
| Toluene-d8 (S) | 103 | % | | 1.0 | 10/26/04 09:41 | DLK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 100 | % | | 1.0 | 10/26/04 09:41 | DLK | 460-00-4 | | |
| Dibromofluoromethane (S) | 98 | % | | 1.0 | 10/26/04 09:41 | DLK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 89 | % | | 1.0 | 10/26/04 09:41 | DLK | 17060-07-0 | | |



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Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Lab Sample No: 924875909 Project Sample Number: 9279737-006 Date Collected: 10/19/04 14:16
Client Sample ID: MW5 Matrix: Water Date Received: 10/22/04 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0052 | mg/l | 0.0050 | 1.0 | 11/04/04 17:44 | ALV | 7439-92-1 | | |
| Date Digested | 10/24/04 00:55 | | | | 10/24/04 00:55 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 10/27/04 16:34 | JEM | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 50 | % | | 1.0 | 10/27/04 16:34 | JEM | 301-79-56 | 1 | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Benzene | 68. J | ug/l | 100 | 20.0 | 10/23/04 20:43 | DLK | 71-43-2 | | |
| Ethylbenzene | 2000 | ug/l | 100 | 20.0 | 10/23/04 20:43 | DLK | 100-41-4 | | |
| Methyl-tert-butyl ether | ND | ug/l | 100 | 20.0 | 10/23/04 20:43 | DLK | 1634-04-4 | | |
| Naphthalene | 250 | ug/l | 100 | 20.0 | 10/23/04 20:43 | DLK | 91-20-3 | | |
| Toluene | 8600 | ug/l | 250 | 50.0 | 10/23/04 20:43 | DLK | 108-88-3 | | |
| m&p-Xylene | 5200 | ug/l | 200 | 20.0 | 10/23/04 20:43 | DLK | | | |
| o-Xylene | 2200 | ug/l | 100 | 20.0 | 10/23/04 20:43 | DLK | 95-47-6 | | |
| Toluene-d8 (S) | 99 | % | | 1.0 | 10/23/04 20:43 | DLK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 101 | % | | 1.0 | 10/23/04 20:43 | DLK | 460-00-4 | | |
| Dibromofluoromethane (S) | 113 | % | | 1.0 | 10/23/04 20:43 | DLK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 108 | % | | 1.0 | 10/23/04 20:43 | DLK | 17060-07-0 | | |



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Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Lab Sample No: 924875917 Project Sample Number: 9279737-007 Date Collected: 10/19/04 13:49
Client Sample ID: MW6 Matrix: Water Date Received: 10/22/04 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.12 | mg/l | 0.0050 | 1.0 | 11/04/04 17:49 | ALV | 7439-92-1 | | |
| Date Digested | 10/24/04 00:55 | | | | 10/24/04 00:55 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 10/26/04 05:34 | JEM | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 67 | % | | 1.0 | 10/26/04 05:34 | JEM | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Benzene | 3.1 J | ug/l | 5.0 | 1.0 | 10/23/04 21:12 | DLK | 71-43-2 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 10/23/04 21:12 | DLK | 100-41-4 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 10/23/04 21:12 | DLK | 1634-04-4 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 10/23/04 21:12 | DLK | 91-20-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 10/23/04 21:12 | DLK | 108-88-3 | | |
| m&p-Xylene | 4.6 J | ug/l | 10. | 1.0 | 10/23/04 21:12 | DLK | | | |
| o-Xylene | 2.4 J | ug/l | 5.0 | 1.0 | 10/23/04 21:12 | DLK | 95-47-6 | | |
| Toluene-d8 (S) | 100 | % | | 1.0 | 10/23/04 21:12 | DLK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 97 | % | | 1.0 | 10/23/04 21:12 | DLK | 460-00-4 | | |
| Dibromofluoromethane (S) | 100 | % | | 1.0 | 10/23/04 21:12 | DLK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 96 | % | | 1.0 | 10/23/04 21:12 | DLK | 17060-07-0 | | |



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Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Lab Sample No: 924875925 Project Sample Number: 9279737-008 Date Collected: 10/19/04 13:05
Client Sample ID: MW7 Matrix: Water Date Received: 10/22/04 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.010 | mg/l | 0.0050 | 1.0 | 11/04/04 17:53 | ALV | 7439-92-1 | | |
| Date Digested | 10/24/04 00:55 | | | | 10/24/04 00:55 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 10/26/04 05:51 | JEM | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 71 | % | | 1.0 | 10/26/04 05:51 | JEM | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 10/25/04 20:07 | DLK | 71-43-2 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 10/25/04 20:07 | DLK | 100-41-4 | | |
| Methyl-tert-butyl ether | 9.4 | ug/l | 5.0 | 1.0 | 10/25/04 20:07 | DLK | 1634-04-4 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 10/25/04 20:07 | DLK | 91-20-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 10/25/04 20:07 | DLK | 108-88-3 | | |
| m&p-Xylene | ND | ug/l | 10. | 1.0 | 10/25/04 20:07 | DLK | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 10/25/04 20:07 | DLK | 95-47-6 | | |
| Toluene-d8 (S) | 103 | % | | 1.0 | 10/25/04 20:07 | DLK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 92 | % | | 1.0 | 10/25/04 20:07 | DLK | 460-00-4 | | |
| Dibromofluoromethane (S) | 104 | % | | 1.0 | 10/25/04 20:07 | DLK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 95 | % | | 1.0 | 10/25/04 20:07 | DLK | 17060-07-0 | | |



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Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Lab Sample No: 924875933 Project Sample Number: 9279737-009 Date Collected: 10/19/04 13:26
Client Sample ID: MW8 Matrix: Water Date Received: 10/22/04 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0064 | mg/l | 0.0050 | 1.0 | 11/04/04 17:58 | ALV | 7439-92-1 | | |
| Date Digested | 10/24/04 00:55 | | | | 10/24/04 00:55 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 10/26/04 06:07 | JEM | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 98 | % | | 1.0 | 10/26/04 06:07 | JEM | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 10/25/04 20:36 | DLK | 71-43-2 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 10/25/04 20:36 | DLK | 100-41-4 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 10/25/04 20:36 | DLK | 1634-04-4 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 10/25/04 20:36 | DLK | 91-20-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 10/25/04 20:36 | DLK | 108-88-3 | | |
| m&p-Xylene | ND | ug/l | 10. | 1.0 | 10/25/04 20:36 | DLK | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 10/25/04 20:36 | DLK | 95-47-6 | | |
| Toluene-d8 (S) | 103 | % | | 1.0 | 10/25/04 20:36 | DLK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 98 | % | | 1.0 | 10/25/04 20:36 | DLK | 460-00-4 | | |
| Dibromofluoromethane (S) | 101 | % | | 1.0 | 10/25/04 20:36 | DLK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 92 | % | | 1.0 | 10/25/04 20:36 | DLK | 17060-07-0 | | |



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Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Lab Sample No: 924875941 Project Sample Number: 9279737-010 Date Collected: 10/20/04 10.55
Client Sample ID: MW9 Matrix: Water Date Received: 10/22/04 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.016 | mg/l | 0.0050 | 1.0 | 11/04/04 18:49 | ALV | 7439-92-1 | | |
| Date Digested | 10/24/04 00:55 | | | | 10/24/04 00:55 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 10/26/04 11:03 | JEM | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 109 | % | | 1.0 | 10/26/04 11:03 | JEM | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 10/26/04 20:51 | DLK | 71-43-2 | | |
| Ethylbenzene | 4.2 J | ug/l | 5.0 | 1.0 | 10/26/04 20:51 | DLK | 100-41-4 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 10/26/04 20:51 | DLK | 1634-04-4 | | |
| Naphthalene | 6.2 | ug/l | 5.0 | 1.0 | 10/26/04 20:51 | DLK | 91-20-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 10/26/04 20:51 | DLK | 108-88-3 | | |
| m&p-Xylene | 160 | ug/l | 10. | 1.0 | 10/26/04 20:51 | DLK | | | |
| o-Xylene | 19. | ug/l | 5.0 | 1.0 | 10/26/04 20:51 | DLK | 95-47-6 | | |
| Toluene-d8 (S) | 103 | % | | 1.0 | 10/26/04 20:51 | DLK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 99 | % | | 1.0 | 10/26/04 20:51 | DLK | 460-00-4 | | |
| Dibromofluoromethane (S) | 97 | % | | 1.0 | 10/26/04 20:51 | DLK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 92 | % | | 1.0 | 10/26/04 20:51 | DLK | 17060-07-0 | | |



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Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Lab Sample No: 924875958 Project Sample Number: 9279737-011 Date Collected: 10/20/04 09:44
Client Sample ID: MW10 Matrix: Water Date Received: 10/22/04 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0079 | mg/l | 0.0050 | 1.0 | 11/04/04 18:53 | ALV | 7439-92-1 | | |
| Date Digested | 10/24/04 00:55 | | | | 10/24/04 00:55 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 6.2 | ug/l | 0.40 | 20.0 | 10/26/04 11:20 | JEM | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 107 | % | | 1.0 | 10/26/04 11:20 | JEM | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Benzene | 7700 | ug/l | 250 | 50.0 | 10/26/04 10:10 | DLK | 71-43-2 | | |
| Ethylbenzene | 2700 | ug/l | 250 | 50.0 | 10/26/04 10:10 | DLK | 100-41-4 | | |
| Methyl-tert-butyl ether | 2900 | ug/l | 250 | 50.0 | 10/26/04 10:10 | DLK | 1634-04-4 | | |
| Naphthalene | 420 | ug/l | 250 | 50.0 | 10/26/04 10:10 | DLK | 91-20-3 | | |
| Toluene | 72000 | ug/l | 2500 | 500 | 10/26/04 10:10 | DLK | 108-88-3 | | |
| m&p-Xylene | 10000 | ug/l | 500 | 50.0 | 10/26/04 10:10 | DLK | | | |
| o-Xylene | 5100 | ug/l | 250 | 50.0 | 10/26/04 10:10 | DLK | 95-47-6 | | |
| Toluene-d8 (S) | 100 | % | | 1.0 | 10/26/04 10:10 | DLK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 101 | % | | 1.0 | 10/26/04 10:10 | DLK | 460-00-4 | | |
| Dibromofluoromethane (S) | 98 | % | | 1.0 | 10/26/04 10:10 | DLK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 91 | % | | 1.0 | 10/26/04 10:10 | DLK | 17060-07-0 | | |



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Fax: 704.875.9091

Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Lab Sample No: 924875966 Project Sample Number: 9279737-012 Date Collected: 10/19/04 14:34
Client Sample ID: MW11 Matrix: Water Date Received: 10/22/04 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.047 | mg/l | 0.0050 | 1.0 | 11/04/04 18:02 | ALV | 7439-92-1 | | |
| Date Digested | 10/24/04 00:55 | | | | 10/24/04 00:55 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 0.061 | ug/l | 0.020 | 1.0 | 10/27/04 16:50 | JEM | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 50 | % | | 1.0 | 10/27/04 16:50 | JEM | 301-79-56 | 1 | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Benzene | 780 | ug/l | 50. | 10.0 | 10/25/04 22:03 | DLK | 71-43-2 | | |
| Ethylbenzene | ND | ug/l | 50. | 10.0 | 10/25/04 22:03 | DLK | 100-41-4 | | |
| Methyl-tert-butyl ether | 8300 | ug/l | 500 | 100 | 10/25/04 22:03 | DLK | 1634-04-4 | | |
| Naphthalene | 32. J | ug/l | 50. | 10.0 | 10/25/04 22:03 | DLK | 91-20-3 | | |
| Toluene | ND | ug/l | 50. | 10.0 | 10/25/04 22:03 | DLK | 108-88-3 | | |
| m&p-Xylene | ND | ug/l | 100 | 10.0 | 10/25/04 22:03 | DLK | | | |
| o-Xylene | 66. | ug/l | 50. | 10.0 | 10/25/04 22:03 | DLK | 95-47-6 | | |
| Toluene-d8 (S) | 105 | % | | 1.0 | 10/25/04 22:03 | DLK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 100 | % | | 1.0 | 10/25/04 22:03 | DLK | 460-00-4 | | |
| Dibromofluoromethane (S) | 99 | % | | 1.0 | 10/25/04 22:03 | DLK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 88 | % | | 1.0 | 10/25/04 22:03 | DLK | 17060-07-0 | | |



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| FL NELAP | E87648 |

| Charlotte Certification IDs | |
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| NC Wastewater | 12 |
| NC Drinking Water | 37706 |
| SC | 99006 |
| FL NELAP | E87627 |

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Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Lab Sample No: 924875974 Project Sample Number: 9279737-013 Date Collected: 10/19/04 14:51
Client Sample ID: MW12 Matrix: Water Date Received: 10/22/04 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0042 J | mg/l | 0.0050 | 1.0 | 11/04/04 18:07 | ALV | 7439-92-1 | | |
| Date Digested | 10/24/04 00:55 | | | | 10/24/04 00:55 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 10/26/04 06:40 | JEM | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 61 | % | | 1.0 | 10/26/04 06:40 | JEM | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 10/25/04 21:05 | DLK | 71-43-2 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 10/25/04 21:05 | DLK | 100-41-4 | | |
| Methyl-tert-butyl ether | 280 | ug/l | 10. | 2.0 | 10/25/04 21:05 | DLK | 1634-04-4 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 10/25/04 21:05 | DLK | 91-20-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 10/25/04 21:05 | DLK | 108-88-3 | | |
| m&p-Xylene | ND | ug/l | 10. | 1.0 | 10/25/04 21:05 | DLK | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 10/25/04 21:05 | DLK | 95-47-6 | | |
| Toluene-d8 (S) | 106 | % | | 1.0 | 10/25/04 21:05 | DLK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 98 | % | | 1.0 | 10/25/04 21:05 | DLK | 460-00-4 | | |
| Dibromofluoromethane (S) | 102 | % | | 1.0 | 10/25/04 21:05 | DLK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 91 | % | | 1.0 | 10/25/04 21:05 | DLK | 17060-07-0 | | |



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Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Lab Sample No: 924875982 Project Sample Number: 9279737-014 Date Collected: 10/19/04 15:17
Client Sample ID: MW13R Matrix: Water Date Received: 10/22/04 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0077 | mg/l | 0.0050 | 1.0 | 11/04/04 18:11 | ALV | 7439-92-1 | | |
| Date Digested | 10/24/04 00:55 | | | | 10/24/04 00:55 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 0.10 | ug/l | 0.020 | 1.0 | 10/27/04 17:07 | JEM | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 88 | % | | 1.0 | 10/27/04 17:07 | JEM | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Benzene | 1700 | ug/l | 1000 | 200 | 10/26/04 03:52 | DLK | 71-43-2 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 10/26/04 03:52 | DLK | 100-41-4 | | |
| Methyl-tert-butyl ether | 35000 | ug/l | 1000 | 200 | 10/26/04 03:52 | DLK | 1634-04-4 | | |
| Naphthalene | 93. | ug/l | 5.0 | 1.0 | 10/26/04 03:52 | DLK | 91-20-3 | | |
| Toluene | 7.5 | ug/l | 5.0 | 1.0 | 10/26/04 03:52 | DLK | 108-88-3 | | |
| m&p-Xylene | 22. | ug/l | 10. | 1.0 | 10/26/04 03:52 | DLK | | | |
| o-Xylene | 100 | ug/l | 5.0 | 1.0 | 10/26/04 03:52 | DLK | 95-47-6 | | |
| Toluene-d8 (S) | 106 | % | | 1.0 | 10/26/04 03:52 | DLK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 100 | % | | 1.0 | 10/26/04 03:52 | DLK | 460-00-4 | | |
| Dibromofluoromethane (S) | 100 | % | | 1.0 | 10/26/04 03:52 | DLK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 97 | % | | 1.0 | 10/26/04 03:52 | DLK | 17060-07-0 | | |



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Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Lab Sample No: 924875990 Project Sample Number: 9279737-015 Date Collected: 10/20/04 09:23
Client Sample ID: MW14 Matrix: Water Date Received: 10/22/04 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.017 | mg/l | 0.0050 | 1.0 | 11/04/04 18:58 | ALV | 7439-92-1 | | |
| Date Digested | 10/24/04 00:55 | | | | 10/24/04 00:55 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 10/26/04 11:36 | JEM | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 103 | % | | 1.0 | 10/26/04 11:36 | JEM | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 10/26/04 05:20 | DLK | 71-43-2 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 10/26/04 05:20 | DLK | 100-41-4 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 10/26/04 05:20 | DLK | 1634-04-4 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 10/26/04 05:20 | DLK | 91-20-3 | | |
| Toluene | 9.4 | ug/l | 5.0 | 1.0 | 10/26/04 05:20 | DLK | 108-88-3 | | |
| m&p-Xylene | ND | ug/l | 10. | 1.0 | 10/26/04 05:20 | DLK | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 10/26/04 05:20 | DLK | 95-47-6 | | |
| Toluene-d8 (S) | 102 | % | | 1.0 | 10/26/04 05:20 | DLK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 95 | % | | 1.0 | 10/26/04 05:20 | DLK | 460-00-4 | | |
| Dibromofluoromethane (S) | 106 | % | | 1.0 | 10/26/04 05:20 | DLK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 95 | % | | 1.0 | 10/26/04 05:20 | DLK | 17060-07-0 | | |



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Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Lab Sample No: 924876006 Project Sample Number: 9279737-016 Date Collected: 10/20/04 08:53
Client Sample ID: MW15 Matrix: Water Date Received: 10/22/04 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0060 | mg/l | 0.0050 | 1.0 | 11/04/04 19:03 | ALV | 7439-92-1 | | |
| Date Digested | 10/24/04 00:55 | | | | 10/24/04 00:55 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 10/26/04 11:53 | JEM | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 104 | % | | 1.0 | 10/26/04 11:53 | JEM | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 10/26/04 04:50 | DLK | 71-43-2 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 10/26/04 04:50 | DLK | 100-41-4 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 10/26/04 04:50 | DLK | 1634-04-4 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 10/26/04 04:50 | DLK | 91-20-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 10/26/04 04:50 | DLK | 108-88-3 | | |
| m&p-Xylene | ND | ug/l | 10. | 1.0 | 10/26/04 04:50 | DLK | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 10/26/04 04:50 | DLK | 95-47-6 | | |
| Toluene-d8 (S) | 103 | % | | 1.0 | 10/26/04 04:50 | DLK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 94 | % | | 1.0 | 10/26/04 04:50 | DLK | 460-00-4 | | |
| Dibromofluoromethane (S) | 105 | % | | 1.0 | 10/26/04 04:50 | DLK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 97 | % | | 1.0 | 10/26/04 04:50 | DLK | 17060-07-0 | | |



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Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Lab Sample No: 924876014 Project Sample Number: 9279737-017 Date Collected: 10/20/04 08:32
Client Sample ID: MW16 Matrix: Water Date Received: 10/22/04 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0056 | mg/l | 0.0050 | 1.0 | 11/04/04 19:07 | ALV | 7439-92-1 | | |
| Date Digested | 10/24/04 00:55 | | | | 10/24/04 00:55 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 10/26/04 12:09 | JEM | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 113 | % | | 1.0 | 10/26/04 12:09 | JEM | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Benzene | 1.8 J | ug/l | 5.0 | 1.0 | 10/26/04 05:49 | DLK | 71-43-2 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 10/26/04 05:49 | DLK | 100-41-4 | | |
| Methyl-tert-butyl ether | 7.7 | ug/l | 5.0 | 1.0 | 10/26/04 05:49 | DLK | 1634-04-4 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 10/26/04 05:49 | DLK | 91-20-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 10/26/04 05:49 | DLK | 108-88-3 | | |
| m&p-Xylene | ND | ug/l | 10. | 1.0 | 10/26/04 05:49 | DLK | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 10/26/04 05:49 | DLK | 95-47-6 | | |
| Toluene-d8 (S) | 104 | % | | 1.0 | 10/26/04 05:49 | DLK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 92 | % | | 1.0 | 10/26/04 05:49 | DLK | 460-00-4 | | |
| Dibromofluoromethane (S) | 104 | % | | 1.0 | 10/26/04 05:49 | DLK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 98 | % | | 1.0 | 10/26/04 05:49 | DLK | 17060-07-0 | | |



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Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Lab Sample No: 924876022 Project Sample Number: 9279737-018 Date Collected: 10/20/04 10:35
Client Sample ID: DMW17 Matrix: Water Date Received: 10/22/04 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0035 J | mg/l | 0.0050 | 1.0 | 11/04/04 19:12 | ALV | 7439-92-1 | | |
| Date Digested | 10/24/04 00:55 | | | | 10/24/04 00:55 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 10/26/04 13:07 | JEM | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 107 | % | | 1.0 | 10/26/04 13:07 | JEM | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 10/26/04 07:16 | DLK | 71-43-2 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 10/26/04 07:16 | DLK | 100-41-4 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 10/26/04 07:16 | DLK | 1634-04-4 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 10/26/04 07:16 | DLK | 91-20-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 10/26/04 07:16 | DLK | 108-88-3 | | |
| m&p-Xylene | ND | ug/l | 10. | 1.0 | 10/26/04 07:16 | DLK | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 10/26/04 07:16 | DLK | 95-47-6 | | |
| Toluene-d8 (S) | 103 | % | | 1.0 | 10/26/04 07:16 | DLK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 97 | % | | 1.0 | 10/26/04 07:16 | DLK | 460-00-4 | | |
| Dibromofluoromethane (S) | 103 | % | | 1.0 | 10/26/04 07:16 | DLK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 97 | % | | 1.0 | 10/26/04 07:16 | DLK | 17060-07-0 | | |



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| NC Drinking Water | 37712 |
| SC Environmental | 99030 |
| FL NELAP | E87648 |

| Charlotte Certification IDs | |
|---|---|
| NC Wastewater | 12 |
| NC Drinking Water | 37706 |
| SC | 99006 |
| FL NELAP | E87627 |

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Lab Project Number: 9279737
Client Project ID: Crawford's Country/12335 22979

Lab Sample No: 924876030 Project Sample Number: 9279737-019 Date Collected: 10/20/04 13:02
Client Sample ID: WSW1 Matrix: Water Date Received: 10/22/04 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0031 J | mg/l | 0.0050 | 1.0 | 11/04/04 19:16 | ALV | 7439-92-1 | | |
| Date Digested | 10/24/04 00:55 | | | | 10/24/04 00:55 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 10/26/04 13:24 | JEM | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 109 | % | | 1.0 | 10/26/04 13:24 | JEM | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 10/26/04 03:23 | DLK | 71-43-2 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 10/26/04 03:23 | DLK | 100-41-4 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 10/26/04 03:23 | DLK | 1634-04-4 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 10/26/04 03:23 | DLK | 91-20-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 10/26/04 03:23 | DLK | 108-88-3 | | |
| m&p-Xylene | ND | ug/l | 10. | 1.0 | 10/26/04 03:23 | DLK | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 10/26/04 03:23 | DLK | 95-47-6 | | |
| Toluene-d8 (S) | 101 | % | | 1.0 | 10/26/04 03:23 | DLK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 89 | % | | 1.0 | 10/26/04 03:23 | DLK | 460-00-4 | | |
| Dibromofluoromethane (S) | 100 | % | | 1.0 | 10/26/04 03:23 | DLK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 95 | % | | 1.0 | 10/26/04 03:23 | DLK | 17060-07-0 | | |



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Asheville Certification IDs
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SC Environmental 99030
FL NELAP E87648

Charlotte Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006
FL NELAP E87627

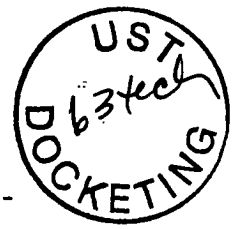
SCDHEC :: SSTL Model version 1.0c

Site ID: 12335 03/20/2006 CoC : Benzene

Source: MW-5 Receptor: Public Well

Input Parameters:

| | | |
|---|---|---|
| CoC RBSL: | 0.005 | mg/L |
| Width across flow dir.: | 10.0000 | m |
| Estimated Source Depth: | 3.000 | m |
| Distance along x-axis: | 33.520 | m |
| Distance along y-axis: | 0.000 | m |
| Distance along z-axis: | 0.000 | m |
| Seepage Velocity: | 0.0000003866 | m/s |
| Time of transport: | 15.0 | years |
| First Order Decay Rate | 0.0000000072 | /s |




Calculations:

| | | |
|---|---|---|
| EXP( -0.5895) | = | 0.5546 |
| ERFC( -3.4517) | = | 2.0000 |
| ERF( 0.4085) | = | 0.4375 |
| ERF( 0.6329) | = | 0.6320 |

Decay is considered

| | |
|---|---|
| Ax: | 3.3520 |
| Ay: | 1.1173 |
| Az: | 0.1676 |

Results:

| | | |
|---|---|---|
| Csstl : | 32.6035 | ug/L |
| Csstl : | 0.0326035 | mg/L |

Contents of this program and its use are the sole property of the South Carolina Department of Health and Environmental Control(SCDHEC).

Program Developed by Sriram Madabhushi.
Unauthorized use is strictly prohibited.

SCDHEC :: SSTL Model version 1.0c

Site ID: 12335 03/20/2006 CoC : Benzene

Source: MW-2 Receptor: Public Well

Input Parameters:

| | | |
|---|---|---|
| CoC RBSL: | 0.005 | mg/L |
| Width across flow dir.: | 10.0000 | m |
| Estimated Source Depth: | 3.000 | m |
| Distance along x-axis: | 79.200 | m |
| Distance along y-axis: | 0.000 | m |
| Distance along z-axis: | 0.000 | m |
| Seepage Velocity: | 0.0000003866 | m/s |
| Time of transport: | 35.0 | years |
| First Order Decay Rate | 0.0000000072 | /s |

Calculations:

| | | |
|---|---|---|
| EXP( -1.3048) | = | 0.2712 |
| ERFC( -3.9466) | = | 2.0000 |
| ERF( 0.1729) | = | 0.1932 |
| ERF( 0.2678) | = | 0.2955 |

Decay is considered

| | |
|---|---|
| Ax: | 7.9200 |
| Ay: | 2.6400 |
| Az: | 0.3960 |

Results:

| | | |
|---|---|---|
| Csstl : | 322.8635 | ug/L |
| Csstl : | 0.3228635 | mg/L |

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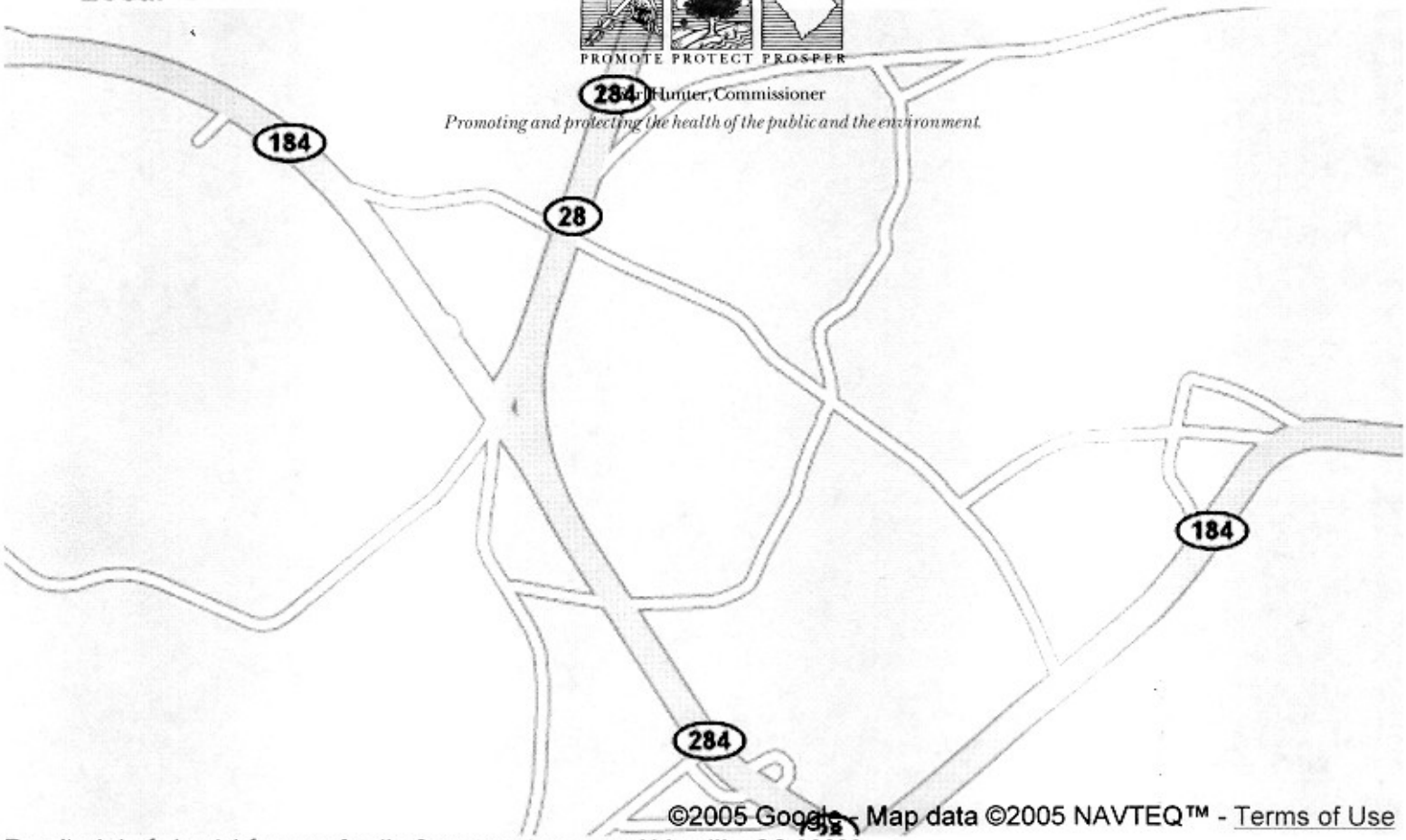
Google Local

D H E C

PROMOTE PROTECT PROSPER

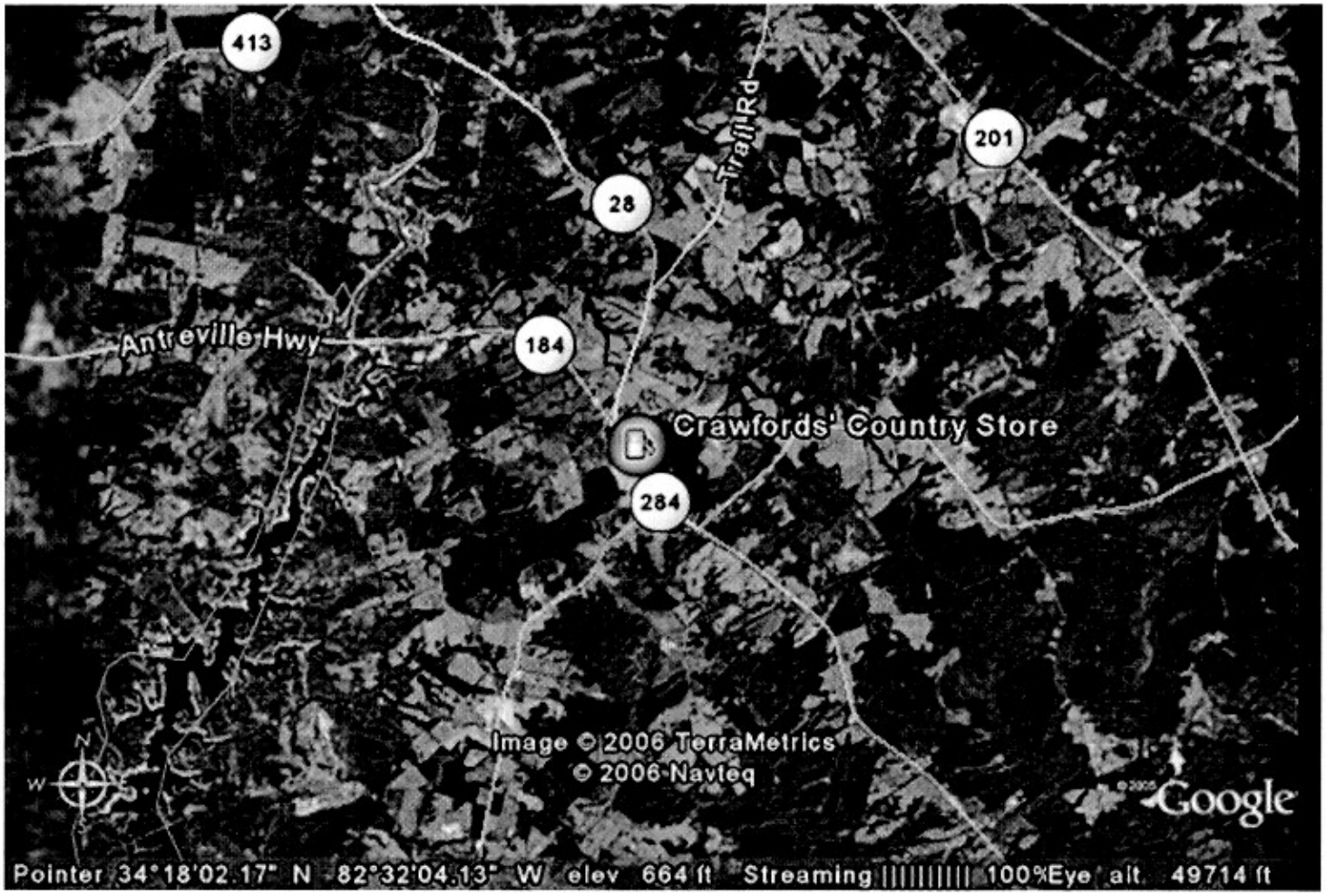
J. Hunter, Commissioner

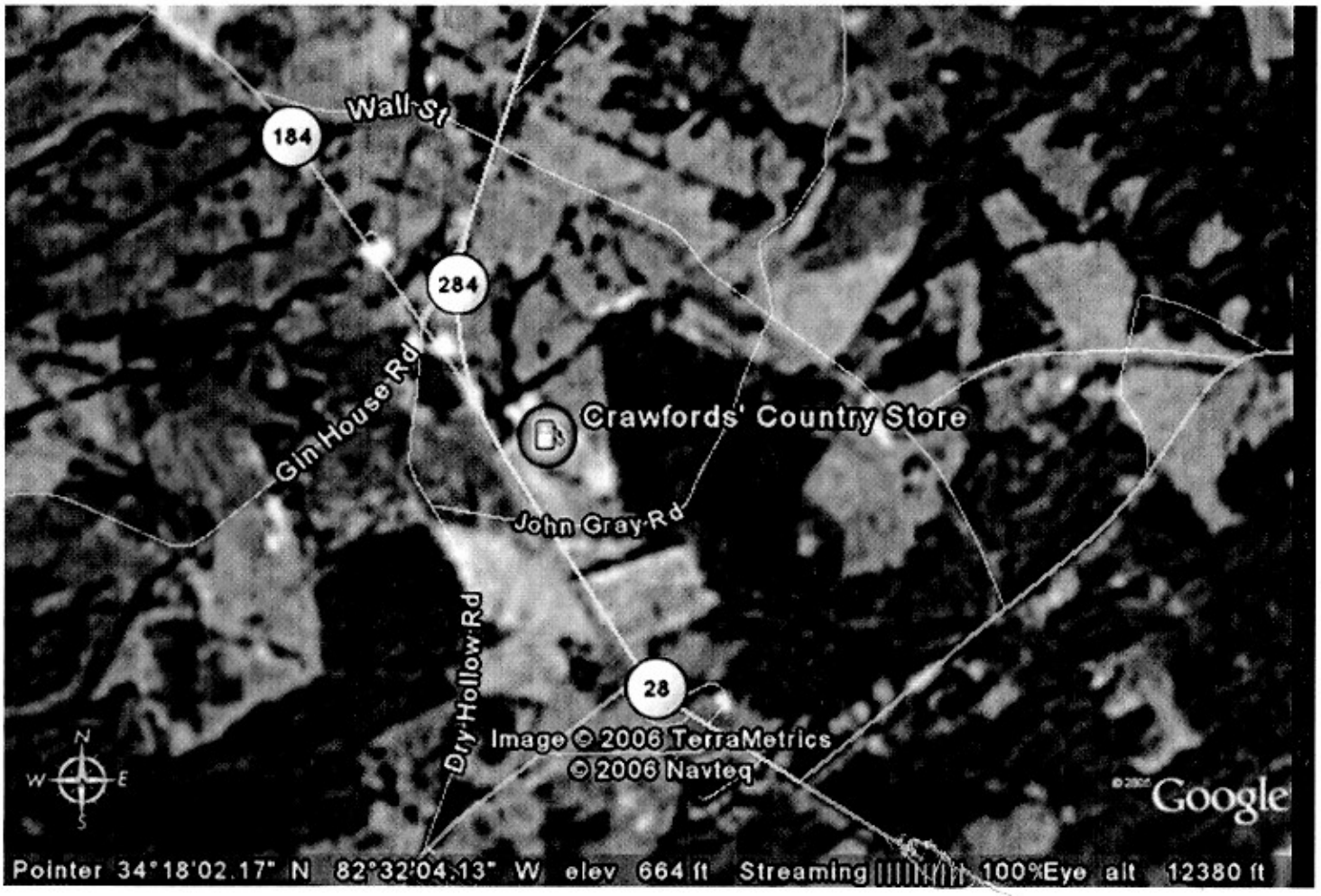
*Promoting and protecting the health of the public and the environment.*

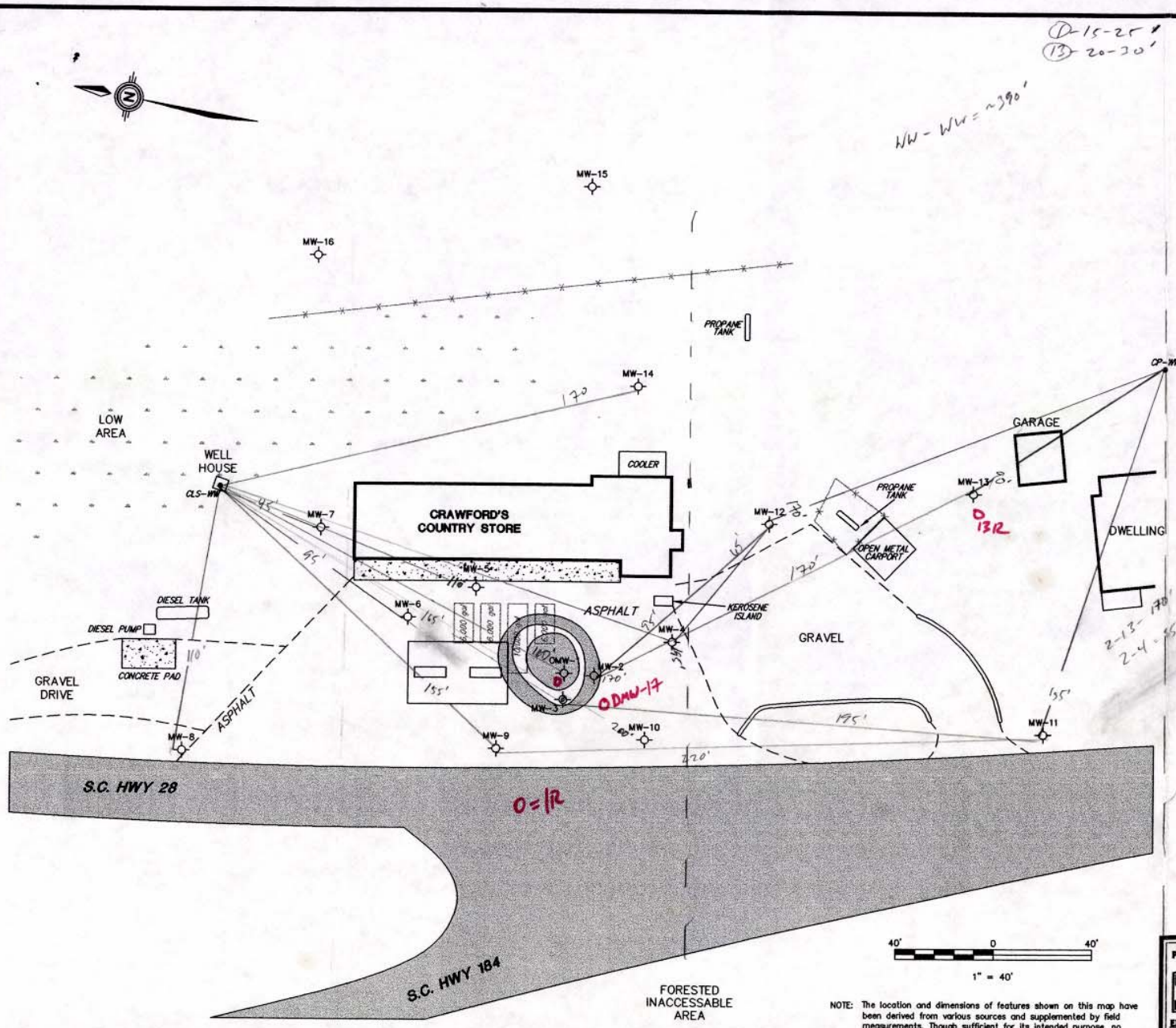



Results **1-1** of about **1** for **crawford's Country store** near **Abbeville, SC 29620**

A. **Crawford's Country Store**
5870 Highway 28 N, Abbeville, SC
(864) 348-7442


413
Trail Rd
201
28
Antreville Hwy
184
Crawfords' Country Store
284
Image © 2006 TerraMetrics
© 2006 Navteq
Google
Pointer 34°18'02.17" N 82°32'04.13" W elev 664 ft Streaming 100% Eye alt 49714 ft


Wall St
184
284
Gin House Rd
Crawfords' Country Store
John Gray Rd
Dry Hollow Rd
28
Image © 2006 TerraMetrics
© 2006 Navteq
Google
Pointer 34°18'02.17" N 82°32'04.13" W elev 664 ft Streaming 100% Eye alt 12380 ft




## LEGEND

- OMW-1 – SHALLOW MONITORING WELL LOCATION INSTALLED BY ENVIRO-TEST SERVICES ON 5/7/97
- MW-10 – SHALLOW MONITORING WELL LOCATION INSTALLED BY MM&A ON 11/19/97 THROUGH 11/21/97
- WW – DOMESTIC WATER SUPPLY WELL
- FENCE
- FREE PRODUCT THICKNESS >1 FOOT
- FREE PRODUCT THICKNESS 0.10–1 FEET
- FREE PRODUCT THICKNESS 0.01 – 0.10 FEET

MEASURED FREE PRODUCT THICKNESS

| MONITORING WELL I.D. | FREE PRODUCT THICKNESS |
|---|---|
| OMW-1 | 2.15 |
| MW-2 | 0.01 |
| MW-3 | 0.10 |
| MW-4 | 0.0 |
| MW-5 | 0.0 |
| MW-6 | 0.0 |
| MW-7 | 0.0 |
| MW-8 | 0.0 |
| MW-9 | 0.0 |
| MW-10 | 0.0 |
| MW-11 | 0.0 |
| MW-12 | 0.0 |
| MW-13 | 0.0 |
| MW-14 | 0.0 |
| MW-15 | 0.0 |
| MW-16 | 0.0 |

NOTE: The location and dimensions of features shown on this map have been derived from various sources and supplemented by field measurements. Though sufficient for its intended purpose, no claim is made as to the degree of accuracy of this drawing.

SOUTH CAROLINA DHEC
Department of Health and Environmental Control

# SITE MAP

SHOWING:

**MEASURED FREE PRODUCT THICKNESS**

**CRAWFORDS COUNTRY STORE**
**ABBEVILLE CO., SOUTH CAROLINA**

Prepared by:
MARSHALL MILLER & ASSOCIATES
ENVIRONMENTAL SERVICES
Bluefield, VA

| | | | |
|---|---|---|---|
| Designed: DLW | Date: JANUARY, 1998 | | |
| Drawn: DHM | Scale: 1" = 40' | | |
| Checked: DLW | | | |
| Project Number: A89128 | File Name: LNAPL.dwg | Map Number: 6 | |

## SITE ACTIVITY SUMMARY

**UST PERMIT #** 12335
**FACILITY NAME** Crawford's Country Store
**COUNTY** Abbeville
**NAME OF SAMPLER** JAMIE BATEMAN

| Sample ID | sampled? | Date | Time | Depth to Water | Depth of well | Depth to Product | FP Thickness | # gal purged | comments |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | Y | 5/17/06 | 1112 | 15.13 | 25.00 | — | — | — | Strong Odor |
| MW-2 | Y | | 1106 | 15.50 | 25.00 | — | — | — | mild Odor |
| MW-3 | Y | | 1126 | 15.23 | 25.00 | — | — | — | Strong Odor |
| MW-4 | Y | | 1056 | 15.84 | 25.00 | — | — | — | mild odor |
| MW-5 | Y | | 1136 | 13.99 | 25.00 | — | — | — | mild Odor |
| MW-6 | Y | | 1146 | 13.50 | 25.00 | — | — | — | — |
| MW-7 | Y | | 1021 | 13.59 | 25.00 | — | — | — | — |
| MW-8 | Y | | 1014 | 12.82 | 25.00 | — | — | — | — |
| MW-9 | Y | | 1036 | 14.62 | 25.00 | — | — | — | — |
| MW-10 | Y | | 1046 | 15.26 | 25.00 | — | — | — | mild Odor |
| MW-11 | Y | | 1156 | 13.65 | 25.00 | — | — | — | — |
| MW-12 | Y | | 1208 | 15.52 | 25.00 | — | — | — | — |
| MW-13 | Y | | 1256 | 20.39 | 30.00 | — | — | — | — |
| MW-14 | Y | | 1426 | 6.83 | 25.00 | — | — | — | — |
| MW-15 | Y | | 1510 | 5.13 | 25.00 | — | — | — | — |
| MW-16 | Y | | 1500 | 9.64 | 25.00 | — | — | — | — |
| DMW-17 | Y | | 1220 | 13.71 | 76.00 | — | — | 5 | Clean, No Odor |
| CLS-WW | Y | | 1400 | — | — | — | — | — | See Below |
| CP-WW | Y | | 1310 | — | — | — | — | — | Spigot on west side of house. New well installed on east side of house |

CLS-WW — Ladies in store did not know if well was still operable. Spigot is broke off on outside of pump house. Retrieved sample from spigot at front of store.

*MW-2 → 12, 14, 15, 16, 17 — Tags in well say screens are 5'-25'

UST DOCKETING 6/16/06

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 5/17/06
**Field Personnel:** Jamie Bateman
**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 23.9 °C 75

**Facility Name:** Crawford's Country Store
**Site ID#:** 12335 **Monitoring Well #** DMW-17
**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 1166 feet

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

* Free Product Thickness: ~~_____~~ feet
Depth to Free Product (DFP) ~~_____~~ feet
Depth to Ground Water (DGW) 13.71 feet
Total Well Depth (TWD) 75.00 feet
Length of the water column (LWC=TWD-DGW) 61.29 feet
1 casing volume (CV=LWC X C)= 61.29 X .1166 = 10.17 gals
3 casing volume (3 X CV)= 31 gals (standard purge volume)

Total Volume of Water Purged Before Sampling 5 gals.
*If free product is present over 1/8 inch, sampling will not be required.

### Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 00866 | serial no. | 894575 |
| pH=4.0 | ✓ | standard | ✓ |
| pH=7.0 | ✓ | standard | ✓ |
| pH=10.0 | ✓ | standard | ✓ |

### Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| [signature] | 5/17/06 1800 | | |

| Cumulative Volume Purged (gallons) | Inital | 1st Vol (2 gal) | 2nd Vol (2 gal) | 3rd Vol (1 gal) | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | | 1230 | 1233 | 1236 | | | | |
| pH (s.u.) | | 1.34 | 1.05 | 1.26 | | | | |
| Specific Conductivity (µmhos/cm) | | 60 | 70 | 70 | | | | |
| Water Temperature (°C) | | 22.8 | 22.7 | 22.5 | | | | |
| Dissolved Oxygen | 4.26@ | | | | | | | |
| ~~PID readings, if required~~ | 21.1 | | | | | | | |

Remarks: Clear, No Odor, Sample @ 1239

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May 25, 2006

RECEIVED
MAY 30 2006
UNDERGROUND STORAGE
TANK PROGRAM

Ms. Debra Thoma
SCDHEC
UST Program
2600 Bull Street
Columbia, SC 29201

RE: Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Dear Ms. Thoma:

Enclosed are the analytical results for sample(s) received by the laboratory on May 18, 2006. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Inorganic Wet Chemistry and Metals Analyses were performed at our Pace Asheville laboratory and Organic testing was performed at our Pace Charlotte laboratory unless otherwise footnoted.

If you have any questions concerning this report please feel free to contact me.

Sincerely,

Teresa Adams
Teresa.Adams@pacelabs.com
Project Manager

Enclosures

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www.pacelabs.com

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9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
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Fax: 704.875.9091

**Pace Analytical Services, Inc.**
2225 Riverside Drive
Asheville, NC 28804
Phone: 828.254.7176
Fax: 828.252.4618

Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Lab Sample No: 926994872 Project Sample Number: 92119599-001 Date Collected: 05/17/06 11:15
Client Sample ID: OMW-1 Matrix: Water Date Received: 05/18/06 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | ND | mg/l | 0.0050 | 1.0 | 05/23/06 19:00 | SHB | 7439-92-1 | | |
| Date Digested | 05/19/06 11:00 | | | | 05/19/06 11:00 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 0.11 | ug/l | 0.020 | 1.0 | 05/23/06 20:16 | RCS1 | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 98 | % | | 1.0 | 05/23/06 20:16 | RCS1 | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| tert-Amylmethyl ether | 2200 | ug/l | 2000 | 200 | 05/23/06 21:45 | PPM | 994-05-8 | | |
| tert-Amyl Alcohol | 18000 | ug/l | 2000 | 200 | 05/23/06 21:45 | PPM | 75-85-4 | | |
| Benzene | 9100 | ug/l | 1000 | 200 | 05/23/06 21:45 | PPM | 71-43-2 | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/l | 2000 | 200 | 05/23/06 21:45 | PPM | 625-95-3 | | |
| tert-Butyl Formate | ND | ug/l | 4000 | 200 | 05/23/06 21:45 | PPM | 762-75-4 | | |
| 1,2-Dichloroethane | ND | ug/l | 1000 | 200 | 05/23/06 21:45 | PPM | 107-06-2 | | |
| Diisopropyl ether | 19000 | ug/l | 1000 | 200 | 05/23/06 21:45 | PPM | 108-20-3 | | |
| Ethanol | ND | ug/l | 4000 | 200 | 05/23/06 21:45 | PPM | 64-17-5 | | |
| Ethylbenzene | 1900 | ug/l | 1000 | 200 | 05/23/06 21:45 | PPM | 100-41-4 | | |
| Ethyl-tert-butyl ether | ND | ug/l | 2000 | 200 | 05/23/06 21:45 | PPM | 637-92-3 | | |
| 2-Methyl-2-propanol | ND | ug/l | 2000 | 200 | 05/23/06 21:45 | PPM | 75-65-0 | | |
| Methyl-tert-butyl ether | 23000 | ug/l | 1000 | 200 | 05/23/06 21:45 | PPM | 1634-04-4 | | |
| Naphthalene | 1100 | ug/l | 1000 | 200 | 05/23/06 21:45 | PPM | 91-20-3 | | |
| Toluene | 30000 | ug/l | 1000 | 200 | 05/23/06 21:45 | PPM | 108-88-3 | | |
| m&p-Xylene | 6200 | ug/l | 2000 | 200 | 05/23/06 21:45 | PPM | | | |
| o-Xylene | 3200 | ug/l | 1000 | 200 | 05/23/06 21:45 | PPM | 95-47-6 | | |
| Toluene-d8 (S) | 98 | % | | 1.0 | 05/23/06 21:45 | PPM | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 99 | % | | 1.0 | 05/23/06 21:45 | PPM | 460-00-4 | | |
| Dibromofluoromethane (S) | 103 | % | | 1.0 | 05/23/06 21:45 | PPM | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 100 | % | | 1.0 | 05/23/06 21:45 | PPM | 17060-07-0 | | |

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MAY 30 2006
UNDERGROUND STORAGE
TANK PROGRAM



Asheville Certification IDs
NC Wastewater 40
NC Drinking Water 37712
SC 99030
FL NELAP E87648

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**Pace Analytical Services, Inc.**
2225 Riverside Drive
Asheville, NC 28804
Phone: 828.254.7176
Fax: 828.252.4618

Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Lab Sample No: 926994880 Project Sample Number: 92119599-002 Date Collected: 05/17/06 11:10
Client Sample ID: MW-2 Matrix: Water Date Received: 05/18/06 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | ND | mg/l | 0.0050 | 1.0 | 05/23/06 19:08 | SHB | 7439-92-1 | | |
| Date Digested | 05/19/06 11:00 | | | | 05/19/06 11:00 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 0.44 | ug/l | 0.020 | 1.0 | 05/23/06 20:36 | RCS1 | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 95 | % | | 1.0 | 05/23/06 20:36 | RCS1 | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| tert-Amylmethyl ether | 840 | ug/l | 500 | 50.0 | 05/23/06 05:46 | MCK | 994-05-8 | | |
| tert-Amyl Alcohol | 11000 | ug/l | 500 | 50.0 | 05/23/06 05:46 | MCK | 75-85-4 | | |
| Benzene | 6100 | ug/l | 250 | 50.0 | 05/23/06 05:46 | MCK | 71-43-2 | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/l | 500 | 50.0 | 05/23/06 05:46 | MCK | 625-95-3 | | |
| tert-Butyl Formate | ND | ug/l | 1000 | 50.0 | 05/23/06 05:46 | MCK | 762-75-4 | | |
| 1,2-Dichloroethane | ND | ug/l | 250 | 50.0 | 05/23/06 05:46 | MCK | 107-06-2 | | |
| Diisopropyl ether | 7200 | ug/l | 250 | 50.0 | 05/23/06 05:46 | MCK | 108-20-3 | | |
| Ethanol | ND | ug/l | 1000 | 50.0 | 05/23/06 05:46 | MCK | 64-17-5 | | |
| Ethylbenzene | 2800 | ug/l | 250 | 50.0 | 05/23/06 05:46 | MCK | 100-41-4 | | |
| Ethyl-tert-butyl ether | ND | ug/l | 500 | 50.0 | 05/23/06 05:46 | MCK | 637-92-3 | | |
| 2-Methyl-2-propanol | 2300 | ug/l | 500 | 50.0 | 05/23/06 05:46 | MCK | 75-65-0 | | |
| Methyl-tert-butyl ether | 9400 | ug/l | 250 | 50.0 | 05/23/06 05:46 | MCK | 1634-04-4 | | |
| Naphthalene | 830 | ug/l | 250 | 50.0 | 05/23/06 05:46 | MCK | 91-20-3 | | |
| Toluene | 9600 | ug/l | 250 | 50.0 | 05/23/06 05:46 | MCK | 108-88-3 | | |
| m&p-Xylene | 7700 | ug/l | 500 | 50.0 | 05/23/06 05:46 | MCK | | | |
| o-Xylene | 5400 | ug/l | 250 | 50.0 | 05/23/06 05:46 | MCK | 95-47-6 | | |
| Toluene-d8 (S) | 97 | % | | 1.0 | 05/23/06 05:46 | MCK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 100 | % | | 1.0 | 05/23/06 05:46 | MCK | 460-00-4 | | |
| Dibromofluoromethane (S) | 102 | % | | 1.0 | 05/23/06 05:46 | MCK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 97 | % | | 1.0 | 05/23/06 05:46 | MCK | 17060-07-0 | | |



Asheville Certification IDs
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NC Drinking Water 37712
SC 99030
FL NELAP E87648

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Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Lab Sample No: 926994898 Project Sample Number: 92119599-003 Date Collected: 05/17/06 11:30
Client Sample ID: MW-3 Matrix: Water Date Received: 05/18/06 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | ND | mg/l | 0.0050 | 1.0 | 05/23/06 19:10 | SHB | 7439-92-1 | | |
| Date Digested | 05/19/06 11:00 | | | | 05/19/06 11:00 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 2.4 | ug/l | 0.20 | 10.0 | 05/23/06 20:57 | RCS1 | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 97 | % | | 1.0 | 05/23/06 20:57 | RCS1 | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| tert-Amylmethyl ether | ND | ug/l | 5000 | 500 | 05/23/06 05:22 | MCK | 994-05-8 | | |
| tert-Amyl Alcohol | 32000 | ug/l | 5000 | 500 | 05/23/06 05:22 | MCK | 75-85-4 | | |
| Benzene | 9900 | ug/l | 2500 | 500 | 05/23/06 05:22 | MCK | 71-43-2 | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/l | 5000 | 500 | 05/23/06 05:22 | MCK | 625-95-3 | | |
| tert-Butyl Formate | ND | ug/l | 10000 | 500 | 05/23/06 05:22 | MCK | 762-75-4 | | |
| 1,2-Dichloroethane | ND | ug/l | 2500 | 500 | 05/23/06 05:22 | MCK | 107-06-2 | | |
| Diisopropyl ether | 9900 | ug/l | 2500 | 500 | 05/23/06 05:22 | MCK | 108-20-3 | | |
| Ethanol | ND | ug/l | 10000 | 500 | 05/23/06 05:22 | MCK | 64-17-5 | | |
| Ethylbenzene | 2700 | ug/l | 2500 | 500 | 05/23/06 05:22 | MCK | 100-41-4 | | |
| Ethyl-tert-butyl ether | ND | ug/l | 5000 | 500 | 05/23/06 05:22 | MCK | 637-92-3 | | |
| 2-Methyl-2-propanol | ND | ug/l | 5000 | 500 | 05/23/06 05:22 | MCK | 75-65-0 | | |
| Methyl-tert-butyl ether | 5600 | ug/l | 2500 | 500 | 05/23/06 05:22 | MCK | 1634-04-4 | | |
| Naphthalene | 2500 | ug/l | 2500 | 500 | 05/23/06 05:22 | MCK | 91-20-3 | | |
| Toluene | 60000 | ug/l | 2500 | 500 | 05/23/06 05:22 | MCK | 108-88-3 | | |
| m&p-Xylene | 10000 | ug/l | 5000 | 500 | 05/23/06 05:22 | MCK | | | |
| o-Xylene | 4600 | ug/l | 2500 | 500 | 05/23/06 05:22 | MCK | 95-47-6 | | |
| Toluene-d8 (S) | 98 | % | | 1.0 | 05/23/06 05:22 | MCK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 99 | % | | 1.0 | 05/23/06 05:22 | MCK | 460-00-4 | | |
| Dibromofluoromethane (S) | 102 | % | | 1.0 | 05/23/06 05:22 | MCK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 99 | % | | 1.0 | 05/23/06 05:22 | MCK | 17060-07-0 | | |



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Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Lab Sample No: 926994906 Project Sample Number: 92119599-004 Date Collected: 05/17/06 11:00
Client Sample ID: MW-4 Matrix: Water Date Received: 05/18/06 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.17 | mg/l | 0.0050 | 1.0 | 05/23/06 19:13 | SHB | 7439-92-1 | | |
| Date Digested | 05/19/06 11:00 | | | | 05/19/06 11:00 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 78. | ug/l | 20. | 1000 | 05/23/06 21:18 | RCS1 | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 96 | % | | 1.0 | 05/23/06 21:18 | RCS1 | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| tert-Amylmethyl ether | 1000 | ug/l | 500 | 50.0 | 05/23/06 06:09 | MCK | 994-05-8 | | |
| tert-Amyl Alcohol | 12000 | ug/l | 500 | 50.0 | 05/23/06 06:09 | MCK | 75-85-4 | | |
| Benzene | 7200 | ug/l | 250 | 50.0 | 05/23/06 06:09 | MCK | 71-43-2 | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/l | 500 | 50.0 | 05/23/06 06:09 | MCK | 625-95-3 | | |
| tert-Butyl Formate | ND | ug/l | 1000 | 50.0 | 05/23/06 06:09 | MCK | 762-75-4 | | |
| 1,2-Dichloroethane | ND | ug/l | 250 | 50.0 | 05/23/06 06:09 | MCK | 107-06-2 | | |
| Diisopropyl ether | 8300 | ug/l | 250 | 50.0 | 05/23/06 06:09 | MCK | 108-20-3 | | |
| Ethanol | ND | ug/l | 1000 | 50.0 | 05/23/06 06:09 | MCK | 64-17-5 | | |
| Ethylbenzene | 3300 | ug/l | 250 | 50.0 | 05/23/06 06:09 | MCK | 100-41-4 | | |
| Ethyl-tert-butyl ether | ND | ug/l | 500 | 50.0 | 05/23/06 06:09 | MCK | 637-92-3 | | |
| 2-Methyl-2-propanol | 4300 | ug/l | 500 | 50.0 | 05/23/06 06:09 | MCK | 75-65-0 | | |
| Methyl-tert-butyl ether | 9800 | ug/l | 500 | 100 | 05/23/06 06:09 | MCK | 1634-04-4 | | |
| Naphthalene | 1000 | ug/l | 250 | 50.0 | 05/23/06 06:09 | MCK | 91-20-3 | | |
| Toluene | 11000 | ug/l | 500 | 100 | 05/23/06 06:09 | MCK | 108-88-3 | | |
| m&p-Xylene | 9300 | ug/l | 500 | 50.0 | 05/23/06 06:09 | MCK | | | |
| o-Xylene | 6500 | ug/l | 250 | 50.0 | 05/23/06 06:09 | MCK | 95-47-6 | | |
| Toluene-d8 (S) | 97 | % | | 1.0 | 05/23/06 06:09 | MCK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 100 | % | | 1.0 | 05/23/06 06:09 | MCK | 460-00-4 | | |
| Dibromofluoromethane (S) | 95 | % | | 1.0 | 05/23/06 06:09 | MCK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 93 | % | | 1.0 | 05/23/06 06:09 | MCK | 17060-07-0 | | |



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Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Lab Sample No: 926994914 Project Sample Number: 92119599-005 Date Collected: 05/17/06 11:40
Client Sample ID: MW-5 Matrix: Water Date Received: 05/18/06 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0094 | mg/l | 0.0050 | 1.0 | 05/23/06 19:15 | SHB | 7439-92-1 | | |
| Date Digested | 05/19/06 11:00 | | | | 05/19/06 11:00 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 05/23/06 21:38 | RCS1 | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 91 | % | | 1.0 | 05/23/06 21:38 | RCS1 | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| tert-Amylmethyl ether | ND | ug/l | 250 | 25.0 | 05/23/06 22:32 | PPM | 994-05-8 | | |
| tert-Amyl Alcohol | 1400 | ug/l | 250 | 25.0 | 05/23/06 22:32 | PPM | 75-85-4 | | |
| Benzene | 73. | J ug/l | 120 | 25.0 | 05/23/06 22:32 | PPM | 71-43-2 | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/l | 250 | 25.0 | 05/23/06 22:32 | PPM | 625-95-3 | | |
| tert-Butyl Formate | ND | ug/l | 500 | 25.0 | 05/23/06 22:32 | PPM | 762-75-4 | | |
| 1,2-Dichloroethane | ND | ug/l | 120 | 25.0 | 05/23/06 22:32 | PPM | 107-06-2 | | |
| Diisopropyl ether | 76. | J ug/l | 120 | 25.0 | 05/23/06 22:32 | PPM | 108-20-3 | | |
| Ethanol | ND | ug/l | 500 | 25.0 | 05/23/06 22:32 | PPM | 64-17-5 | | |
| Ethylbenzene | 1300 | ug/l | 120 | 25.0 | 05/23/06 22:32 | PPM | 100-41-4 | | |
| Ethyl-tert-butyl ether | ND | ug/l | 250 | 25.0 | 05/23/06 22:32 | PPM | 637-92-3 | | |
| 2-Methyl-2-propanol | ND | ug/l | 250 | 25.0 | 05/23/06 22:32 | PPM | 75-65-0 | | |
| Methyl-tert-butyl ether | ND | ug/l | 120 | 25.0 | 05/23/06 22:32 | PPM | 1634-04-4 | | |
| Naphthalene | 240 | ug/l | 120 | 25.0 | 05/23/06 22:32 | PPM | 91-20-3 | | |
| Toluene | 3400 | ug/l | 120 | 25.0 | 05/23/06 22:32 | PPM | 108-88-3 | | |
| m&p-Xylene | 2400 | ug/l | 250 | 25.0 | 05/23/06 22:32 | PPM | | | |
| o-Xylene | 1100 | ug/l | 120 | 25.0 | 05/23/06 22:32 | PPM | 95-47-6 | | |
| Toluene-d8 (S) | 99 | % | | 1.0 | 05/23/06 22:32 | PPM | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 100 | % | | 1.0 | 05/23/06 22:32 | PPM | 460-00-4 | | |
| Dibromofluoromethane (S) | 105 | % | | 1.0 | 05/23/06 22:32 | PPM | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 103 | % | | 1.0 | 05/23/06 22:32 | PPM | 17060-07-0 | | |



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Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Lab Sample No: 926994922 Project Sample Number: 92119599-006 Date Collected: 05/17/06 11:50
Client Sample ID: MW-6 Matrix: Water Date Received: 05/18/06 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.011 | mg/l | 0.0050 | 1.0 | 05/23/06 19:18 | SHB | 7439-92-1 | | |
| Date Digested | 05/19/06 11:00 | | | | 05/19/06 11:00 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 05/23/06 21:59 | RCS1 | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 93 | % | | 1.0 | 05/23/06 21:59 | RCS1 | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| tert-Amylmethyl ether | ND | ug/l | 10. | 1.0 | 05/23/06 12:49 | MCK | 994-05-8 | | |
| tert-Amyl Alcohol | ND | ug/l | 10. | 1.0 | 05/23/06 12:49 | MCK | 75-85-4 | | |
| Benzene | 1.9 | J ug/l | 5.0 | 1.0 | 05/23/06 12:49 | MCK | 71-43-2 | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/l | 10. | 1.0 | 05/23/06 12:49 | MCK | 625-95-3 | | |
| tert-Butyl Formate | ND | ug/l | 20. | 1.0 | 05/23/06 12:49 | MCK | 762-75-4 | | |
| 1,2-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 05/23/06 12:49 | MCK | 107-06-2 | | |
| Diisopropyl ether | 11. | ug/l | 5.0 | 1.0 | 05/23/06 12:49 | MCK | 108-20-3 | | |
| Ethanol | ND | ug/l | 20. | 1.0 | 05/23/06 12:49 | MCK | 64-17-5 | | |
| Ethylbenzene | 2.0 | J ug/l | 5.0 | 1.0 | 05/23/06 12:49 | MCK | 100-41-4 | | |
| Ethyl-tert-butyl ether | ND | ug/l | 10. | 1.0 | 05/23/06 12:49 | MCK | 637-92-3 | | |
| 2-Methyl-2-propanol | ND | ug/l | 10. | 1.0 | 05/23/06 12:49 | MCK | 75-65-0 | | |
| Methyl-tert-butyl ether | 4.1 | J ug/l | 5.0 | 1.0 | 05/23/06 12:49 | MCK | 1634-04-4 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 05/23/06 12:49 | MCK | 91-20-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 05/23/06 12:49 | MCK | 108-88-3 | | |
| m&p-Xylene | 5.1 | J ug/l | 10. | 1.0 | 05/23/06 12:49 | MCK | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 05/23/06 12:49 | MCK | 95-47-6 | | |
| Toluene-d8 (S) | 99 | % | | 1.0 | 05/23/06 12:49 | MCK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 97 | % | | 1.0 | 05/23/06 12:49 | MCK | 460-00-4 | | |
| Dibromofluoromethane (S) | 105 | % | | 1.0 | 05/23/06 12:49 | MCK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 100 | % | | 1.0 | 05/23/06 12:49 | MCK | 17060-07-0 | | |



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Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Lab Sample No: 926994930 Project Sample Number: 92119599-007 Date Collected: 05/17/06 10:25
Client Sample ID: MW-7 Matrix: Water Date Received: 05/18/06 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0061 | mg/l | 0.0050 | 1.0 | 05/23/06 19:20 | SHB | 7439-92-1 | | |
| Date Digested | 05/19/06 11:00 | | | | 05/19/06 11:00 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 05/23/06 22:20 | RCS1 | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 95 | % | | 1.0 | 05/23/06 22:20 | RCS1 | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| tert-Amylmethyl ether | ND | ug/l | 10. | 1.0 | 05/20/06 08:19 | MCK | 994-05-8 | | |
| tert-Amyl Alcohol | ND | ug/l | 10. | 1.0 | 05/20/06 08:19 | MCK | 75-85-4 | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 05/20/06 08:19 | MCK | 71-43-2 | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/l | 10. | 1.0 | 05/20/06 08:19 | MCK | 625-95-3 | | |
| tert-Butyl Formate | ND | ug/l | 20. | 1.0 | 05/20/06 08:19 | MCK | 762-75-4 | | |
| 1,2-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 05/20/06 08:19 | MCK | 107-06-2 | | |
| Diisopropyl ether | ND | ug/l | 5.0 | 1.0 | 05/20/06 08:19 | MCK | 108-20-3 | | |
| Ethanol | ND | ug/l | 20. | 1.0 | 05/20/06 08:19 | MCK | 64-17-5 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 05/20/06 08:19 | MCK | 100-41-4 | | |
| Ethyl-tert-butyl ether | ND | ug/l | 10. | 1.0 | 05/20/06 08:19 | MCK | 637-92-3 | | |
| 2-Methyl-2-propanol | ND | ug/l | 10. | 1.0 | 05/20/06 08:19 | MCK | 75-65-0 | | |
| Methyl-tert-butyl ether | 7.9 | ug/l | 5.0 | 1.0 | 05/20/06 08:19 | MCK | 1634-04-4 | | |
| Naphthalene | 5.1 | ug/l | 5.0 | 1.0 | 05/20/06 08:19 | MCK | 91-20-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 05/20/06 08:19 | MCK | 108-88-3 | | |
| m&p-Xylene | ND | ug/l | 10. | 1.0 | 05/20/06 08:19 | MCK | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 05/20/06 08:19 | MCK | 95-47-6 | | |
| Toluene-d8 (S) | 99 | % | | 1.0 | 05/20/06 08:19 | MCK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 96 | % | | 1.0 | 05/20/06 08:19 | MCK | 460-00-4 | | |
| Dibromofluoromethane (S) | 107 | % | | 1.0 | 05/20/06 08:19 | MCK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 101 | % | | 1.0 | 05/20/06 08:19 | MCK | 17060-07-0 | | |



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Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Lab Sample No: 926994948 Project Sample Number: 92119599-008 Date Collected: 05/17/06 10:15
Client Sample ID: MW-8 Matrix: Water Date Received: 05/18/06 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0015 J | mg/l | 0.0050 | 1.0 | 05/23/06 19:23 | SHB | 7439-92-1 | | |
| Date Digested | 05/19/06 11:00 | | | | 05/19/06 11:00 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 05/24/06 | RCS1 | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 96 | % | | 1.0 | 05/24/06 | RCS1 | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| tert-Amylmethyl ether | ND | ug/l | 10. | 1.0 | 05/20/06 08:43 | MCK | 994-05-8 | | |
| tert-Amyl Alcohol | ND | ug/l | 10. | 1.0 | 05/20/06 08:43 | MCK | 75-85-4 | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 05/20/06 08:43 | MCK | 71-43-2 | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/l | 10. | 1.0 | 05/20/06 08:43 | MCK | 625-95-3 | | |
| tert-Butyl Formate | ND | ug/l | 20. | 1.0 | 05/20/06 08:43 | MCK | 762-75-4 | | |
| 1,2-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 05/20/06 08:43 | MCK | 107-06-2 | | |
| Diisopropyl ether | ND | ug/l | 5.0 | 1.0 | 05/20/06 08:43 | MCK | 108-20-3 | | |
| Ethanol | ND | ug/l | 20. | 1.0 | 05/20/06 08:43 | MCK | 64-17-5 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 05/20/06 08:43 | MCK | 100-41-4 | | |
| Ethyl-tert-butyl ether | ND | ug/l | 10. | 1.0 | 05/20/06 08:43 | MCK | 637-92-3 | | |
| 2-Methyl-2-propanol | ND | ug/l | 10. | 1.0 | 05/20/06 08:43 | MCK | 75-65-0 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 05/20/06 08:43 | MCK | 1634-04-4 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 05/20/06 08:43 | MCK | 91-20-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 05/20/06 08:43 | MCK | 108-88-3 | | |
| m&p-Xylene | ND | ug/l | 10. | 1.0 | 05/20/06 08:43 | MCK | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 05/20/06 08:43 | MCK | 95-47-6 | | |
| Toluene-d8 (S) | 98 | % | | 1.0 | 05/20/06 08:43 | MCK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 97 | % | | 1.0 | 05/20/06 08:43 | MCK | 460-00-4 | | |
| Dibromofluoromethane (S) | 106 | % | | 1.0 | 05/20/06 08:43 | MCK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 101 | % | | 1.0 | 05/20/06 08:43 | MCK | 17060-07-0 | | |



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Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Lab Sample No: 926994955 Project Sample Number: 92119599-009 Date Collected: 05/17/06 10:40
Client Sample ID: MW-9 Matrix: Water Date Received: 05/18/06 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.040 | mg/l | 0.0050 | 1.0 | 05/23/06 19:25 | SHB | 7439-92-1 | | |
| Date Digested | 05/19/06 11:00 | | | | 05/19/06 11:00 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 05/24/06 00:20 | RCS1 | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 85 | % | | 1.0 | 05/24/06 00:20 | RCS1 | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| tert-Amylmethyl ether | ND | ug/l | 10. | 1.0 | 05/20/06 09:06 | MCK | 994-05-8 | | |
| tert-Amyl Alcohol | ND | ug/l | 10. | 1.0 | 05/20/06 09:06 | MCK | 75-85-4 | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 05/20/06 09:06 | MCK | 71-43-2 | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/l | 10. | 1.0 | 05/20/06 09:06 | MCK | 625-95-3 | | |
| tert-Butyl Formate | ND | ug/l | 20. | 1.0 | 05/20/06 09:06 | MCK | 762-75-4 | | |
| 1,2-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 05/20/06 09:06 | MCK | 107-06-2 | | |
| Diisopropyl ether | ND | ug/l | 5.0 | 1.0 | 05/20/06 09:06 | MCK | 108-20-3 | | |
| Ethanol | ND | ug/l | 20. | 1.0 | 05/20/06 09:06 | MCK | 64-17-5 | | |
| Ethylbenzene | 2.5 | J ug/l | 5.0 | 1.0 | 05/20/06 09:06 | MCK | 100-41-4 | | |
| Ethyl-tert-butyl ether | ND | ug/l | 10. | 1.0 | 05/20/06 09:06 | MCK | 637-92-3 | | |
| 2-Methyl-2-propanol | ND | ug/l | 10. | 1.0 | 05/20/06 09:06 | MCK | 75-65-0 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 05/20/06 09:06 | MCK | 1634-04-4 | | |
| Naphthalene | 9.6 | ug/l | 5.0 | 1.0 | 05/20/06 09:06 | MCK | 91-20-3 | | |
| Toluene | 3.0 | J ug/l | 5.0 | 1.0 | 05/20/06 09:06 | MCK | 108-88-3 | | |
| m&p-Xylene | 150 | ug/l | 10. | 1.0 | 05/20/06 09:06 | MCK | | | |
| o-Xylene | 35. | ug/l | 5.0 | 1.0 | 05/20/06 09:06 | MCK | 95-47-6 | | |
| Toluene-d8 (S) | 97 | % | | 1.0 | 05/20/06 09:06 | MCK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 100 | % | | 1.0 | 05/20/06 09:06 | MCK | 460-00-4 | | |
| Dibromofluoromethane (S) | 102 | % | | 1.0 | 05/20/06 09:06 | MCK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 97 | % | | 1.0 | 05/20/06 09:06 | MCK | 17060-07-0 | | |



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Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Lab Sample No: 926994963 Project Sample Number: 92119599-010 Date Collected: 05/17/06 10:50
Client Sample ID: MW-10 Matrix: Water Date Received: 05/18/06 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.014 | mg/l | 0.0050 | 1.0 | 05/25/06 12:39 | ALV | 7439-92-1 | | |
| Date Digested | 05/19/06 11:15 | | | | 05/19/06 11:15 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 5.5 | ug/l | 0.40 | 20.0 | 05/24/06 00:41 | RCS1 | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 96 | % | | 1.0 | 05/24/06 00:41 | RCS1 | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| tert-Amylmethyl ether | 680 | ug/l | 500 | 50.0 | 05/23/06 06:56 | MCK | 994-05-8 | | |
| tert-Amyl Alcohol | 7100 | ug/l | 500 | 50.0 | 05/23/06 06:56 | MCK | 75-85-4 | | |
| Benzene | 7800 | ug/l | 250 | 50.0 | 05/23/06 06:56 | MCK | 71-43-2 | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/l | 500 | 50.0 | 05/23/06 06:56 | MCK | 625-95-3 | | |
| tert-Butyl Formate | ND | ug/l | 1000 | 50.0 | 05/23/06 06:56 | MCK | 762-75-4 | | |
| 1,2-Dichloroethane | ND | ug/l | 250 | 50.0 | 05/23/06 06:56 | MCK | 107-06-2 | | |
| Diisopropyl ether | 5300 | ug/l | 250 | 50.0 | 05/23/06 06:56 | MCK | 108-20-3 | | |
| Ethanol | ND | ug/l | 1000 | 50.0 | 05/23/06 06:56 | MCK | 64-17-5 | | |
| Ethylbenzene | 2900 | ug/l | 250 | 50.0 | 05/23/06 06:56 | MCK | 100-41-4 | | |
| Ethyl-tert-butyl ether | ND | ug/l | 500 | 50.0 | 05/23/06 06:56 | MCK | 637-92-3 | | |
| 2-Methyl-2-propanol | ND | ug/l | 500 | 50.0 | 05/23/06 06:56 | MCK | 75-65-0 | | |
| Methyl-tert-butyl ether | 1800 | ug/l | 250 | 50.0 | 05/23/06 06:56 | MCK | 1634-04-4 | | |
| Naphthalene | 570 | ug/l | 250 | 50.0 | 05/23/06 06:56 | MCK | 91-20-3 | | |
| Toluene | 62000 | ug/l | 2500 | 500 | 05/23/06 06:56 | MCK | 108-88-3 | | |
| m&p-Xylene | 11000 | ug/l | 500 | 50.0 | 05/23/06 06:56 | MCK | | | |
| o-Xylene | 5400 | ug/l | 250 | 50.0 | 05/23/06 06:56 | MCK | 95-47-6 | | |
| Toluene-d8 (S) | 97 | % | | 1.0 | 05/23/06 06:56 | MCK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 99 | % | | 1.0 | 05/23/06 06:56 | MCK | 460-00-4 | | |
| Dibromofluoromethane (S) | 102 | % | | 1.0 | 05/23/06 06:56 | MCK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 97 | % | | 1.0 | 05/23/06 06:56 | MCK | 17060-07-0 | | |



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Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Lab Sample No: 926994971 Project Sample Number: 92119599-011 Date Collected: 05/17/06 12:00
Client Sample ID: MW-11 Matrix: Water Date Received: 05/18/06 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0016 J | mg/l | 0.0050 | 1.0 | 05/25/06 12:43 | ALV | 7439-92-1 | | |
| Date Digested | 05/19/06 11:15 | | | | 05/19/06 11:15 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 0.020 | ug/l | 0.020 | 1.0 | 05/24/06 01:02 | RCS1 | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 92 | % | | 1.0 | 05/24/06 01:02 | RCS1 | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| tert-Amylmethyl ether | ND | ug/l | 500 | 50.0 | 05/23/06 07:20 | MCK | 994-05-8 | | |
| tert-Amyl Alcohol | 2500 | ug/l | 500 | 50.0 | 05/23/06 07:20 | MCK | 75-85-4 | | |
| Benzene | 430 | ug/l | 250 | 50.0 | 05/23/06 07:20 | MCK | 71-43-2 | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/l | 500 | 50.0 | 05/23/06 07:20 | MCK | 625-95-3 | | |
| tert-Butyl Formate | ND | ug/l | 1000 | 50.0 | 05/23/06 07:20 | MCK | 762-75-4 | | |
| 1,2-Dichloroethane | ND | ug/l | 250 | 50.0 | 05/23/06 07:20 | MCK | 107-06-2 | | |
| Diisopropyl ether | 1200 | ug/l | 250 | 50.0 | 05/23/06 07:20 | MCK | 108-20-3 | | |
| Ethanol | ND | ug/l | 1000 | 50.0 | 05/23/06 07:20 | MCK | 64-17-5 | | |
| Ethylbenzene | ND | ug/l | 250 | 50.0 | 05/23/06 07:20 | MCK | 100-41-4 | | |
| Ethyl-tert-butyl ether | ND | ug/l | 500 | 50.0 | 05/23/06 07:20 | MCK | 637-92-3 | | |
| 2-Methyl-2-propanol | ND | ug/l | 500 | 50.0 | 05/23/06 07:20 | MCK | 75-65-0 | | |
| Methyl-tert-butyl ether | 5100 | ug/l | 250 | 50.0 | 05/23/06 07:20 | MCK | 1634-04-4 | | |
| Naphthalene | 270 | ug/l | 250 | 50.0 | 05/23/06 07:20 | MCK | 91-20-3 | | |
| Toluene | ND | ug/l | 250 | 50.0 | 05/23/06 07:20 | MCK | 108-88-3 | | |
| m&p-Xylene | ND | ug/l | 500 | 50.0 | 05/23/06 07:20 | MCK | | | |
| o-Xylene | ND | ug/l | 250 | 50.0 | 05/23/06 07:20 | MCK | 95-47-6 | | |
| Toluene-d8 (S) | 98 | % | | 1.0 | 05/23/06 07:20 | MCK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 98 | % | | 1.0 | 05/23/06 07:20 | MCK | 460-00-4 | | |
| Dibromofluoromethane (S) | 105 | % | | 1.0 | 05/23/06 07:20 | MCK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 102 | % | | 1.0 | 05/23/06 07:20 | MCK | 17060-07-0 | | |



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Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Lab Sample No: 926994989 Project Sample Number: 92119599-012 Date Collected: 05/17/06 12:10
Client Sample ID: MW-12 Matrix: Water Date Received: 05/18/06 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0072 | mg/l | 0.0050 | 1.0 | 05/25/06 12:47 | ALV | 7439-92-1 | | |
| Date Digested | 05/19/06 11:15 | | | | 05/19/06 11:15 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 05/24/06 01:23 | RCS1 | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 90 | % | | 1.0 | 05/24/06 01:23 | RCS1 | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| tert-Amylmethyl ether | ND | ug/l | 20. | 2.0 | 05/20/06 09:30 | MCK | 994-05-8 | | |
| tert-Amyl Alcohol | 140 | ug/l | 20. | 2.0 | 05/20/06 09:30 | MCK | 75-85-4 | | |
| Benzene | ND | ug/l | 10. | 2.0 | 05/20/06 09:30 | MCK | 71-43-2 | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/l | 20. | 2.0 | 05/20/06 09:30 | MCK | 625-95-3 | | |
| tert-Butyl Formate | ND | ug/l | 40. | 2.0 | 05/20/06 09:30 | MCK | 762-75-4 | | |
| 1,2-Dichloroethane | ND | ug/l | 10. | 2.0 | 05/20/06 09:30 | MCK | 107-06-2 | | |
| Diisopropyl ether | 240 | ug/l | 10. | 2.0 | 05/20/06 09:30 | MCK | 108-20-3 | | |
| Ethanol | ND | ug/l | 40. | 2.0 | 05/20/06 09:30 | MCK | 64-17-5 | | |
| Ethylbenzene | ND | ug/l | 10. | 2.0 | 05/20/06 09:30 | MCK | 100-41-4 | | |
| Ethyl-tert-butyl ether | ND | ug/l | 20. | 2.0 | 05/20/06 09:30 | MCK | 637-92-3 | | |
| 2-Methyl-2-propanol | ND | ug/l | 20. | 2.0 | 05/20/06 09:30 | MCK | 75-65-0 | | |
| Methyl-tert-butyl ether | 240 | ug/l | 10. | 2.0 | 05/20/06 09:30 | MCK | 1634-04-4 | | |
| Naphthalene | ND | ug/l | 10. | 2.0 | 05/20/06 09:30 | MCK | 91-20-3 | | |
| Toluene | ND | ug/l | 10. | 2.0 | 05/20/06 09:30 | MCK | 108-88-3 | | |
| m&p-Xylene | ND | ug/l | 20. | 2.0 | 05/20/06 09:30 | MCK | | | |
| o-Xylene | ND | ug/l | 10. | 2.0 | 05/20/06 09:30 | MCK | 95-47-6 | | |
| Toluene-d8 (S) | 99 | % | | 1.0 | 05/20/06 09:30 | MCK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 94 | % | | 1.0 | 05/20/06 09:30 | MCK | 460-00-4 | | |
| Dibromofluoromethane (S) | 105 | % | | 1.0 | 05/20/06 09:30 | MCK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 100 | % | | 1.0 | 05/20/06 09:30 | MCK | 17060-07-0 | | |



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Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Lab Sample No: 926994997 Project Sample Number: 92119599-013 Date Collected: 05/17/06 13:00
Client Sample ID: MW-13 Matrix: Water Date Received: 05/18/06 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0012 J | mg/l | 0.0050 | 1.0 | 05/25/06 12:52 | ALV | 7439-92-1 | | |
| Date Digested | 05/19/06 11:15 | | | | 05/19/06 11:15 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | 0.067 | ug/l | 0.020 | 1.0 | 05/24/06 01:43 | RCS1 | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 94 | % | | 1.0 | 05/24/06 01:43 | RCS1 | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| tert-Amylmethyl ether | ND | ug/l | 1000 | 100 | 05/23/06 08:53 | MCK | 994-05-8 | | |
| tert-Amyl Alcohol | 5900 | ug/l | 1000 | 100 | 05/23/06 08:53 | MCK | 75-85-4 | | |
| Benzene | 1700 | ug/l | 500 | 100 | 05/23/06 08:53 | MCK | 71-43-2 | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/l | 10. | 1.0 | 05/23/06 08:53 | MCK | 625-95-3 | | |
| tert-Butyl Formate | ND | ug/l | 20. | 1.0 | 05/23/06 08:53 | MCK | 762-75-4 | | |
| 1,2-Dichloroethane | 52. | ug/l | 5.0 | 1.0 | 05/23/06 08:53 | MCK | 107-06-2 | | |
| Diisopropyl ether | 5400 | ug/l | 500 | 100 | 05/23/06 08:53 | MCK | 108-20-3 | | |
| Ethanol | ND | ug/l | 20. | 1.0 | 05/23/06 08:53 | MCK | 64-17-5 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 05/23/06 08:53 | MCK | 100-41-4 | | |
| Ethyl-tert-butyl ether | ND | ug/l | 10. | 1.0 | 05/23/06 08:53 | MCK | 637-92-3 | | |
| 2-Methyl-2-propanol | 4900 | ug/l | 1000 | 100 | 05/23/06 08:53 | MCK | 75-65-0 | | |
| Methyl-tert-butyl ether | 34000 | ug/l | 1200 | 250 | 05/23/06 08:53 | MCK | 1634-04-4 | | |
| Naphthalene | 110 | ug/l | 5.0 | 1.0 | 05/23/06 08:53 | MCK | 91-20-3 | | |
| Toluene | 5.3 | ug/l | 5.0 | 1.0 | 05/23/06 08:53 | MCK | 108-88-3 | | |
| m&p-Xylene | 23. | ug/l | 10. | 1.0 | 05/23/06 08:53 | MCK | | | |
| o-Xylene | 75. | ug/l | 5.0 | 1.0 | 05/23/06 08:53 | MCK | 95-47-6 | | |
| Toluene-d8 (S) | 96 | % | | 1.0 | 05/23/06 08:53 | MCK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 98 | % | | 1.0 | 05/23/06 08:53 | MCK | 460-00-4 | | |
| Dibromofluoromethane (S) | 100 | % | | 1.0 | 05/23/06 08:53 | MCK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 106 | % | | 1.0 | 05/23/06 08:53 | MCK | 17060-07-0 | | |



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Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Lab Sample No: 926995002 Project Sample Number: 92119599-014 Date Collected: 05/17/06 14:30
Client Sample ID: MW-14 Matrix: Water Date Received: 05/18/06 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.029 | mg/l | 0.0050 | 1.0 | 05/25/06 12:56 | ALV | 7439-92-1 | | |
| Date Digested | 05/19/06 11:15 | | | | 05/19/06 11:15 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 05/24/06 02:04 | RCS1 | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 94 | % | | 1.0 | 05/24/06 02:04 | RCS1 | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| tert-Amylmethyl ether | ND | ug/l | 10. | 1.0 | 05/20/06 09:53 | MCK | 994-05-8 | | |
| tert-Amyl Alcohol | ND | ug/l | 10. | 1.0 | 05/20/06 09:53 | MCK | 75-85-4 | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 05/20/06 09:53 | MCK | 71-43-2 | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/l | 10. | 1.0 | 05/20/06 09:53 | MCK | 625-95-3 | | |
| tert-Butyl Formate | ND | ug/l | 20. | 1.0 | 05/20/06 09:53 | MCK | 762-75-4 | | |
| 1,2-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 05/20/06 09:53 | MCK | 107-06-2 | | |
| Diisopropyl ether | ND | ug/l | 5.0 | 1.0 | 05/20/06 09:53 | MCK | 108-20-3 | | |
| Ethanol | ND | ug/l | 20. | 1.0 | 05/20/06 09:53 | MCK | 64-17-5 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 05/20/06 09:53 | MCK | 100-41-4 | | |
| Ethyl-tert-butyl ether | ND | ug/l | 10. | 1.0 | 05/20/06 09:53 | MCK | 637-92-3 | | |
| 2-Methyl-2-propanol | ND | ug/l | 10. | 1.0 | 05/20/06 09:53 | MCK | 75-65-0 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 05/20/06 09:53 | MCK | 1634-04-4 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 05/20/06 09:53 | MCK | 91-20-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 05/20/06 09:53 | MCK | 108-88-3 | | |
| m&p-Xylene | ND | ug/l | 10. | 1.0 | 05/20/06 09:53 | MCK | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 05/20/06 09:53 | MCK | 95-47-6 | | |
| Toluene-d8 (S) | 98 | % | | 1.0 | 05/20/06 09:53 | MCK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 94 | % | | 1.0 | 05/20/06 09:53 | MCK | 460-00-4 | | |
| Dibromofluoromethane (S) | 104 | % | | 1.0 | 05/20/06 09:53 | MCK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 103 | % | | 1.0 | 05/20/06 09:53 | MCK | 17060-07-0 | | |



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Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Lab Sample No: 926995010 Project Sample Number: 92119599-015 Date Collected: 05/17/06 15:10
Client Sample ID: MW-15 Matrix: Water Date Received: 05/18/06 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.024 | mg/l | 0.0050 | 1.0 | 05/25/06 13:00 | ALV | 7439-92-1 | | |
| Date Digested | 05/19/06 11:15 | | | | 05/19/06 11:15 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 05/24/06 02:25 | RCS1 | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 91 | % | | 1.0 | 05/24/06 02:25 | RCS1 | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| tert-Amylmethyl ether | ND | ug/l | 10. | 1.0 | 05/20/06 10:16 | MCK | 994-05-8 | | |
| tert-Amyl Alcohol | ND | ug/l | 10. | 1.0 | 05/20/06 10:16 | MCK | 75-85-4 | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 05/20/06 10:16 | MCK | 71-43-2 | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/l | 10. | 1.0 | 05/20/06 10:16 | MCK | 625-95-3 | | |
| tert-Butyl Formate | ND | ug/l | 20. | 1.0 | 05/20/06 10:16 | MCK | 762-75-4 | | |
| 1,2-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 05/20/06 10:16 | MCK | 107-06-2 | | |
| Diisopropyl ether | ND | ug/l | 5.0 | 1.0 | 05/20/06 10:16 | MCK | 108-20-3 | | |
| Ethanol | ND | ug/l | 20. | 1.0 | 05/20/06 10:16 | MCK | 64-17-5 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 05/20/06 10:16 | MCK | 100-41-4 | | |
| Ethyl-tert-butyl ether | ND | ug/l | 10. | 1.0 | 05/20/06 10:16 | MCK | 637-92-3 | | |
| 2-Methyl-2-propanol | ND | ug/l | 10. | 1.0 | 05/20/06 10:16 | MCK | 75-65-0 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 05/20/06 10:16 | MCK | 1634-04-4 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 05/20/06 10:16 | MCK | 91-20-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 05/20/06 10:16 | MCK | 108-88-3 | | |
| m&p-Xylene | ND | ug/l | 10. | 1.0 | 05/20/06 10:16 | MCK | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 05/20/06 10:16 | MCK | 95-47-6 | | |
| Toluene-d8 (S) | 99 | % | | 1.0 | 05/20/06 10:16 | MCK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 95 | % | | 1.0 | 05/20/06 10:16 | MCK | 460-00-4 | | |
| Dibromofluoromethane (S) | 106 | % | | 1.0 | 05/20/06 10:16 | MCK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 102 | % | | 1.0 | 05/20/06 10:16 | MCK | 17060-07-0 | | |



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Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Lab Sample No: 926995028 Project Sample Number: 92119599-016 Date Collected: 05/17/06 15:00
Client Sample ID: MW-16 Matrix: Water Date Received: 05/18/06 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0065 | mg/l | 0.0050 | 1.0 | 05/25/06 13:04 | ALV | 7439-92-1 | | |
| Date Digested | 05/19/06 11:15 | | | | 05/19/06 11:15 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 05/24/06 02:46 | RCS1 | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 96 | % | | 1.0 | 05/24/06 02:46 | RCS1 | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| tert-Amylmethyl ether | ND | ug/l | 10. | 1.0 | 05/20/06 10:40 | MCK | 994-05-8 | | |
| tert-Amyl Alcohol | ND | ug/l | 10. | 1.0 | 05/20/06 10:40 | MCK | 75-85-4 | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 05/20/06 10:40 | MCK | 71-43-2 | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/l | 10. | 1.0 | 05/20/06 10:40 | MCK | 625-95-3 | | |
| tert-Butyl Formate | ND | ug/l | 20. | 1.0 | 05/20/06 10:40 | MCK | 762-75-4 | | |
| 1,2-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 05/20/06 10:40 | MCK | 107-06-2 | | |
| Diisopropyl ether | ND | ug/l | 5.0 | 1.0 | 05/20/06 10:40 | MCK | 108-20-3 | | |
| Ethanol | ND | ug/l | 20. | 1.0 | 05/20/06 10:40 | MCK | 64-17-5 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 05/20/06 10:40 | MCK | 100-41-4 | | |
| Ethyl-tert-butyl ether | ND | ug/l | 10. | 1.0 | 05/20/06 10:40 | MCK | 637-92-3 | | |
| 2-Methyl-2-propanol | ND | ug/l | 10. | 1.0 | 05/20/06 10:40 | MCK | 75-65-0 | | |
| Methyl-tert-butyl ether | 5.2 | ug/l | 5.0 | 1.0 | 05/20/06 10:40 | MCK | 1634-04-4 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 05/20/06 10:40 | MCK | 91-20-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 05/20/06 10:40 | MCK | 108-88-3 | | |
| m&p-Xylene | ND | ug/l | 10. | 1.0 | 05/20/06 10:40 | MCK | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 05/20/06 10:40 | MCK | 95-47-6 | | |
| Toluene-d8 (S) | 99 | % | | 1.0 | 05/20/06 10:40 | MCK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 94 | % | | 1.0 | 05/20/06 10:40 | MCK | 460-00-4 | | |
| Dibromofluoromethane (S) | 106 | % | | 1.0 | 05/20/06 10:40 | MCK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 103 | % | | 1.0 | 05/20/06 10:40 | MCK | 17060-07-0 | | |



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Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Lab Sample No: 926995036 Project Sample Number: 92119599-017 Date Collected: 05/17/06 12:39
Client Sample ID: DMW-17 Matrix: Water Date Received: 05/18/06 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0014 J | mg/l | 0.0050 | 1.0 | 05/25/06 13:08 | ALV | 7439-92-1 | | |
| Date Digested | 05/19/06 11:15 | | | | 05/19/06 11:15 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 05/24/06 03:06 | RCS1 | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 96 | % | | 1.0 | 05/24/06 03:06 | RCS1 | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| tert-Amylmethyl ether | ND | ug/l | 10. | 1.0 | 05/20/06 11:04 | MCK | 994-05-8 | | |
| tert-Amyl Alcohol | ND | ug/l | 10. | 1.0 | 05/20/06 11:04 | MCK | 75-85-4 | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 05/20/06 11:04 | MCK | 71-43-2 | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/l | 10. | 1.0 | 05/20/06 11:04 | MCK | 625-95-3 | | |
| tert-Butyl Formate | ND | ug/l | 20. | 1.0 | 05/20/06 11:04 | MCK | 762-75-4 | | |
| 1,2-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 05/20/06 11:04 | MCK | 107-06-2 | | |
| Diisopropyl ether | ND | ug/l | 5.0 | 1.0 | 05/20/06 11:04 | MCK | 108-20-3 | | |
| Ethanol | ND | ug/l | 20. | 1.0 | 05/20/06 11:04 | MCK | 64-17-5 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 05/20/06 11:04 | MCK | 100-41-4 | | |
| Ethyl-tert-butyl ether | ND | ug/l | 10. | 1.0 | 05/20/06 11:04 | MCK | 637-92-3 | | |
| 2-Methyl-2-propanol | ND | ug/l | 10. | 1.0 | 05/20/06 11:04 | MCK | 75-65-0 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 05/20/06 11:04 | MCK | 1634-04-4 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 05/20/06 11:04 | MCK | 91-20-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 05/20/06 11:04 | MCK | 108-88-3 | | |
| m&p-Xylene | ND | ug/l | 10. | 1.0 | 05/20/06 11:04 | MCK | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 05/20/06 11:04 | MCK | 95-47-6 | | |
| Toluene-d8 (S) | 99 | % | | 1.0 | 05/20/06 11:04 | MCK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 94 | % | | 1.0 | 05/20/06 11:04 | MCK | 460-00-4 | | |
| Dibromofluoromethane (S) | 107 | % | | 1.0 | 05/20/06 11:04 | MCK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 104 | % | | 1.0 | 05/20/06 11:04 | MCK | 17060-07-0 | | |



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Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Lab Sample No: 926995044 Project Sample Number: 92119599-018 Date Collected: 05/17/06 00:00
Client Sample ID: CLS-WW Matrix: Water Date Received: 05/18/06 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0015 J | mg/l | 0.0050 | 1.0 | 05/25/06 13:13 | ALV | 7439-92-1 | | |
| Date Digested | 05/19/06 11:15 | | | | 05/19/06 11:15 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 05/24/06 17:43 | RCS1 | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 98 | % | | 1.0 | 05/24/06 17:43 | RCS1 | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| tert-Amylmethyl ether | ND | ug/l | 10. | 1.0 | 05/23/06 21:22 | PPM | 994-05-8 | | |
| tert-Amyl Alcohol | ND | ug/l | 10. | 1.0 | 05/23/06 21:22 | PPM | 75-85-4 | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 05/23/06 21:22 | PPM | 71-43-2 | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/l | 10. | 1.0 | 05/23/06 21:22 | PPM | 625-95-3 | | |
| tert-Butyl Formate | ND | ug/l | 20. | 1.0 | 05/23/06 21:22 | PPM | 762-75-4 | | |
| 1,2-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 05/23/06 21:22 | PPM | 107-06-2 | | |
| Diisopropyl ether | ND | ug/l | 5.0 | 1.0 | 05/23/06 21:22 | PPM | 108-20-3 | | |
| Ethanol | ND | ug/l | 20. | 1.0 | 05/23/06 21:22 | PPM | 64-17-5 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 05/23/06 21:22 | PPM | 100-41-4 | | |
| Ethyl-tert-butyl ether | ND | ug/l | 10. | 1.0 | 05/23/06 21:22 | PPM | 637-92-3 | | |
| 2-Methyl-2-propanol | ND | ug/l | 10. | 1.0 | 05/23/06 21:22 | PPM | 75-65-0 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 05/23/06 21:22 | PPM | 1634-04-4 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 05/23/06 21:22 | PPM | 91-20-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 05/23/06 21:22 | PPM | 108-88-3 | | |
| m&p-Xylene | ND | ug/l | 10. | 1.0 | 05/23/06 21:22 | PPM | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 05/23/06 21:22 | PPM | 95-47-6 | | |
| Toluene-d8 (S) | 97 | % | | 1.0 | 05/23/06 21:22 | PPM | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 97 | % | | 1.0 | 05/23/06 21:22 | PPM | 460-00-4 | | |
| Dibromofluoromethane (S) | 103 | % | | 1.0 | 05/23/06 21:22 | PPM | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 99 | % | | 1.0 | 05/23/06 21:22 | PPM | 17060-07-0 | | |



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Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

Lab Sample No: 926995051 Project Sample Number: 92119599-019 Date Collected: 05/17/06 00:00
Client Sample ID: CP-WW Matrix: Water Date Received: 05/18/06 09:30

| Parameters | Results | Units | Report Limit | DF | Analyzed | By | CAS No. | Qual | RegLmt |
|---|---|---|---|---|---|---|---|---|---|
| **Metals** | | | | | | | | | |
| Metals by Trace ICP | Prep/Method: EPA 3010 / EPA 6010 | | | | | | | | |
| Lead | 0.0011 J | mg/l | 0.0050 | 1.0 | 05/25/06 13:17 | ALV | 7439-92-1 | | |
| Date Digested | 05/19/06 11:15 | | | | 05/19/06 11:15 | | | | |
| **GC Semivolatiles** | | | | | | | | | |
| EDB and DBCP in Water | Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/l | 0.020 | 1.0 | 05/24/06 18:25 | RCS1 | 106-93-4 | | |
| 1-Chloro-2-bromopropane (S) | 101 | % | | 1.0 | 05/24/06 18:25 | RCS1 | 301-79-56 | | |
| **GC/MS Volatiles** | | | | | | | | | |
| GC/MS VOCs by 8260 | Method: EPA 8260 | | | | | | | | |
| tert-Amylmethyl ether | ND | ug/l | 10. | 1.0 | 05/23/06 09:40 | MCK | 994-05-8 | | |
| tert-Amyl Alcohol | ND | ug/l | 10. | 1.0 | 05/23/06 09:40 | MCK | 75-85-4 | | |
| Benzene | ND | ug/l | 5.0 | 1.0 | 05/23/06 09:40 | MCK | 71-43-2 | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/l | 10. | 1.0 | 05/23/06 09:40 | MCK | 625-95-3 | | |
| tert-Butyl Formate | ND | ug/l | 20. | 1.0 | 05/23/06 09:40 | MCK | 762-75-4 | | |
| 1,2-Dichloroethane | ND | ug/l | 5.0 | 1.0 | 05/23/06 09:40 | MCK | 107-06-2 | | |
| Diisopropyl ether | ND | ug/l | 5.0 | 1.0 | 05/23/06 09:40 | MCK | 108-20-3 | | |
| Ethanol | ND | ug/l | 20. | 1.0 | 05/23/06 09:40 | MCK | 64-17-5 | | |
| Ethylbenzene | ND | ug/l | 5.0 | 1.0 | 05/23/06 09:40 | MCK | 100-41-4 | | |
| Ethyl-tert-butyl ether | ND | ug/l | 10. | 1.0 | 05/23/06 09:40 | MCK | 637-92-3 | | |
| 2-Methyl-2-propanol | ND | ug/l | 10. | 1.0 | 05/23/06 09:40 | MCK | 75-65-0 | | |
| Methyl-tert-butyl ether | ND | ug/l | 5.0 | 1.0 | 05/23/06 09:40 | MCK | 1634-04-4 | | |
| Naphthalene | ND | ug/l | 5.0 | 1.0 | 05/23/06 09:40 | MCK | 91-20-3 | | |
| Toluene | ND | ug/l | 5.0 | 1.0 | 05/23/06 09:40 | MCK | 108-88-3 | | |
| m&p-Xylene | ND | ug/l | 10. | 1.0 | 05/23/06 09:40 | MCK | | | |
| o-Xylene | ND | ug/l | 5.0 | 1.0 | 05/23/06 09:40 | MCK | 95-47-6 | | |
| Toluene-d8 (S) | 96 | % | | 1.0 | 05/23/06 09:40 | MCK | 2037-26-5 | | |
| 4-Bromofluorobenzene (S) | 97 | % | | 1.0 | 05/23/06 09:40 | MCK | 460-00-4 | | |
| Dibromofluoromethane (S) | 105 | % | | 1.0 | 05/23/06 09:40 | MCK | 1868-53-7 | | |
| 1,2-Dichloroethane-d4 (S) | 101 | % | | 1.0 | 05/23/06 09:40 | MCK | 17060-07-0 | | |



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Fax: 828.252.4618

Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

## PARAMETER FOOTNOTES

Dilution factor shown represents the factor applied to the reported result and reporting limit due to changes in sample preparation, dilution of the extract, or moisture content

Method 9071B modified to use ASE.

All pH, Free Chlorine, Total Chlorine and Ferrous Iron analyses conducted outside of EPA recommended immediate hold time.

Depending on the moisture content the PRLs can be elevated for all soil samples reported on a dry weight basis.

2-Chloroethyl vinyl ether has been shown to degrade in the presence of acid.

| | |
|---|---|
| ND | Not detected at or above adjusted reporting limit |
| NC | Not Calculable |
| J | Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit |
| MDL | Adjusted Method Detection Limit |
| (S) | Surrogate |



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# QUALITY CONTROL DATA

Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

QC Batch: 157933 — Analysis Method: EPA 8011
QC Batch Method: EPA 504.1 — Analysis Description: EDB and DBCP in Water
Associated Lab Samples: 926994872 926994880 926994898 926994906 926994914 926994922 926994930 926994948 926994955 926994963 926994971 926994989 926994997 926995002 926995010 926995028 926995036

METHOD BLANK: 927011148
Associated Lab Samples: 926994872 926994880 926994898 926994906 926994914 926994922 926994930 926994948 926994955 926994963 926994971 926994989 926994997 926995002 926995010 926995028 926995036

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/l | ND | 0.020 | |
| 1-Chloro-2-bromopropane (S) | % | 104 | | |

LABORATORY CONTROL SAMPLE & LCSD: 927011155 927011163

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | RPD | Footnotes |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/l | 0.2500 | 0.2281 | 0.2338 | 91 | 94 | 2 | |
| 1-Chloro-2-bromopropane (S) | | | | | 103 | 105 | | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 927011171 927011189

| Parameter | Units | 926994781 Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | RPD | Footnotes |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/l | 0 | 0.2500 | 0.2401 | 0.2261 | 96 | 90 | 6 | |
| 1-Chloro-2-bromopropane (S) | | | | | | 99 | 98 | | |

SAMPLE DUPLICATE: 927011197

| Parameter | Units | 926994799 Result | DUP Result | RPD | Footnotes |
|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/l | ND | ND | NC | |
| 1-Chloro-2-bromopropane (S) | % | 96 | 103 | | |



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# QUALITY CONTROL DATA

Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

QC Batch: 158020 Analysis Method: EPA 8011
QC Batch Method: EPA 504.1 Analysis Description: EDB and DBCP in Water
Associated Lab Samples: 926995044 926995051

METHOD BLANK: 927016063
Associated Lab Samples: 926995044 926995051

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/l | ND | 0.020 | |
| 1-Chloro-2-bromopropane (S) | % | 100 | | |

LABORATORY CONTROL SAMPLE & LCSD: 927016071 927016089

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | RPD | Footnotes |
|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/l | 0.2500 | 0.2149 | 0.2298 | 86 | 92 | 7 | |
| 1-Chloro-2-bromopropane (S) | | | | | 97 | 99 | | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 927016097 927016105

| Parameter | Units | 926995044 Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | RPD | Footnotes |
|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/l | 0 | 0.2500 | 0.2356 | 0.2235 | 94 | 89 | 5 | |
| 1-Chloro-2-bromopropane (S) | | | | | | 102 | 100 | | |

SAMPLE DUPLICATE: 927016113

| Parameter | Units | 926995051 Result | DUP Result | RPD | Footnotes |
|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/l | ND | ND | NC | |
| 1-Chloro-2-bromopropane (S) | % | 101 | 101 | | |



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# QUALITY CONTROL DATA

Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

QC Batch: 157684 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: GC/MS VOCs by 8260
Associated Lab Samples: 926994930 926994948 926994955 926994989 926995002 926995010 926995028 926995036

METHOD BLANK: 927002485
Associated Lab Samples: 926994930 926994948 926994955 926994989 926995002 926995010 926995028 926995036

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| tert-Amylmethyl ether | ug/l | ND | 10. | |
| tert-Amyl Alcohol | ug/l | ND | 10. | |
| Benzene | ug/l | ND | 5.0 | |
| 3,3-Dimethyl-1-Butanol | ug/l | ND | 10. | |
| tert-Butyl Formate | ug/l | ND | 20. | |
| 1,2-Dichloroethane | ug/l | ND | 5.0 | |
| Diisopropyl ether | ug/l | ND | 5.0 | |
| Ethanol | ug/l | ND | 20. | |
| Ethylbenzene | ug/l | ND | 5.0 | |
| Ethyl-tert-butyl ether | ug/l | ND | 10. | |
| 2-Methyl-2-propanol | ug/l | ND | 10. | |
| Methyl-tert-butyl ether | ug/l | ND | 5.0 | |
| Naphthalene | ug/l | ND | 5.0 | |
| Toluene | ug/l | ND | 5.0 | |
| m&p-Xylene | ug/l | ND | 10. | |
| o-Xylene | ug/l | ND | 5.0 | |
| Toluene-d8 (S) | % | 99 | | |
| 4-Bromofluorobenzene (S) | % | 97 | | |
| Dibromofluoromethane (S) | % | 104 | | |
| 1,2-Dichloroethane-d4 (S) | % | 101 | | |

LABORATORY CONTROL SAMPLE: 927002493

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | Footnotes |
|---|---|---|---|---|---|
| Benzene | ug/l | 50.00 | 51.68 | 103 | |
| 1,2-Dichloroethane | ug/l | 50.00 | 48.52 | 97 | |
| Diisopropyl ether | ug/l | 50.00 | 49.42 | 99 | |



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# QUALITY CONTROL DATA

Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

LABORATORY CONTROL SAMPLE: 927002493

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | Footnotes |
|---|---|---|---|---|---|
| Ethylbenzene | ug/l | 50.00 | 53.26 | 107 | |
| Methyl-tert-butyl ether | ug/l | 50.00 | 48.00 | 96 | |
| Naphthalene | ug/l | 50.00 | 45.34 | 91 | |
| Toluene | ug/l | 50.00 | 50.72 | 101 | |
| m&p-Xylene | ug/l | 100.00 | 107.1 | 107 | |
| o-Xylene | ug/l | 50.00 | 53.22 | 106 | |
| Toluene-d8 (S) | | | | 100 | |
| 4-Bromofluorobenzene (S) | | | | 98 | |
| Dibromofluoromethane (S) | | | | 99 | |
| 1,2-Dichloroethane-d4 (S) | | | | 101 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 927003913 927003921

| Parameter | Units | 926994930 Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | RPD | Footnotes |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ug/l | 0 | 50.00 | 54.16 | 53.40 | 108 | 107 | 1 | |
| Toluene | ug/l | 0 | 50.00 | 56.96 | 53.22 | 114 | 106 | 7 | |
| Toluene-d8 (S) | | | | | | 97 | 96 | | |
| 4-Bromofluorobenzene (S) | | | | | | 98 | 98 | | |
| Dibromofluoromethane (S) | | | | | | 99 | 100 | | |
| 1,2-Dichloroethane-d4 (S) | | | | | | 96 | 97 | | |



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# QUALITY CONTROL DATA

Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

QC Batch: 157845 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: GC/MS VOCs by 8260
Associated Lab Samples: 926994872 926994880 926994898 926994906 926994914 926994922 926994963 926994971 926994997 926995044 926995051

METHOD BLANK: 927008672
Associated Lab Samples: 926994872 926994880 926994898 926994906 926994914 926994922 926994963 926994971 926994997 926995044 926995051

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| tert-Amylmethyl ether | ug/l | ND | 10. | |
| tert-Amyl Alcohol | ug/l | ND | 10. | |
| Benzene | ug/l | ND | 5.0 | |
| 3,3-Dimethyl-1-Butanol | ug/l | ND | 10. | |
| tert-Butyl Formate | ug/l | ND | 20. | |
| 1,2-Dichloroethane | ug/l | ND | 5.0 | |
| Diisopropyl ether | ug/l | ND | 5.0 | |
| Ethanol | ug/l | ND | 20. | |
| Ethylbenzene | ug/l | ND | 5.0 | |
| Ethyl-tert-butyl ether | ug/l | ND | 10. | |
| 2-Methyl-2-propanol | ug/l | ND | 10. | |
| Methyl-tert-butyl ether | ug/l | ND | 5.0 | |
| Naphthalene | ug/l | ND | 5.0 | |
| Toluene | ug/l | ND | 5.0 | |
| m&p-Xylene | ug/l | ND | 10. | |
| o-Xylene | ug/l | ND | 5.0 | |
| Toluene-d8 (S) | % | 98 | | |
| 4-Bromofluorobenzene (S) | % | 97 | | |
| Dibromofluoromethane (S) | % | 107 | | |
| 1,2-Dichloroethane-d4 (S) | % | 102 | | |

LABORATORY CONTROL SAMPLE: 927008680

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | Footnotes |
|---|---|---|---|---|---|
| Benzene | ug/l | 50.00 | 54.20 | 108 | |
| 1,2-Dichloroethane | ug/l | 50.00 | 49.83 | 100 | |



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# QUALITY CONTROL DATA

Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

LABORATORY CONTROL SAMPLE: 927008680

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | Footnotes |
|---|---|---|---|---|---|
| Diisopropyl ether | ug/l | 50.00 | 50.56 | 101 | |
| Ethylbenzene | ug/l | 50.00 | 55.38 | 111 | |
| Methyl-tert-butyl ether | ug/l | 50.00 | 48.52 | 97 | |
| Naphthalene | ug/l | 50.00 | 44.56 | 89 | |
| Toluene | ug/l | 50.00 | 52.76 | 106 | |
| m&p-Xylene | ug/l | 100.00 | 110.4 | 110 | |
| o-Xylene | ug/l | 50.00 | 54.47 | 109 | |
| Toluene-d8 (S) | | | | 98 | |
| 4-Bromofluorobenzene (S) | | | | 100 | |
| Dibromofluoromethane (S) | | | | 98 | |
| 1,2-Dichloroethane-d4 (S) | | | | 100 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 927009233 927009241

| Parameter | Units | 926994922 Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | RPD | Footnotes |
|---|---|---|---|---|---|---|---|---|---|
| Benzene | ug/l | 1.944 | 50.00 | 29.78 | 29.63 | 56 | 55 | 0 | |
| Toluene | ug/l | 0.1265 | 50.00 | 27.38 | 27.43 | 54 | 55 | 0 | |
| Toluene-d8 (S) | | | | | | 96 | 97 | | |
| 4-Bromofluorobenzene (S) | | | | | | 98 | 98 | | |
| Dibromofluoromethane (S) | | | | | | 112 | 112 | | |
| 1,2-Dichloroethane-d4 (S) | | | | | | 110 | 109 | | |



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# QUALITY CONTROL DATA

Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

QC Batch: 157643 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: Metals by Trace ICP
Associated Lab Samples: 926994872 926994880 926994898 926994906 926994914 926994922 926994930 926994948 926994955

METHOD BLANK: 926999749
Associated Lab Samples: 926994872 926994880 926994898 926994906 926994914 926994922 926994930 926994948 926994955

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| Lead | mg/l | 0.0047 | 0.0050 | |

LABORATORY CONTROL SAMPLE: 926999756

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | Footnotes |
|---|---|---|---|---|---|
| Lead | mg/l | 0.5000 | 0.4722 | 94 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 926999764 926999772

| Parameter | Units | 926986753 Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | RPD | Footnotes |
|---|---|---|---|---|---|---|---|---|---|
| Lead | mg/l | 0.01342 | 0.5000 | 0.4664 | 0.4605 | 91 | 89 | 1 | |



Asheville Certification IDs
NC Wastewater 40
NC Drinking Water 37712
SC 99030
FL NELAP E87648

**REPORT OF LABORATORY ANALYSIS**
This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc.

Charlotte Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006
FL NELAP E87627

Pace Analytical®
www.pacelabs.com

**Pace Analytical Services, Inc.**
9800 Kincey Avenue, Suite 100
Huntersville, NC 28078
Phone: 704.875.9092
Fax: 704.875.9091

**Pace Analytical Services, Inc.**
2225 Riverside Drive
Asheville, NC 28804
Phone: 828.254.7176
Fax: 828.252.4618

# QUALITY CONTROL DATA

Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

QC Batch: 157653 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: Metals by Trace ICP
Associated Lab Samples: 926994963 926994971 926994989 926994997 926995002 926995010 926995028 926995036 926995044 926995051

METHOD BLANK: 926999996
Associated Lab Samples: 926994963 926994971 926994989 926994997 926995002 926995010 926995028 926995036 926995044 926995051

| Parameter | Units | Blank Result | Reporting Limit | Footnotes |
|---|---|---|---|---|
| Lead | mg/l | 0.0021 | 0.0050 | |

LABORATORY CONTROL SAMPLE: 927000000

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | Footnotes |
|---|---|---|---|---|---|
| Lead | mg/l | 0.5000 | 0.4440 | 89 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 927000018 927000026

| Parameter | Units | 926994963 Result | Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | RPD | Footnotes |
|---|---|---|---|---|---|---|---|---|---|
| Lead | mg/l | 0.01430 | 0.5000 | 0.4580 | 0.4500 | 89 | 87 | 2 | |



Asheville Certification IDs
NC Wastewater 40
NC Drinking Water 37712
SC 99030
FL NELAP E87648

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**Pace Analytical Services, Inc.**
2225 Riverside Drive
Asheville, NC 28804
Phone: 828.254.7176
Fax: 828.252.4618

Lab Project Number: 92119599
Client Project ID: Crawford's 12335/CA:26743

## QUALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines, unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

| | |
|---|---|
| LCS(D) | Laboratory Control Sample (Duplicate) |
| MS(D) | Matrix Spike (Duplicate) |
| DUP | Sample Duplicate |
| ND | Not detected at or above adjusted reporting limit |
| NC | Not Calculable |
| J | Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit |
| MDL | Adjusted Method Detection Limit |
| RPD | Relative Percent Difference |
| (S) | Surrogate |



Asheville Certification IDs
NC Wastewater 40
NC Drinking Water 37712
SC 99030
FL NELAP E87648

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Charlotte Certification IDs
NC Wastewater 12
NC Drinking Water 37706
SC 99006
FL NELAP E87627

# CHAIN-OF-CUSTODY / Analytical Request Document

**The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.**

Pace Analytical®

Page: 1 of 2

0999057

## Section A
**Required** Client Information:

| | |
|---|---|
| Company | SCDHEC-UST |
| Address | 2600 Bull St. Columbia SC 29201 |
| Email To: | |
| Phone: 803 896 4620 | Fax: 803 896 4695 |
| Requested Due Date/TAT: | 7 day |

## Section B
**Required** Project Information:

| | |
|---|---|
| Report To: | D. Thoma |
| Copy To: | |
| | |
| Purchase Order No.: | 547989 |
| Project Name: | Crawford's Country Store |
| Project Number: | 12335 / A:26743 |

## Section C
Invoice Information:

| | |
|---|---|
| Attention: | Finance |
| Company Name: | |
| Address: | |
| Pace Quote Reference: | |
| Pace Project Manager: | |
| Pace Profile #: | 1700 10 |

**REGULATORY AGENCY**

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☒ UST ☐ RCRA ☐ Other_____

**SITE LOCATION** ☐GA ☐IL ☐IN ☐MI ☐MN ☐NC ☐OH ☒SC ☐WI ☐OTHER _____

## Section D
**Required** Client Information

**SAMPLE ID**

One Character per box.
(A-Z, 0-9 / -)
Samples IDs MUST BE UNIQUE

Valid Matrix Codes

| MATRIX | CODE |
|---|---|
| DRINKING WATER | DW |
| WATER | WT |
| WASTE WATER | WW |
| PRODUCT | P |
| SOIL/SOLID | SL |
| OIL | OL |
| WIPE | WP |
| AIR | AR |
| OTHER | OT |
| TISSUE | TS |

| ITEM # | SAMPLE ID | MATRIX CODE | SAMPLE TYPE G=GRAB C=COMP | COLLECTED COMPOSITE START DATE | COLLECTED COMPOSITE START TIME | COLLECTED COMPOSITE END/GRAB DATE | COLLECTED COMPOSITE END/GRAB TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives: Unpreserved | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | $Na_2S_2O_3$ | Methanol | Other | Requested Analysis: BTEX/MTBE (8260B) | 1,2-DCA (8260B) | Oxygenates (8260B) | EDB (504.1) | Total Lead | Residual Chlorine (Y/N) | Pace Project Number / Lab I.D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | OMW-1 | WT | G | 5/17 | 1115 | | | | 7 | | | 1 | 6 | | | | X | X | X | X | | | | Hot |
| 2 | MW-2 | WT | G | | 1110 | | | | 7 | | | 1 | 6 | | | | X | X | X | X | | | | mild odor |
| 3 | MW-3 | WT | G | | 1130 | | | | 7 | | | 1 | 6 | | | | X | X | X | X | | | | Hot |
| 4 | MW-4 | WT | G | | 1100 | | | | 7 | | | 1 | 6 | | | | X | X | X | X | | | | mild odor |
| 5 | MW-5 | WT | G | | 1140 | | | | 7 | | | 1 | 6 | | | | X | X | X | X | | | | mild odor |
| 6 | MW-6 | WT | G | | 1150 | | | | 7 | | | 1 | 6 | | | | X | X | X | X | | | | |
| 7 | MW-7 | WT | G | | 1025 | | | | 7 | | | 1 | 6 | | | | X | X | X | X | | | | |
| 8 | MW-8 | WT | G | | 1015 | | | | 7 | | | 1 | 6 | | | | X | X | X | X | | | | |
| 9 | MW-9 | WT | G | | 1040 | | | | 7 | | | 1 | 6 | | | | X | X | X | X | | | | |
| 10 | MW-10 | WT | G | | 1050 | | | | 7 | | | 1 | 6 | | | | X | X | X | X | | | | mild odor |
| 11 | MW-11 | WT | G | | 1200 | | | | 7 | | | 1 | 6 | | | | X | X | X | X | | | | |
| 12 | MW-12 | WT | G | | 1210 | | | | 7 | | | 1 | 6 | | | | X | X | X | X | | | | |

**Additional Comments:**

| RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME |
|---|---|---|---|---|---|
| [signature] | 5/17 | 1530 | [signature] | 5/19/06 | 9:30 |
| | | | | | |
| | | | | | |
| | | | | | |

**SAMPLE CONDITION**

| Temp in °C | Received on Ice Y/N | Custody Sealed Cooler Y/N | Samples Intact Y/N |
|---|---|---|---|
| 4.0 | Y/N | Y/N | Y/N |
| | Y/N | Y/N | Y/N |
| | Y/N | Y/N | Y/N |
| | Y/N | Y/N | Y/N |

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER: Jamie Bateman

SIGNATURE of SAMPLER: [signature] DATE Signed (MM / DD / YY): 5/17/06

SEE REVERSE SIDE FOR INSTRUCTIONS



ALLQ020rev.3,31Mar05

## Instructions for completing Chain of Custody (COC)

1. **Section A and B:** Complete all Client information at top of sheet: company name, address, phone, fax, contact (the person to contact if there are questions, and who will receive the final report.), e-mail address (if available), PO#, Project Name and/or Project Number as you would like to see it appear on the report.

2. **Section C:** Invoice Information: Billing information is included in this section. This information should include the name and address of the person receiving the invoice.

3. Quote Reference should be completed if a quotation was provided by Pace Analytical. The Project Manager, and Profile No. will be completed by Pace Analytical Services.

4. **Site Location:** A separate COC must be filled out for each day of sample collection. Record the two letter postal code for the US state in which the samples were collected.

5. **Regulatory Agency:** List the program that is guiding the work to ensure proper regulations are followed.

6. **Section D:** Complete a Sample Description in the "SAMPLE ID" section as you would like it to appear on the laboratory report. The following information should also be included: the sample matrix, sample type (G (grab) or C (composite). When collecting a composite, the start time and end time should be documented in the respective boxes. The collection time for a grab (G) sample should be entered in the boxes marked 'Composite End/Grab'). Sample temp at collection (if required by state), the total number of containers, and preservative used.

7. Mark if the sample was filtered in the field by marking Y or N in 'Filtered' row by the Analysis requested.

8. Requested Analysis: List the required analysis and methods on the lines provided and place a check in the column for the samples requiring the analysis. Additional comments should be referenced in the bottom left hand corner or include attachments for extended lists of parameters.

9. The sampler should print their name in the space provided and sign their name followed by the date of the sampling event at the bottom of the COC in the spaces designated for 'SAMPLER NAME AND SIGNATURE'.

10. When relinquishing custody of the samples to a representative of the laboratory or other organization, indicate the Item Numbers of those samples being transferred; sign relinquished by, date and time, and include your affiliation.

***Important Note:**

**Standard Turnaround Time is 2 Weeks/10 business days.** Results will be delivered by end of business on the date due unless other arrangements have been made with your project manager.

**Special Project Requirements** such as Low Level Detection Limits or level of QC reported must be included on the chain of custody in the Additional Comments section.

# CHAIN-OF-CUSTODY / Analytical Request Document

**The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.**

Pace Analytical®

Page: 2 of 2

0999058

## Section A
**Required** Client Information:

| | |
|---|---|
| Company: | SCDHEC-UST |
| Address: | 2600 Bull St. Columbia SC 29201 |
| Email To: | |
| Phone: 8038966240 | Fax: 8038966245 |
| Requested Due Date/TAT: | 7 day |

## Section B
**Required** Project Information:

| | |
|---|---|
| Report To: | D. Thoma |
| Copy To: | |
| Purchase Order No.: | 574989 |
| Project Name: | Crawford's Country Store |
| Project Number: | 12335/CA:26743 |

## Section C
Invoice Information:

| | |
|---|---|
| Attention: | Finance |
| Company Name: | |
| Address: | |
| Pace Quote Reference: | |
| Pace Project Manager: | |
| Pace Profile #: | |

**REGULATORY AGENCY**

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☒ UST ☐ RCRA ☐ Other _____

**SITE LOCATION**: ☐GA ☐IL ☐IN ☐MI ☐MN ☐NC ☐OH ☒SC ☐WI ☐OTHER _____

## Section D
**Required** Client Information

**SAMPLE ID**

One Character per box.
(A-Z, 0-9 / -)
Samples IDs MUST BE UNIQUE

Valid Matrix Codes

| MATRIX | CODE |
|---|---|
| DRINKING WATER | DW |
| WATER | WT |
| WASTE WATER | WW |
| PRODUCT | P |
| SOIL/SOLID | SL |
| OIL | OL |
| WIPE | WP |
| AIR | AR |
| OTHER | OT |
| TISSUE | TS |

| ITEM # | SAMPLE ID | MATRIX CODE | SAMPLE TYPE G=GRAB C=COMP | COLLECTED COMPOSITE START DATE | COLLECTED COMPOSITE START TIME | COLLECTED COMPOSITE END/GRAB DATE | COLLECTED COMPOSITE END/GRAB TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives: Unpreserved | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | $Na_2S_2O_3$ | Methanol | Other | Requested Analysis: BTEX/MNS(8260B) | 1,2-DCA(8260B) | EDB(8260B) | TDEL Lead | Filtered (Y/N) | Residual Chlorine (Y/N) | Pace Project Number / Lab I.D |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-13 | WT | G | 5/17 | 1300 | — | — | | 7 | | | 1 | 6 | | | | | XXXXX | | | | | | |
| 2 | MW-14 | WT | G | | 1430 | — | — | | 7 | | | 1 | 6 | | | | | XXXXX | | | | | | |
| 3 | MW-15 | WT | G | | 1510 | — | — | | 7 | | | 1 | 6 | | | | | XXXXX | | | | | | |
| 4 | MW-16 | WT | G | | 1500 | — | — | | 7 | | | 1 | 6 | | | | | XXXXX | | | | | | |
| 5 | DMW-17 | WT | G | | 1731 | — | — | | 7 | | | 1 | 6 | | | | | XXXXX | | | | | | |
| 6 | CLS-WW | WT | G | | | | | | 7 | | | 1 | 6 | | | | | XXXXX | | | | | | 1 ppb N |
| 7 | CP-WW | WT | G | | | | | | 7 | | | 1 | 6 | | | | | XXXXX | | | | | | 1 ppb N |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | |
| 11 | | | | | | | | | | | | | | | | | | | | | | | | |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | |

**Additional Comments:**

| RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME |
|---|---|---|---|---|---|
| [signature] | 5/17 | 1830 | [signature] | 5/19/06 | 9:30 |
| | | | | | |
| | | | | | |

**SAMPLE CONDITION**

| Temp in °C | Received on Ice | Custody Sealed Cooler | Samples Intact |
|---|---|---|---|
| 4.0 | Y/N | Y/N | Y/N |
| | Y/N | Y/N | Y/N |
| | Y/N | Y/N | Y/N |

**SAMPLER NAME AND SIGNATURE**

PRINT Name of SAMPLER: Jamie Bateman

SIGNATURE of SAMPLER: [signature]

DATE Signed (MM / DD / YY): 5/17/06

SEE REVERSE SIDE FOR INSTRUCTIONS



ALLQ020rev.3,31Mar05

## Instructions for completing Chain of Custody (COC)

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**Special Project Requirements** such as Low Level Detection Limits or level of QC reported must be included on the chain of custody in the Additional Comments section.

# ENVIRO-TEST SERVICES

# DHEC

## [SUPERB SITE RANKING]

## IGWA

*INITIAL GROUNDWATER ASSESSMENT*

## SITE # 12335

UST DOCKETING 65 Leach

# CRAWFORD'S COUNTRY STORE

## ABBEVILLE COUNTY, SC

**PROJECT MANAGER: TERRY L. TEATE**
**SITE GEOLOGIST: ED LEACH**

**Environmental Laboratory & Drilling**

7435 Broad River Road, Suite 105 • IRMO, South Carolina 29063 • (803) 732-5770 • FAX (803) 732-5714

# ENVIRO-TEST SERVICES

*"underground Storage Tank Program, SUPERB-Funded Site Assessment"*

## MONITOR WELL CONSTRUCTION DATA

DHEC FACILITY SITE # [ 12335 ] PUPS Ticket # [ 119909 ]

Facility Name: Crawford's Country Store

Facility Address: Route 4 Box 205

Town of: Abbeville, South Carolina County: Abbeville

[/Monitor Well Location]:

Latitude: 34 deg 19 . 99 Min-North

Longitude: 082 deg 23 . 42 Min-West

MW ID #: 1 [2" PVC (.010) Slot-Screen]

Construction Date: 5 / 7 / 97

Driller's Name: Terry L. Teate

State Certification ID #: 1242

Groundwater Level: 12 ft.- 3 tenths

Total Depth of Well: 21 ft.- 7 tenths

Interval Screened: 6.7 ft. (to) 21.7 ft.

<.....>Ground Level Surface Conditions: Asphalt, Concrete, Dirt, Other:

.....> 5 ft. Lithology CL-v.hard,dark reddish-brown,dry,mild odor OVM 15 ppm

.....> 10 ft. Lithology CL-v.hard,pale yellowish-gray w/dark reddish-brown mottling, dry, scattered gravel, mild odor OVM 21 ppm

.....> 15 ft. Lithology SILT-dark brown,moist,abundant biotite, moderate odor OVM 54 ppm

.....> 20 ft. Lithology SILT-dark brown,moist,abundant biotite, mild odor OVM 25 ppm

.....> 25 ft. Lithology OVM ppm

*SOIL SAMPLES* Are Screened For Evidence Of Contamination Via Headspace Analysis, Utilizing An Organic Vapor Meter (OVM) With A Photoionization Detector (PID) Calibrated On Zero Air Then On 250 ppm Of Isobutylene.

**Environmental Laboratory & Drilling**

7435 Broad River Road, Suite 105 • IRMO, South Carolina 29063 • (803) 732-5770 • FAX (803) 732-5714

per. conversation
with Harold Crawford 7/1/97
wants to go state lead
MB

RECEIVED
JUN 27 1997
Bureau of Underground
Storage Tank Management

**Underground Storage Tank (UST) Owner/Operator Lead (Option 1)**
**Information Sheet**

**1. CHOICE OF CONTRACTOR** (Crawford's Country Store, Abbeville County)
As the UST Owner/Operator of Site # ( 12335 ), I would like to proceed with the (SLA/RA/Corrective Action/Well Abandonment) using the contractor or person(s)* listed below.

Name of Contractor/Person(s) Enviro-Test Services, Inc.
Address 7435 Broad River Road, Suite # 105
Irmo, South Carolina 29063
Telephone Number (803) 732 - 5770

*indicate if the person listed is your own employee

**2. FINANCIAL OR FAMILIAL RELATIONSHIP**
Does a financial or familial relationship, as defined below, exist between you and the contractor/person that you listed above? _____ Yes ___X___ No

Financial Relationship: A connection or association through a material interest of sources of income which exceed five percent of annual gross income form a business entity.

Familial Relationship: A connection or association by family or relatives in which a family member or relative has a material interest. Family or relatives include: father, mother, son, daughter, brother, sister, uncle, aunt, first cousin, nephew, niece, husband, wife, father-n-law, mother-n-law, son-n-law, daughter-n-law, stepfather, stepmother, stepson, stepdaughter, stepbrother, stepsister, half brother, half sister, grandparent, grandchild, great grandchild, step grandparent, step great grandparent, step grandchild, step great grandchild, or fiancee.

**3. PAYMENT**
You can pay the contractor and, upon the submittal of the canceled check (or a notarized statement from the contractor), be compensated from the SUPERB Account, or have payment issued directly from us to the contractor.

I request that payment be made to me after I have paid the contactor. _____ Yes ___X___ No
I request that payment be made directly to the contractor. ___X___ Yes _____ No

(Note: all costs must receive prior financial approval from the Department regardless of payment option.)

Underground Storage Tank Owner/Operator Signature Frank Crawford
Date 5-7-97

# ENVIRO-TEST SERVICES

## [INITIAL GROUNDWATER ASSESSMENT]

Facility ID # (SCDHEC SITE #): [ 12335 ] State of South Carolina

Facility Name: Crawford's Country Store

Facility Address: Route 4 Box 205

Town of: Abbeville, South Carolina County: Abbeville

Owner/Authorized Representative: Harold Franklin Crawford

Owner/Rep Address: Route 4 Box 205, Abbeville, South Carolina

Owner's Phone No.: Home ( 864 ) 446 - 2000 Work ( 864 ) 348 - 7442

Date Sampled: 5 / 30 / 97 Sampling Method: Teflon Bailer

Groundwater Level: 12 ft. 86 tenths Total-Depth of Well: 21 ft. 7 tenths

Free Product: [No X ] [Yes ] [Sheen X ] + Thickness [ ft. tenths]

***Field Parameters:***

pH: 6 . 8 Temperature: 17 . 4 *c Conductivity: 102 u/S

Total Dissolved Solids: 40 ppm; Water Quality: Brown Odor: Gas

**[GROUNDWATER ANALYTICAL DATA]**

| Benzene: | Toluene: | Ethylbenzene: | (Total) Xylenes: | (Total) BTEX: | (Total) Naphthalenes: |
|---|---|---|---|---|---|
| 21100 ug/L | 96500 ug/L | 12200 ug/L | 71700 ug/L | 201500 ug/L | 5100 ug/L |

***Receptor & Site Data: Survey Questions:***

Is there a drinking water supply well [*pubic, private*], or surface water supply intake within 1,000 feet of the UST? [Yes X ] [No ]

Are Irrigation or other non-drinking water wells within 1,000 feet of the UST? [Yes ] [No X ]

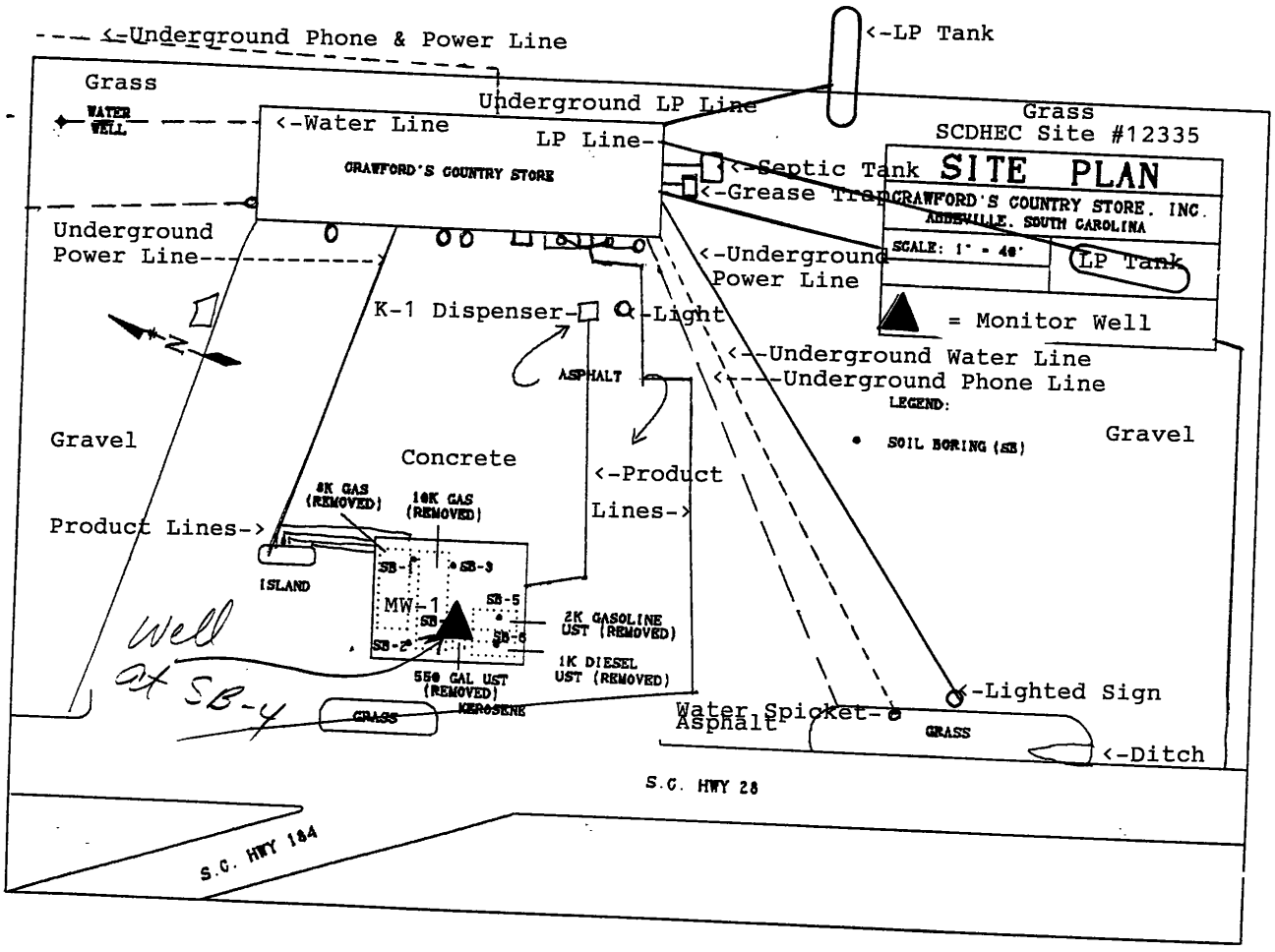
Are there potential receptors [*Utilities, Surface Waters, Wetlands, Ditches*] less than 500 feet from the UST? [Yes X ] [No ]

If Yes, Provide Additional Information: Ditch, Underground Power & Phone Lines, Water Line

Is the current use site and surrounding properties *Commercial, Residential, Agricultural, Industrial, or Other* ? (explain):

**Environmental Laboratory & Drilling**

7435 Broad River Road, Suite 105 • IRMO, South Carolina 29063 • (803) 732-5770 • FAX (803) 732-5714


<-Underground Phone & Power Line
<-LP Tank
Grass
WATER WELL
Underground LP Line
<-Water Line
LP Line-
Grass
SCDHEC Site #12335
CRAWFORD'S COUNTRY STORE
<-Septic Tank
SITE PLAN
<-Grease Trap
CRAWFORD'S COUNTRY STORE, INC.
ASHEVILLE, SOUTH CAROLINA
Underground Power Line
SCALE: 1" = 40'
LP Tank
<-Underground Power Line
K-1 Dispenser
<-Light
= Monitor Well
<--Underground Water Line
<----Underground Phone Line
ASPHALT
LEGEND:
Gravel
SOIL BORING (SB)
Gravel
Concrete
<-Product Lines->
Product Lines->
8K GAS (REMOVED)
10K GAS (REMOVED)
ISLAND
SB-1
SB-3
SB-5
MW-1
SB
SB-6
SB-2
2K GASOLINE UST (REMOVED)
1K DIESEL UST (REMOVED)
550 GAL UST (REMOVED)
KEROSENE
Well at SB-4
GRASS
Water Spicket
Asphalt
GRASS
<-Lighted Sign
<-Ditch
S.C. HWY 28
S.C. HWY 184

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | ENVIRO-TEST SERVICES |
| COMPANY PROJECT NUMBER: | 12335 |
| HYDROLOGIC PROJECT NUMBER: | K9712001 |
| HYDROLOGIC SAMPLE NUMBER: | 9712001 |
| HYDROLOGIC LAB ID #: | 70002 |
| SAMPLE IDENTIFICATION: | MW-1 |
| DATE SAMPLED: | 05/30/97 |
| DATE EXTRACTED: | N/A |
| DATE/TIME ANALYZED: | 06/09/97 |

**METHOD 602+MTBE+NAPHTHALENE**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| **Benzene** | **71-43-2** | **5000** | **21100** |
| **Toluene** | **108-88-3** | **5000** | **96500** |
| **Ethylbenzene** | **100-41-4** | **5000** | **12200** |
| **Xylenes (Total)** | **1330-20-7** | **5000** | **71700** |
| **MTBE** | | **5000** | **94400** |
| **Naphthalene** | **91-20-3** | **5000** | **5100** |
| Surrogate Recovery: | | | |
| BFB | | | 100% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: COMPOUNDS WITH ELEVATED SDL ARE DUE TO A SAMPLE DILUTION.

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | ENVIRO-TEST SERVICES |
| COMPANY PROJECT NUMBER: | 12335 |
| HYDROLOGIC PROJECT NUMBER: | K9712001 |
| HYDROLOGIC SAMPLE NUMBER: | 9712001 |
| HYDROLOGIC LAB ID #: | 70002 |
| SAMPLE IDENTIFICATION: | MW-1 |
| DATE SAMPLED: | 5/30/97 |
| DATE EXTRACTED: | 06/06/97 |
| DATE/TIME ANALYZED: | 06/12/97 |

**METHOD PAH-610**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| Benzo(a)anthracene | 56-55-3 | 10.0 | BDL |
| Benzo(b)fluoranthene | 205-99-2 | 10.0 | BDL |
| Benzo(k)fluoranthene | 207-08-9 | 10.0 | BDL |
| Chrysene | 218-01-9 | 10.0 | BDL |
| Dibenzo(a,h)anthracene | 53-70-3 | 10.0 | BDL |
| Surrogate Recovery: | | | |
| p-Terphenyl | | | 160% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

*Chain of Custody Record*

# HYDROLOGIC, INC.

(3)




❒ 122 Lyman Street, Asheville, NC 28801, (704)254-5169, FAX (704) 252-9711
❒ 1412 Oakbrook Drive #105, Norcross, Georgia 30093, (770) 368-0636, FAX (770) 368-0806
❒ 1491 Twilight Trail, Frankfort, KY 40601, (502) 223-0251, FAX (502) 875-8016
❒ 2003 North Pine Street, Lumberton, NC 28358, (910) 738-6190, FAX (910) 671-8837
❒ I-85 S Bldg. 2848, Charlotte, NC 28208, (704) 392-1164, FAX (704) 392-9073
❒ 2500 Gateway Centre, Morrisville, NC 27560, (919) 380-9699, FAX (919) 380-9717
❒ 4875 Riverside Drive, Macon, GA 31210, (912) 757-0811, FAX (912) 757-0149
❒ 695 N Seventh Ave, Brighton, CO. 80601, (303) 659-0497, FAX (303) 659-5064


Client: Enviro-Test Services
Report Address: 7435 Broad River Rd. #105 Irmo, SC 29063
Attn: Wendy Bussie
Phone No.: 803-732-5770
Fax No.: 803-732-5714

Project No.: 12335
Invoice Address: SAME
Attn: Wendy Bussie
Sampled By: Tom Martin
P.O. No:
State Samples Collected SC

TURNAROUND TIME
❒ 24 Hours ❒ 48 Hours
❒ 5 Days ❒ 10 Days Date Needed:

**REQUESTED PARAMETERS**

602 - BTEX MTBE
610 - PAH

**LAB CODE I.D.**
A = Asheville, NC
C = Charlotte, NC
D = Denver, CO
G = Macon, GA
K = Frankfort, KY
L = Lumberton, NC
M = Morrisville, NC
N = Norcross
S = Subcontracted

K9712001

| Sample ID | Date | Time | Comp/ Grab | Matrix | Containers | ← Preserv. | REMARKS |
|---|---|---|---|---|---|---|---|
| MW-1 | 5-30 | 17:45 | G | GW | 2-40 1-1000 | X X | Crawford's Country Store Route #4 Box 205 Antreville, SC Abbeville County #12335 |

Lab Use Only — Custody Seal: ❒ Yes ❒ No ❒ N/A — K K Billing — On Ice Slub — Init Lab Temp. — Rec. Lab Temp

COMMENTS: Rec 1-1L(g) unpres. / 2-40ml(g) w/HCL 477-2170-760

| Relinquished By: | Date | Time | Received By: | Date | Time | Lab Use Only: |
|---|---|---|---|---|---|---|
| Tom Martin | | | SWBaker | 6/2/97 | 16:25 | |
| SWBaker | 6/2/97 | 16:54 | Enviro-Test | 6/3/97 | 1000 | |
| | Date | Time | Received By: | Date | Time | |
| Relinquished By: | Date | Time | Received By: | Date | Time | |

Abbeville

**If you are the owner of the former or existing underground storage tanks and the property owner, please complete this form.**

## PERMISSION FORM - SITE ID #12335

I, HAROLD FRANKLIN CRAWFORD, certify that I am the legal owner of the underground storage tanks and property located at the facility identified below or serve as the authorized representative for the owner. I grant permission to the South Carolina Department of Health and Environmental Control (SCDHEC) to secure on my behalf services of a contractor for only the activities outlined in the November 27, 1996 letter and authorize SCDHEC, or a contractor selected by SCDHEC, to enter this property at reasonable times only to accomplish these tasks. The contractor will be designated as my contractor for only the site rehabilitation activities outlined therein. Compensation to the contractor will be from the SUPERB Account and I will have no obligation to pay the contractor. I understand that SCDHEC shall be responsible for notifying me of all activities that are necessary prior to their initiation and shall promptly provide to me a summary of the data upon request.

Name of Facility Crawford's Country Store Phone # 864-348-7442

Street Address of Facility ROUTE # 4 BOX 205

Town, City, District, Suburb ABBEVILLE, SC 29620

Name of nearest intersecting street, road, highway, alley
INTERSECTION OF HIGHWAY 28 and 184

Is this facility within the city limits? (yes or no) NO

Is this facility serviced by a public water or sewer utility? (yes or no) NO, if no, please provide the name and phone number of a person that we can contact that can assist in the location of private water and septic tank lines HAROLD FRANKLIN CRAWFORD, phone number 864-446-2000

Were underground storage tanks previously removed from the ground at this facility? (yes or no) YES, if yes, please provide the name of a person we can contact that can assist in the location of the former underground storage tank excavation HAROLD FRANKLIN CRAWFORD, Phone number 864-446-2000

Is the property currently leased or rented to someone? (yes or no) NO, if yes, please provide their name _____ and phone number _____ and let them know about the pending assessment activities. If vehicles or other mobile structures are parked over the former or existing underground storage tanks, they should be moved before SCDHEC's contractor gets to the site.

NAME of UST/property owner (Please Print): HAROLD FRANKLIN CRAWFORD

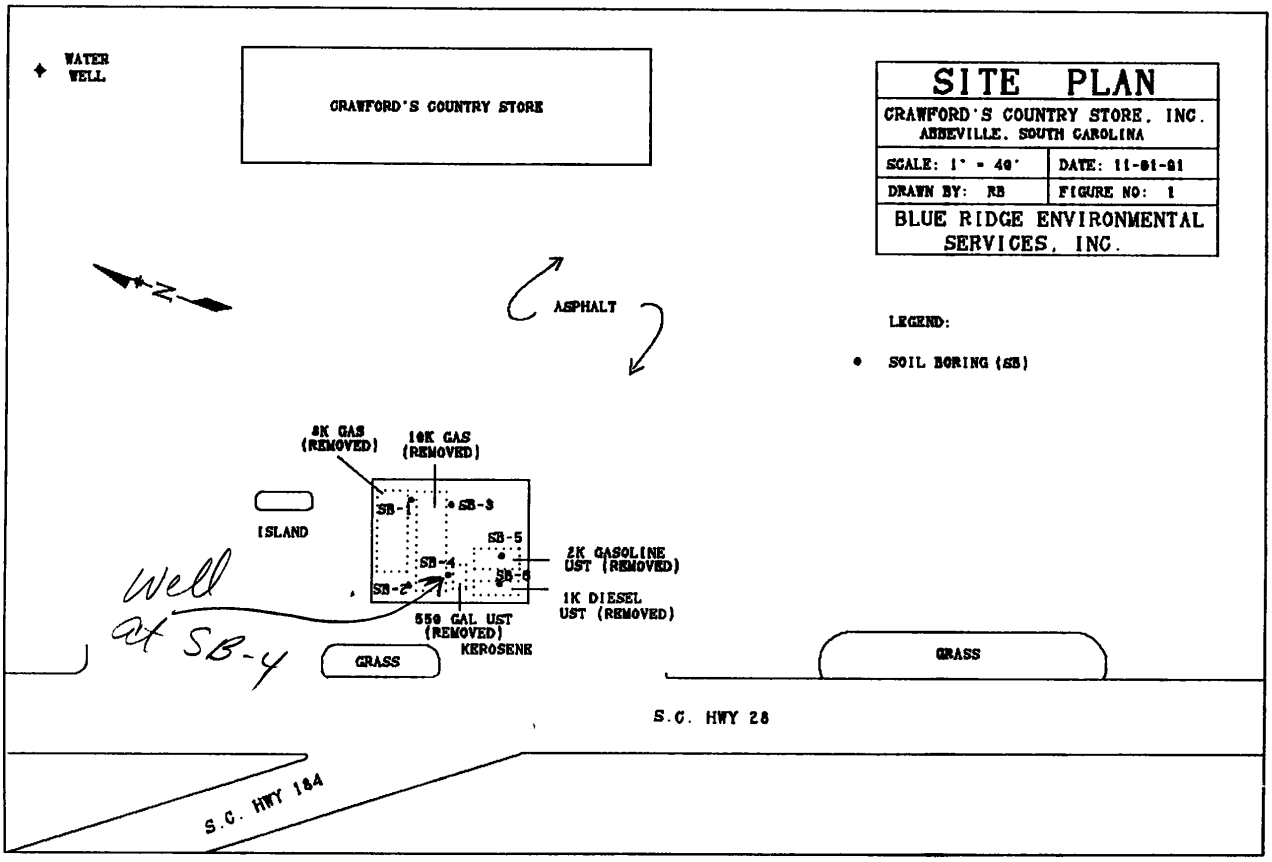
Phone Number (home) 864-446-2000 (work) 864-348-7442

Signature of UST/property Owner: Harold Franklin Crawford

Witness: Sam W Allen

Date: 12 Month 6 Day 1996 Year

RECEIVED
DEC 09 1996
Bureau of Underground Storage Tank Management


WATER WELL
CRAWFORD'S COUNTRY STORE
SITE PLAN
CRAWFORD'S COUNTRY STORE, INC.
ABBEVILLE, SOUTH CAROLINA
SCALE: 1" = 40'
DATE: 11-01-91
DRAWN BY: RB
FIGURE NO: 1
BLUE RIDGE ENVIRONMENTAL SERVICES, INC.
N
ASPHALT
LEGEND:
SOIL BORING (SB)
8K GAS (REMOVED)
10K GAS (REMOVED)
SB-1
SB-3
SB-5
SB-4
SB-6
SB-2
ISLAND
2K GASOLINE UST (REMOVED)
1K DIESEL UST (REMOVED)
550 GAL UST (REMOVED) KEROSENE
Well at SB-4
GRASS
GRASS
S.C. HWY 28
S.C. HWY 184

## 3.0 Discussion of Laboratory Results

All soil samples obtained during the course of UST closure field activities were submitted to a state certified laboratory for analysis. The soil samples were analyzed using EPA Method 8020, 5030 and 8100. Refer to Table 1, below, for a select summary of the soils laboratory analysis results.

**Table 1**

Select Summary of Laboratory Results: Soils

| Sample ID # | Benzene* | Toluene* | Ethyl-benzene* | Xylenes* | TPH^ | Naphthalene* |
|---|---|---|---|---|---|---|
| # 1 | BDL | 57 | 148 | 299 | 18 | NA |
| 2 | 5278 | 8116 | 28527 | 30214 | 1819 | NA |
| 3 | 1663 | 6598 | 20104 | 26144 | 1379 | NA |
| 4 | 3507 | 7099 | 21078 | 24848 | 1469 | NA |
| 5 | 246 | 532 | 286 | 1647 | 82 | BDL |
| 6 | 6155 | 8940 | 29938 | 29552 | 1794 | NA |
| SS # 1 | BDL | 99 | 742 | 1461 | 113 | BDL |
| 2 | 12 | 83 | 299 | 815 | 51 | BDL |
| 3 | 27 | 58 | 154 | 353 | 34 | BDL |
| 4 | 69 | 174 | 393 | 1057 | 90 | BDL |
| 5 | BDL | BDL | 28 | 68 | 8 | BDL |
| 6 | BDL | 44 | 214 | 484 | 44 | BDL |
| 7 | BDL | 00.21 | 769 | 1413 | 109 | BDL |
| 8 | 25 | 61 | 0 .99 | 362 | 36 | BDL |
| 9 | BDL | 16 | 256 | 647 | 68 | BDL |
| 10 | BDL | 39 | 350 | 619 | 68 | BDL |

Notes:

NA - Not Analyzed
BDL - Below Detection Limit
* - parts per billion
^ - parts per million

Complete laboratory results and the associated Chain-of-Custody record for the soil samples listed in Table 1 can be located in Appendix A. Refer to Figures 1 and 2 for the sample locations.

**Bold Research Labs**
Incorporated
ANALYTICAL TESTING & CONSULTING SERVICES
P.O. BOX 31486 • CHARLOTTE, NC 28231 • TELEPHONE (704) 527-4183 • FAX: (704) 525-0409



| | | | |
|---|---|---|---|
| BTEX (continued): | | | |
| BENZENE | ug/kg | 5278 | 100 |
| TOLUENE | ug/kg | 8116 | 100 |
| ETHYLBENZENE | ug/kg | 28527 | 100 |
| XYLENE | ug/kg | 30214 | 100 |
| EPA METHOD 5030, GC FID | | done | |
| PETROLEUM HYDROCARBONS, #5030 | mg/kg | 1819. | 1. |

Comments:
PO # 10039
PROJ NAME: CRAWFORD'S COUNTRY STORE
12.5'

**Customer Code: BLUERIDG** Phone Number: (704)482-2111/fax(704)482-4335
**LAB I.D. AA08675** Bold ID Number 627H1-16 Bold Customer Number 5-6771
Collection Date: 10/30/91
Submittal Date: 11/01/91 Submittal Time: 15:41
Customer Sample I.D#: #3

| TEST PARAMETER | UNITS | TEST RESULT | DETECTION LIMIT |
|---|---|---|---|
| Multicomponent analysis: BTEX | | | |
| BENZENE | ug/kg | 1663 | 100 |
| TOLUENE | ug/kg | 6598 | 100 |
| ETHYLBENZENE | ug/kg | 20104 | 100 |
| XYLENE | ug/kg | 26144 | 100 |
| EPA METHOD 5030, GC FID | | done | |
| PETROLEUM HYDROCARBONS, #5030 | mg/kg | 1379. | 1. |

Comments:
PO # 10039
PROJ NAME: CRAWFORD'S COUNTRY STORE
12.5'

**Customer Code: BLUERIDG** Phone Number: (704)482-2111/fax(704)482-4335
**LAB I.D. AA08676** Bold ID Number 627H1-16 Bold Customer Number 5-6771
Collection Date: 10/30/91
Submittal Date: 11/01/91 Submittal Time: 15:41
Customer Sample I.D#: #4

| TEST PARAMETER | UNITS | TEST RESULT | DETECTION LIMIT |
|---|---|---|---|
| Multicomponent analysis: BTEX | | | |

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Blue Ridge Environmental Serv.
Page: 3
November 25, 1991

| | | | |
|---|---|---|---|
| BTEX (continued): | | | |
| BENZENE | ug/kg | 3507 | 100 |
| TOLUENE | ug/kg | 7099 | 100 |
| ETHYLBENZENE | ug/kg | 21078 | 100 |
| XYLENE | ug/kg | 24848 | 100 |
| EPA METHOD 5030, GC FID | | done | |
| PETROLEUM HYDROCARBONS, #5030 | mg/kg | 1469. | 1. |

Comments:
PO # 10039
PROJ NAME: CRAWFORD'S COUNTRY STORE
12.5'

**Customer Code: BLUERIDG** Phone Number: (704)482-2111/fax(704)482-4335
**LAB I.D. AA08677** Bold ID Number 827Hi-16 Bold Customer Number 5-6771
Collection Date: 10/30/91
Submittal Date: 11/01/91 Submittal Time: 15:41
Customer Sample I.D#: #5

| TEST PARAMETER | UNITS | TEST RESULT | DETECTION LIMIT |
|---|---|---|---|
| Multicomponent analysis: BTEX | | | |
| BENZENE | ug/kg | 246 | 10 |
| TOLUENE | ug/kg | 532 | 10 |
| ETHYLBENZENE | ug/kg | 286 | 10 |
| XYLENE | ug/kg | 1647 | 10 |
| EPA METHOD 5030, GC FID | | done | |
| PETROLEUM HYDROCARBONS, #5030 | mg/kg | 82. | 1. |
| Multicomponent analysis: POLYNUCLEAR AROMATIC HYDROCARBON | | | |
| ACENAPHTHENE | ug/kg | Not Det | 100 |
| ACENAPHTHYLENE | ug/kg | Not Det | 100 |
| ANTHRACENE | ug/kg | Not Det | 100 |
| BENZO(a)ANTHRACENE | ug/kg | Not Det | 100 |
| BENZO(a)PYRENE | ug/kg | Not Det | 100 |
| BENZO(b)FLUORANTHRENE | ug/kg | Not Det | 100 |
| BENZO(ghi)PERYLENE | ug/kg | Not Det | 100 |
| BENZO(k)FLUORANTHENE | ug/kg | Not Det | 100 |
| CHRYSENE | ug/kg | Not Det | 100 |
| DIBENZO(a,h)ANTHRACENE | ug/kg | Not Det | 100 |
| FLUORANTHENE | ug/kg | Not Det | 100 |
| FLUORENE | ug/kg | Not Det | 100 |
| INDENO(1,2,3-cd)PYRENE | ug/kg | Not Det | 100 |
| NAPHTHALENE | ug/kg | Not Det | 100 |
| PHENANTHRENE | ug/kg | Not Det | 100 |

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| | | | |
|---|---|---|---|
| POLYNUCLEAR AROMATIC HYDROCARBON (continued): | | | |
| PYRENE | ug/kg | Not Det | 100 |
| EPA METHOD 8270, GCMS | | done | |

Comments:
PO # 10039
PROJ NAME: CRAWFORD'S COUNTRY STORE
12.5'

**Customer Code: BLUERIDG** Phone Number: (704)482-2111/fax(704)482-4335
**LAB I.D. AA08678** Bold ID Number 627H1-16 Bold Customer Number 5-6771
Collection Date: 10/30/91
Submittal Date: 11/01/91 Submittal Time: 15:41
Customer Sample I.D#: #6

| TEST PARAMETER | UNITS | TEST RESULT | DETECTION LIMIT |
|---|---|---|---|
| Multicomponent analysis: BTEX | | | |
| BENZENE | ug/kg | 6155 | 100 |
| TOLUENE | ug/kg | 8940 | 100 |
| ETHYLBENZENE | ug/kg | 29938 | 100 |
| XYLENE | ug/kg | 29552 | 100 |
| EPA METHOD 5030, GC FID | | done | |
| PETROLEUM HYDROCARBONS, #5030 | mg/kg | 1794. | 1. |
| Multicomponent analysis: POLYNUCLEAR AROMATIC HYDROCARBON | | | |
| ACENAPHTHENE | ug/kg | Not Det | 1000 |
| ACENAPHTHYLENE | ug/kg | Not Det | 1000 |
| ANTHRACENE | ug/kg | Not Det | 1000 |
| BENZO(a)ANTHRACENE | ug/kg | Not Det | 1000 |
| BENZO(a)PYRENE | ug/kg | Not Det | 1000 |
| BENZO(b)FLUORANTHRENE | ug/kg | Not Det | 1000 |
| BENZO(ghi)PERYLENE | ug/kg | Not Det | 1000 |
| BENZO(k)FLUORANTHENE | ug/kg | Not Det | 1000 |
| CHRYSENE | ug/kg | Not Det | 1000 |
| DIBENZO(a,h)ANTHRACENE | ug/kg | Not Det | 1000 |
| FLUORANTHENE | ug/kg | Not Det | 1000 |
| FLUORENE | ug/kg | Not Det | 1000 |
| INDENO(1,2,3-cd)PYRENE | ug/kg | Not Det | 1000 |
| NAPHTHALENE | ug/kg | 10017 | 1000 |
| PHENANTHRENE | ug/kg | Not Det | 1000 |
| PYRENE | ug/kg | Not Det | 1000 |
| EPA METHOD 8270, GCMS | | done | |

## MONITOR WELL LOCATIONS & ELEVATIONS

| OBJECT | BLDG. CORNER | BEARING & DISTANCE | ELEVATIONS TOP GROUND | ELEVATIONS TOP CASING |
|---|---|---|---|---|
| OMW-1 | "A" | N 53°11'36"W 59.40' | 100.06 | 99.82 |
| MW-2 | "A" | N 63°11'59"W 51.27' | 100.02 | 99.83 |
| MW-3 | "A" | N 59°32'03"W 67.19' | 100.20 | 99.98 |
| MW-4 | "A" | S 76°20'50"W 27.15' | 99.82 | 99.59 |
| MW-5 | "B" | S 02°51'24"W 52.47' | 99.60 | 99.42 |
| MW-6 | "B" | S 36°05'33"W 33.04' | 99.65 | 99.47 |
| MW-7 | "B" | N 31°46'12"E 18.25' | 99.73 | 99.47 |
| MW-8 | "B" | N 58°37'13"W 105.69' | 102.67 | 102.42 |
| MW-9 | "B" | S 42°10'56"W 97.85' | 100.68 | 100.53 |
| MW-10 | "A" | S 88°05'05"W 67.52' | 99.89 | 99.65 |
| MW-11 | "A" | S 12°15'00"W 166.79' | 96.73 | 96.47 |
| MW-12 | "A" | S 37°13'43"E 46.25' | 99.15 | 98.63 |
| MW-13 | "A" | S 25°42'17"E 130.02' | 101.05 | 100.80 |
| MW-14 | "C" | S 29°23'07"E 123.45' | 89.53 | 89.38 |
| MW-15 | "C" | S 61°50'51"E 155.52' | 87.57 | 87.33 |
| MW-16 | "C" | N 70°00'14"E 94.61' | 94.16 | 93.74 |
| MW-17 | "A" | N 71°58'45"W 60.07' | 100.19 | 100.08 |
| WW-"D" | "A" | S 33°13'50"E 228.94' | | |
| WW-"E" | "A" | S 32°07'42"E 228.39' | | |
| WW-"F" | "C" | N 14°03'22"W 53.91' | | |
| WW-"G" | "C" | N 08°59'43"W 52.17' | | |
| MW-1 TO MW-3 | | S 81°38'42"W 10.46' | | |
| MW-3 TO MW-9 | | N 46°41'12"W 33.92' | | |
| MW-9 TO MW-5 | | N 72°19'42"E 66.21' | | |
| MW-5 TO MW-6 | | N 33°14'20"W 30.74' | | |
| MW-6 TO MW-8 | | N 40°53'20"W 108.12' | | |
| MW-8 TO MW-7 | | S 68°24'16"E 107.38' | | |
| MW-7 TO WW-"G" | | N 16°45'37"E 42.88' | | |
| WW-"G" TO MW-16 | | S 78°49'17"E 98.94' | | |
| MW-16 TO MW-15 | | S 24°30'47"E 116.20' | | |
| MW-15 TO MW-14 | | S 65°55'39"W 83.83' | | |
| MW-14 TO MW-12 | | S 35°33'29"W 78.83' | | |
| MW-12 TO MW-13 | | S 19°28'50"E 85.21' | | |
| MW-13 TO WW-"D" | | S 42°53'28"E 101.48' | | |
| WW-"D" TO MW-11 | | N 79°56'59"W 163.36' | | |
| MW-11 TO MW-4 | | N 03°17'30"E 156.84' | | |
| MW-4 TO MW-10 | | N 84°13'53"W 41.31' | | |
| MW-10 TO DMW-17 | | N 26°25'47"E 23.27' | | |
| DMW-17 TO MW-2 | | N 68°15'13"E 12.23' | | |
| MW-2 TO MW-1 | | N 08°11'32"W 12.60' | | |

SITE MAP PREPARED FOR

**CRAWFORD'S**

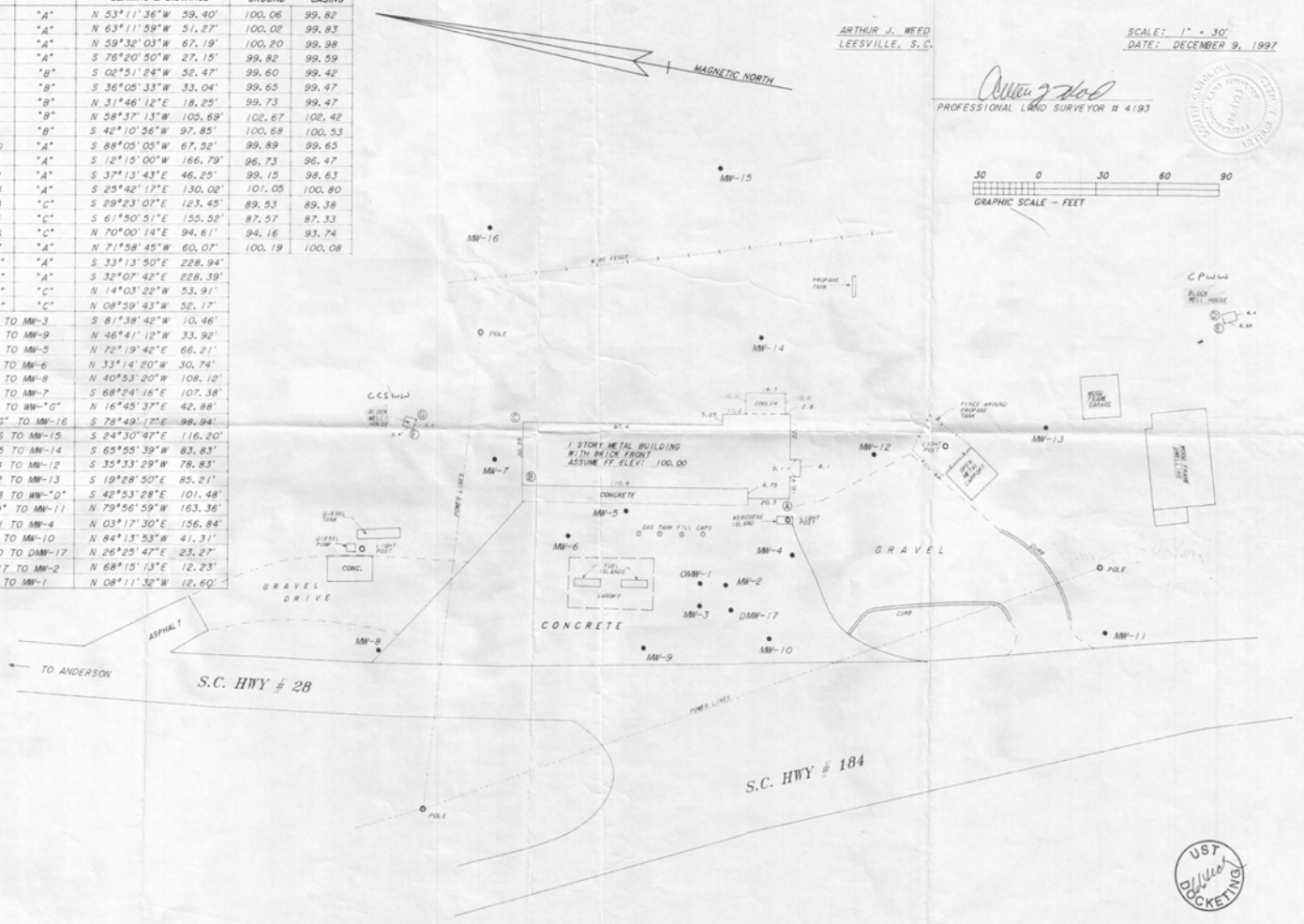
LOCATED NEAR ANTREVILLE, S.C.
ABBEVILLE COUNTY

ARTHUR J. WEED
LEESVILLE, S.C.

SCALE: 1" = 30'
DATE: DECEMBER 9, 1997

PROFESSIONAL LAND SURVEYOR # 4193

30 0 30 60 90
GRAPHIC SCALE - FEET




UST DOCKETING

299-23

12335

RECEIVED
JAN 09 1998
Bureau of Underground
Storage Tank Management

# State-Lead
# Rapid Assessment Report
# Crawford's Country Store
# Site ID #12335
# Abbeville County, South Carolina

*January, 1998*

UST DOCKETING 62Hech

*Prepared By:*
**Marshall Miller & Associates**
**P.O. Box 848**
**Bluefield, Virginia 24605**
**MM&A Project #A89128**

**Written by:**

David Wilson
**David Wilson**
**Environmental Scientist**

**Charles E. Cline**
**Senior Project Hydrogeologist**

**Reviewed by:**

Ronald H. Mullennex
**Ronald H. Mullennex, C.P.G., C.G.W.P.**
**Senior Vice President**

UST DOCKETING

MARSHALL MILLER & ASSOCIATES

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**APPENDIX I**

*Table 1 – Potentiometric Data*
*Table 2 – Field Screening Sample Points*
*Table 3 – Ground Water Monitoring Well Total Depths*
*Table 4 – Ground Water Field Screening PID Results (ppm)*
*Table 5 – Soil Analytical Results (mg/kg)*
*Table 6 – Ground Water Analytical Results (µg/L)*
*Table 7– Free Product Bail-Down Results*
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**APPENDIX II**

*Map 1 - Vicinity Map*
*Map 2 - Potential Receptors*
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# 1.0 INTRODUCTION

The Crawford's Country Store Site, SCDHEC Site # 12335, is a convenience store/gasoline retail facility. The site is located on the corner of S.C. Highway 28 and S.C. Highway 184, in Abbeville County, South Carolina. The site is depicted on the Antreville, South Carolina, 7.5-minute quadrangle U.S. Geological Survey topographic map. In November, 1991, a Report of Suspected/Confirmed Release was filed with the South Carolina Department of Health and Environmental Control (DHEC) for the Crawford's Country Store Site, by Blue Ridge Environmental Services, Inc. Soil analytical data obtained during underground storage tank (UST) closure activities at the site indicated a petroleum hydrocarbon release had occurred. Five tanks were removed during the UST closure, which included: one 10,000-gallon gasoline, one 8,000-gallon gasoline, one 2,000-gallon gasoline, one 1,000-gallon diesel, and one 550-gallon kerosene tank. The tanks were replaced, within the site tank basin, with one 10,000-gallon and two 6,000-gallon gasoline tanks and one 6,000-gallon kerosene tank. There is also a 6,000-gallon diesel tank located northwest of the on-site building. In May, 1997, Enviro-Test Services, Inc., performed an Initial Groundwater Assessment, which revealed petroleum hydrocarbon impact to the ground water at the site.

In December, 1997, Marshall Miller & Associates (MM&A) performed a Rapid Assessment under state contract #SB-76499-08/29/96/MJN to further assess the site, as directed by DHEC. This Rapid Assessment Report (RAR) describes the work activities performed by MM&A.

## 1.1 Qualifying Statement

This report documents the results of the Rapid Assessment investigation conducted at the subject site under State Contract #SB-76499-08/19/96/MJN. Its intent is to summarize the results and findings of the investigation, and to provide recommendations regarding further investigative, monitoring, or remedial steps to be taken. The primary focus of the investigation and this report is to determine the degree and extent of contaminant impact that may pose a threat to human health and safety and/or the

environment, determine the potential migration pathways and potential receptors involved, and provide recommendations regarding remediation, monitoring, and/or further investigative efforts. Detailed presentation and discussion of methods and background is minimized, but all data are incorporated in tables, maps, and appendices.

The State Contract (#SB-76499-08/29/96-MJN) requirements and the "Risk-Based Corrective Action for Petroleum Releases" (January 5, 1998) guidance document were used to provide guidance on site assessment activities.

## 2.0 RECEPTOR SURVEY RESULTS

MM&A evaluated potential receptors within 1,000 feet of the site, which are depicted on *Map 2, Potential Receptors, Appendix II.* The potential receptors that were evaluated are as follows:

- Underground utilities
- Surface water drainage structures and features
- Underground stormwater drainage structures and features
- Potable water wells
- Buildings or structures.

### 2.1 Underground Utilities

Underground utilities that were identified during the potential receptor survey include telephone lines, gas lines, fiber optics, and a septic system. Electricity is supplied by overhead power lines, except for a few lines leading from the Crawford's Country Store to the pump islands.

Based on the Rapid Assessment results, it does not appear that any of these underground utilities are in direct contact with dissolved phase-contaminated ground water, or with residual soil contamination.

### 2.2 Surface Water Drainage Structures and Features

A small lake is located approximately 1,000 feet north of the site, which is hydrologically upgradient of the site.

### 2.3 Underground Storm Water Drainage Structures and Features

One drop inlet drain was identified in close proximity to the northwest corner of the Crawford's Country Store building which appeared to be designed to direct water away from the site in the northwest direction, toward a topographically lower area (see *Map 2, Appendix II*). The discharge location was not known by the property owner. At the time of this Rapid Assessment no water was identified in the drain, thus no sample was procured. Volatile Organic Compounds (VOCs) were not identified when the drop inlet was screened with a PID.

### 2.4 Potable Water Supply Wells

Several residences and commercial facilities are located within 1,000 feet of the site all of which are reported to have water wells. However, only three water wells were determined to be on-site or downgradient of the Crawford's Country Store. One water well, the Crawford's Country Store water well (CLSWW), is located on-site, approximately 170 feet hydraulically upgradient of monitoring well MW-2, located near the former UST basin. A second potable water well, the Crawford Property water well (CPWW), is located approximately 275 feet downgradient of MW-2 (see *Map 2, Appendix II* for location). At the time of the field investigation, well CPWW was not being utilized and the residence it supplies (owned by Mr. Crawford) was unoccupied. The third downgradient water well is located at the Jerry McCullough residence (803-348-7040), situated approximately 1,000 feet downgradient of the site.

### 2.5 Buildings or Structures

Two buildings are located within 250 feet of the former UST basin where the highest COC concentrations where observed. One building, the Crawford's Country Store, appears to be located above the region of apparent ground water contamination and could present an exposure point for vapor inhalation due to COC volatilization from contaminated ground water. The second building is the Crawford residence, which is located approximately 250 feet downgradient of the former UST basin and does not appear to be located directly above the area of highest soil or ground water impact. At the time of the assessment, the Crawford residence was unoccupied.

## 3.0 ASSESSMENT INFORMATION

### 3.1 Regional Geology and Hydrogeology

The subject site lies in the western Piedmont geologic province of South Carolina. Bedrock strata in the area are igneous and metamorphic assemblages of gneisses, schists, amphibolites, and intrusive granitoids, lying in composite stackings of thrust sheets of the Inner Piedmont belt. Unconsolidated sediments which mantle the bedrock form a relatively thin veneer, formed from weathering of the parent bedrock material (saprolite) and from recent re-working of colluvial deposits originally derived from the parent igneous and metamorphic rocks.

In general, the near surface aquifer system within the vicinity consists of antochthonous and colluvial sediments consisting of a variety of lithologies from predominately fine to medium sands. Shallow ground water discharge is towards the south-southeast. Spur Creek is the principal drainage feature within the site vicinity, and flows southeasterly and is located approximately 2,000 feet southeast of the site.

### 3.2 Site-Specific Soils, Geology, and Hydrogeology

The description of the site-specific soils, geology, and hydrogeology at the site is based on lithologic observations, and sieve and hydrometer analyses associated with the 13 soil borings conducted by MM&A. Results of these observations and analyses indicate that:

- The lithology consists of fine- to medium-grained, consolidated sandy clay down to a depth of approximately 65 feet below ground surface. At that depth, competent bedrock was encountered in boring DMW-17, the only boring which was taken to such depth as to encounter the bedrock. Sieve and hydrometer analyses of two soil samples obtained from soil borings SB-1 (at a depth of 24 feet below ground surface) and SB-2 (at a depth of 12 feet below ground surface) showed the following results:

    - 36.6% of the shallow sample (depth of 12 feet) passed the No. 200 sieve. This indicates that 36.6% of the soil particles are silt- and clay-sized, and 63.4% of the sample consists of sand- and/or gravel-sized particles.
    - 50.8% of the deeper sample (depth of 24 feet) passed the No. 200 sieve. This indicates that 50.8% of the soil particles are silt- and clay-sized, and 49.2% of the sample consists of sand- and/or gravel-sized particles.

## 4.0 FIELD ASSESSMENT METHODOLOGY

### 4.1 Soil Boring and Field Screening Points Installation and Sampling

MM&A installed 12 soil borings (SB–1 through SB-12) and 13 ground water field screening points (FS-13 through FS-25) to a maximum depth of 28 feet below ground surface, utilizing direct push technology (Geoprobe®). The locations of these soil borings and field screening points are indicated on *Map 3, Soil Boring, Field Screening and Monitoring Well Locations, Appendix II.*

### 4.1.1 Soil Borings

The soil boring samples were collected utilizing a decontaminated two-inch diameter, stainless steel barrel with expendable acetate liners. Continuous cores were collected following penetration of any asphalt and/or concrete. All of the soil borings were evaluated for indications of petroleum staining and/or odors, and lithologically logged using ASTM D2488-84, "Standard Practices for Description and Identification of Soils (Visual-Manual Procedures)."

A portion of each soil sample was placed into laboratory-supplied glassware following QA/QC protocols, and then placed into a cooler with ice and Chain-of-Custody forms for shipment to the approved analytical laboratory. A second portion of the field screening soil sample was placed into a Zip-Lock ® type bag, broken apart, and placed in the sun to enhance volatilization. After approximately 15 minutes, the headspace of each soil sample was screened for the presence of volatile organic compounds (VOCs) with a photoionization detector (PID). The PID was calibrated daily with 100 parts per million (ppm) isobutylene and air. All PID readings and field observations were recorded (see *Soil Boring Logs, Appendix III).* The PID readings for the saturated soils at the bottom of the soil borings were used in conjunction with additional ground water field screening points to determine the most appropriate locations for the permanent ground water monitoring wells.

### 4.1.2 Ground Water Field Screening Points

In addition to field screening of saturated soils, ground water samples were collected from each of ten field screening locations, in order to qualitatively delineate the extent of ground water contamination and provide a basis for selection of monitoring wells locations. Each sample was collected using a four feet long Geoprobe® stainless steel ground water sampling device, or through a one-inch diameter temporary monitoring well and a single-use, 0.5-inch polyethylene tubing with a decontaminated stainless steel check valve. Each ground water sample was placed into a Zip-Lock® type bag and the headspace of each sample was screened, within two minutes of collection, for the presence of VOCs with a PID (see *Table 4, Appendix I, Ground Water Field Screening PID Results).*

All drilling and sampling equipment was steam cleaned and/or cleaned with an industrial grade detergent (Alconox®) prior to use at each of the boring locations to minimize the potential for cross-boring contamination, and between each sampling interval. *Table 2, Appendix I, Soil Boring/Field Screening Total Depths,* identifies the total depth of each soil boring and field screening point.

### 4.2 Monitoring Well Installation

Fifteen shallow permanent ground water monitoring wells (designated MW-2 through MW-16) and one deeper, telescoping ground water monitoring well (DMW-17) were installed at the site in accordance with the June 2, 1985, South Carolina Well Standards and Regulations, and under the supervision of American Environmental Drilling Service, Inc., South Carolina Certified Well Driller No. 1152. A drilling rig equipped with 4.25-inch inside diameter hollow stem augers (HSA) was used to install the wells. Ground water monitoring well construction details are provided in *Appendix IV.*

All wells installed during this Rapid Assessment were constructed using two-inch diameter, flush-threaded, PVC well casings and 10 feet of No. 10 (0.010-inch) slot screens. Each well received a well-sorted, medium-grained, silica sand pack. Each sand pack extended approximately two feet above the top of the screen. Approximately two feet of bentonite was placed in the boreholes above the sand pack and hydrated. The remainder of the borehole annulus was filled with cement grout, and flush-mounted steel protective casings were set in the grout to protect the PVC well casing. To complete each well, a PVC cap was placed on the PVC well casing and locked.

A drilling rig capable of performing air and mud rotary was used to install one telescoping permanent ground water monitoring well, DMW-17, to delineate the vertical extent of dissolved phase impacted ground water. The telescoping well was constructed by installing a six-inch diameter PVC outer casing to a depth of 65 feet below ground surface (to the top of the bedrock surface), and grouting it into place. The following day, the boring was advanced an additional 10 feet below the base of the six-inch diameter casing. A five feet length of two-inch diameter, 0.010-inch slot well screen was installed from 70 to 75 feet below ground surface. A sand filter pack was emplaced extending approximately five feet above the top of the screen, creating an effective screened interval from 65 to 75 feet below ground surface. The total depths of the ground water

monitoring wells are presented in *Table 3, Appendix I, Ground Water Monitoring Well Total Depths.*

### 4.3 Permanent Ground Water Monitoring Well Sampling

The ground water sampling data were recorded on water sampling forms (see *Appendix III*). After measuring the depth to ground water, the wells were properly developed by evacuating a minimum of three well volumes or until pH, temperature and specific conductivity measurements stabilized. Water generated from the wells during well development and sampling was transported and treated off-site at Carolina Bio-Services Inc., Orangeburg, SC.

The ground water samples were collected in a manner such as to minimize the potential to alter or to contaminate the sample during collection or introduction into the sample containers. The ground water sample collection procedures and field measurements were conducted in accordance with accepted US EPA and DHEC protocols. Sampling personnel wore new, laboratory-quality latex gloves during all sample collection activities; at a minimum, the gloves were replaced prior to sampling each well. The filled sample containers, which were provided by the laboratory, were placed immediately into a clean sample cooler and covered with ice packs.

The ground water samples remained in the custody of MM&A sampling personnel throughout the collection process. MM&A personnel transported the ground water samples directly to the laboratory. This transaction is documented on the Chain-of-Custody Record (*Appendix V*).

## 5.0 HYDROGEOLOGIC PARAMETERS

### 5.1 Potentiometric Surface

The top of each permanent ground water monitoring well casing and the ground level elevation were surveyed relative to an arbitrary benchmark of 100 feet during a comprehensive site survey conducted by Arthur J. Weed, South Carolina Professional Surveyor Number 4193. The northern edge of each well casing was marked with a permanent indelible marker as a referenced point. All potentiometric ground water levels

were measured in relation to this surveyed reference point. The depth to ground water was measured to the nearest 0.01 feet using a decontaminated interface probe, and was found on December 1, 1997, to range from 5.1 feet to 21.05 feet below surface grade. The presence or absence of free product was determined by the interface probe. The potentiometric data are depicted on *Map 4, Appendix II, Potentiometric Surface of Upper Unconfined Horizon,* and are summarized in *Table 1, Appendix I, Potentiometric Data.*

### 5.2 Hydraulic Gradient

#### 5.2.1 Horizontal Gradient

The horizontal hydraulic gradient (i) is the difference in the hydraulic head between two potentiometric lines, divided by the differences at right angles between the two potentiometric lines. The hydraulic gradient in the area of ground water impact at the site, in the upper unconfined aquifer horizon, was calculated to be approximately 0.0229 feet per feet (2.29%), as measured on December 1, 1997. Ground water flow lines indicate that the direction of flow is to the south-southeast.

#### 5.2.2 Vertical Gradient

An upward vertical gradient was calculated between the upper and lower aquifer horizons. On December 1, 1997, the ground water elevation in the telescoping permanent ground water monitoring well, DMW-17, was 84.55 feet, and ground water elevation in the adjacent shallow monitoring well, MW-2, was 82.40 feet. Therefore, the difference in the water level between the upper and lower aquifer horizons was 2.15 feet. The separation between the well screen midpoints of the wells is 55.0 feet. Therefore, dividing the difference in ground water elevations (2.15 feet) by the mid-point screen separation (55.0 feet) results in a calculated upward vertical gradient of 0.0391 feet per feet (3.91%).

### 5.3 Hydraulic Conductivity

The hydraulic conductivity (K) is the rate at which water can move through an aquifer, or porous medium (Fetter, 1980). An "average" hydraulic conductivity for the upper unconfined horizon at the site has been estimated on the basis of performing slug tests on two shallow permanent ground water monitoring wells, MW-8 and MW-13. In

addition, a third slug test was performed on DMW-17, the telescoping well, to estimate the hydraulic conductivity at the deeper horizon. Each slug test was performed by quickly removing a volume of water from each well and measuring the rate of the recovery of the water level. The recovery data were plotted onto semi-log graph paper, and a best-fit line was imposed on the graphs. The hydraulic conductivity (K) was calculated by the following formula (Hvorslev, 1951);

$$K = \frac{r^2 \ln (L/R)}{2 L To}$$

| | | |
|---|---|---|
| $K$ | = | Hydraulic conductivity |
| ln | = | natural logarithm |
| *r | = | effective radius of screened interval |
| To | = | basis lag time |
| R | = | radius of boring |
| $L$ | = | length of saturated screened interval |

The slug test data are included in this report in *Appendix VII.* The following conductivity values were calculated for each well:

| Well | Hydraulic Conductivity |
|---|---|
| MW-8 | 1.137 ft/day |
| MW-13 | 5.200 ft/day |
| DMW-17* | 1.499 ft/day* |
| Arithmetic average of MW-8 and MW-13 | 3.169 ft/day |

*Telescoping well results are not applicable to upper horizon hydraulic conductivity calculations.

### 5.4 Average Linear Velocity

The average linear velocity (V) of ground water flow is the calculated rate of movement of ground water through an aquifer. The average linear velocity equation utilizes the following parameters:

- Calculated "average" value for the hydraulic conductivity (K), estimated to be 3.169 feet per year.
- Calculated value for the hydraulic gradient (i), 0.0229 feet per feet.
- Estimated effective porosity ($n_e$), 0.46

The effective porosity of the unconfined upper aquifer at the site was estimated based on the procedures outlined in the DHEC Risk-Based Corrective Action for Petroleum Releases as presented in *Appendix B, Figure 4* of that document, and the grain size/hydrometer data (see *Appendix V*). Based on these procedures and data, the effective porosity in the ground water zone was estimated to be 0.46 (46.0%).

The average linear velocity is calculated using the following equation:

$$V = \left( \frac{(3.169)(0.0229)}{0.46} = 0.1578 \text{ ft/d or } 57.58 \text{ ft/yr} \right)$$

The SCDHEC "Summary of Slug Test" data form, which summarizes the data for MW-8, MW-13, and DMW-17 is shown on the following page.

# SUMMARY OF SLUG TEST

**SOUTH CAROLINA**
**Department of Health and Environmental Control (DHEC)**

**Site Data**

Site ID: #12335 County: Abbeville
Facility Name: Crawford's Country Store

**Slug Data**

See Appendix III Table _____ Figure _____ for a list of all data measurements.(water level logs, etc.) (Complete as appropriate)
Water Level Recovery Data was measured by manually with water level indicator. (Hermit Data Logger, Manually with Water Level Indicator, etc.) (List Method).
Complete the following table for each well tested.
COMPLETE A SECOND SHEET IF MORE THAN FOUR WELLS ARE TESTED

| Slug Test Conducted in well(s) number | MW-8 | MW-13 | DMW-17 Type III |
|---|---|---|---|
| Initial Rise/Drawdown in well (feet) | 3.57 | 1.55 | 3.17 |
| Radius of Well Casing (feet) | 0.083 | 0.083 | 0.083 |
| Effective Radius of Well (feet) | 0.217 | 0.217 | 0.217 |
| Static Saturated Aquifer Thickness (feet) | NA | NA | NA |
| Length of Well Screen (feet) | 15 | 15 | 10 |
| Static Height of Water Column in Well (ft) | 12.47 | 3.95 | 10 |

**Calculations**

See Appendix VII Table _____ Figure ____ for calculations. (*Complete as appropriate*)
The method for aquifer calculations was Hvorslev (*i.e. Bouwer-Rice, Cooper, etc.*)
Calculated values by well were as follows:

| Slug Test Conducted in well(s) number | MW-8 | MW-13 | DMW-17 |
|---|---|---|---|
| Hydraulic Conductivity | 1.137 | 5.200 | 1.499 |

Thickness of the aquifer used to calculate hydraulic conductivity was _____ feet.
The aquifer is _____ confined _____ semi-confined X _____ water table (*Check as appropriate*).
The estimated seepage velocity is 57.58 feet per year based on a hydraulic conductivity of 3.169 ft/day (avg.), a hydraulic gradient of 2.29% , and a porosity of 46 percent for sandy clay soil (*list type, i.e., silty sand, clay, etc.*).

# SUMMARY OF SLUG TEST

# 6.0 ASSESSMENT RESULTS

## 6.1 Ground Water Field Screening Results

The PID results for ground water field screening points are summarized in *Table 4, Appendix I, Ground Water Field Screening PID Results.*

The ground water field screening data were utilized to identify areas of potential impact, and to identify the most appropriate locations for the placement of the permanent ground water monitoring wells. The saturated soil and ground water field screening locations where PID concentrations were greater than 20.0 ppm (calibration gas units) are depicted on *Map 5, Appendix II, Ground Water Field Screening* (prepared prior to installation eight (8) monitoring wells, and used as guidance in selection of well locations).

## 6.2 Soil Analytical Results

The laboratory analytical results from the soil borings are summarized in *Table 5, Appendix I, Soil Analytical Results (mg/kg).* Concentrations of chemicals of concern (COC) that exceed the Tier I South Carolina Risk Based Screening Levels (RBSLs) are highlighted.

The analytical results were compared to the Tier I RBSLs look-up table (DHEC Risk Based Corrective Action for Petroleum Releases, January, 1998) for sandy soil. Based on this comparison, benzene, and toluene, ethylbenzene, total xylenes, and naphthalene were present in concentrations greater than their RBSLs in the following soil borings:

- Benzene:

  SB-1, SB-5, and SB-7, at a depth of eight feet below ground surface.
  SB-4 at a depth of 12 feet below ground surface.

- Toluene and naphthalene:

  SB-4 at a depth of 12 feet below ground surface.
  SB-5 at a depth of eight feet below ground surface.

- Ethylbenzene and Total Xylenes:
  SB-4 at a depth of 12 feet below ground surface.

### 6.3 Free Product Results

Free product was identified and delineated in ground water monitoring wells OMW-1, MW-2, and MW-3 during the December, 1997, field work conducted by MM&A. However, free product was not detected in OMW-1 during the IGWA. The initial thickness measurements on December 1, 1997 indicated that there was 2.15 feet of free product in OMW-1, 0.01 foot in MW-2, and 0.1 foot in MW-3.

It should be noted that there are limitations associated with the accuracy of the results obtained by directly measuring the thickness of free product in monitoring wells. It is documented in the literature that the measured free product thickness in a monitoring well exceeds, sometimes by a large amount, the "true" thickness of hydrocarbon in the aquifer. Hughes, et. al. (1988) attributes this phenomenon to the interaction of capillary forces and buoyancy inside the monitoring well, and between the monitoring well and the formation. The interaction of these physical properties leads to an exaggerated depression of the water table downward in the monitoring well, which results in a greater thickness of hydrocarbon in the monitoring well than in the adjacent formation. Hughes, et. al (1988) notes that the upper elevation of the free product in a monitoring well will be equivalent to that of the free product in the formation; however, the base elevation of the free product in a monitoring well can be significantly lower than the base elevation of the free product in the formation. Hence, the exaggerated thickness.

Research has focused on developing a correlation between the free product thickness measured in monitoring wells, and the "true" free product thickness in the adjacent formation. However, none of the available methods developed to date have been found to generate predictable, reproducible results under either laboratory or field conditions, as noted in the USEPA publication, "*How to Effectively Recovery Free Product at Leaking Underground Storage Tanks: A Guide for State Regulators,*" USEPA document 510-R-96-001, published in 1996. The USEPA publication also identified

several limitations associated with the various methods developed to date that are being used to correlate the measured to the "true" free product thickness, which are as follows:

- The free product thickness measured in monitoring wells changes over time as the water table fluctuates.
- None of the methods account for residual petroleum hydrocarbons in the formation, and a portion of these hydrocarbons can contribute to the free product thickness in either the monitoring well or the formation as the potentiometric surface fluctuates.
- The methods that are based on the measurement of specific soil and fluid properties require field measurement of capillary pressure, pore water pressure, and water saturation that are difficult to accurately measure in the field. Furthermore, laboratory-developed values will typically not accurately represent field conditions.
- None of the methods account for the heterogeneity of aquifer parameters in the field. The movement of free product is a function of aquifer heterogeneities, which are rarely adequately represented by "average" properties.

Therefore, based on these limitations, the measured thickness of free product in permanent ground water monitoring wells should be considered to be representative of a "relative" value, and not a "true" value for the thickness of free product at Crawford's Country Store.

### 6.3.1 Free Product Bail-Down Results

Despite the limitations noted previously in Section 6.3, Wagner, et. al. (1988) and the USEPA (1996) note that either a pumping procedure or a bail-down procedure can be used to evaluate the free product thickness, and can yield results that are representative of a "true" free product thickness in the formation. MM&A used a bail-down procedure to evaluate free product thickness in monitoring well OMW-1. Wagner, et. al. (1988) notes that the quality of the data from the bail-down procedure is analogous to that from a "slug" test, and the procedure assumes the following:

- The hydrocarbon/water interface is above the potentiometric surface.
- The recharge rate of hydrocarbon into the well is "slow."

The bail-down method involves quickly bailing free product from a monitoring well until its thickness reaches an acceptable minimum thickness, which is defined as 0.1 foot to one foot by Wagner, et. al. (1988), and then measuring the upper elevation of the free product as it recharges. A free product bail-down test was performed on December 1, 1997. The field measurements for the free product bail-down tests are summarized in *Table 7, Appendix I, Free Phase Product Drawdown in OMW-1.*

Wagner, et. al. (1989) described the Yaniga and Demko method for evaluating bail-down test data. Wagner, et. al. (1989) indicated that this method could be used to provide an estimate of the "true" free product thickness; therefore, MM&A selected the Yaniga and Demko method to evaluate the bail-down test data. The Yaniga and Demko method involves plotting the field elevation data versus log time to generate a hydrocarbon-water curve. This curve is then visually evaluated to "fit" two straight lines, and the free product thickness at the intersection of those lines is assumed under the Yaniga and Demko method to be the "true" free product thickness. As depicted on *Graph 1, Appendix I,* the estimated free product thickness for OMW-1 is 0.60 feet.

### 6.3.2 Free Product Bail-Down Recovery Rate Estimates

Free product recovery measurements gathered from a bail-down test may also be used to estimate free product recovery rates which are necessary to properly design a free product recovery remediation system. The USEPA has identified a methodology to estimate the initial free product recovery rate from bail-down data that is applicable to skimming type recovery systems, as follows:

> Prepare a recovery time versus measured free product thickness table of the bail-down field data (*Table 8, Appendix I, Free Product Recovery Rate for OMW-1*).

- Multiply the maximum free product thickness recovery data times 80% (value in feet).
- Interpolate a recovery time value to the 80% maximum thickness value (value in minutes).
- Compute the gallons per foot of free product thickness in the well screen using the equation:

  $(\pi) \times (\text{well radius in ft})^2 \times (7.48\ \text{gal/ft}^3) = \text{gallons per foot.}$

- Compute average recovery rate to 80% recovery using the equation:
- (80% max. thickness) x (gallons per foot of free product thickness ÷ interpolated recovery time value) = gallons per minute or gal/day.

The USEPA publication notes that this method is most appropriate where the free product recharge rate is "slow" relative to the rate of ground water recharge. The USEPA defines "slow" as a matter of "a few minutes." Based on the referenced method, the free product recovery rate calculated for OMW-1 is approximately 6.12 gallons per day. The calculations are presented in *Table 8, Appendix I, Free Product Recovery Rate for OMW-1.*

### 6.4 Dissolved Phase Results

Seventeen permanent ground water monitoring wells and three potable water wells were sampled to evaluate the potential for dissolved phase hydrocarbon impact to ground water. [The farthest downgradient water (the Jerry McCullough water well) analytical results are not included but will be provided under separate cover when available]. The analytical results are summarized in *Table 6, Appendix I, Water Analytical Results (µg/L),* for the December 1, 1997, sampling event. Several hydrocarbon constituents were detected above their Tier I RBSL concentrations for ground water, and are highlighted on *Table 6.*

The isoconcentration maps of dissolved phase hydrocarbon impact in ground water are found in *Appendix II*, for the following constituents:

- *Benzene Concentrations in Ground Water in Upper Unconfined Horizon, Map 7.*
- *Toluene Concentrations in Ground Water in Upper Unconfined Horizon, Map 8.*
- *Ethylbenzene Concentrations in Ground Water in Upper Unconfined Horizon, Map 9.*
- *Total Xylenes Concentrations in Ground Water in Upper Unconfined Horizon, Map 10.*
- *Naphthalene Concentrations in Ground Water in Upper Unconfined Horizon, Map 11.*
- *MTBE Concentrations in Ground Water in Upper Unconfined Horizon, Map 12.*

The data indicate that dissolved phase impact continues to pose a potential threat to human health and the environment both on and off site`. The concentrations of various COC exceed their RBSLs in monitoring wells OMW-1 through MW-6, MW-9, MW-10, and MW-12 through MW-14, and the Crawford Property water well (CPWW). Currently, the Crawford property water well is not in use since the residence it serves is unoccupied DHEC was notified by phone about the impacted water well at the time the analytical results were reviewed (December 22, 1997).

The analytical results for the December 1, 1997 sample procured from OMW-1 seem to be anomalous when compared to the concentrations observed in the sample procured during the IGWA and when compared to current concentrations observed in the monitoring wells surrounding OMW-1. In addition, the presence of free product on the well does not support the low concentrations of dissolved constituents observed in the December analytical results. Consequently, the analytical results were not strictly honored in projecting the areal distributions of COC in ground water. The presence of free product is regarded as clear confirmation that the well is within the area of impact.

The analytical results also revealed lead in each ground water sample procured from the site. The concentrations observed were between 4 ug/l and 23 ug/l. The ubiquitous presence of lead in all samples (including these from upgradient wells with no

petroleum hydrocarbon impact) seems to indicate the influence of background lead present.

# 7.0 DELINEATION

## 7.1 Horizontal Delineation

See *Map 7* through *Map 12* for the known and estimated horizontal extent of COC in soil and ground water media.

## 7.2 Vertical Delineation

See Cross-sections on *Map 13* and *Map 14* for the known and estimated vertical extent of COC impact in ground water.

# 8.0 TIER I AND TIER II RISK EVALUATION

Exposure Pathway Summary tables are presented in this section of the Rapid Assessment Report. The tables detail exposure potentials based on the current and potential future land use. The Exposure Pathways process assesses the following media for potential exposure:

- Air
- Surficial soil
- Surface water
- Subsurface soil
- Ground water

## Site Conceptual Model - CURRENT LAND USE

| Media (for exposure) | Exposure Route | Pathway Selected for Evaluation? (Yes or No) | Exposure point or Reason for Non-Selection | Data Requirements (If pathway selected) |
|---|---|---|---|---|
| Air | Inhalation | Yes ____ No __X__ | -COC were identified in the soil and ground water media, but only at depths well below the surface. | |
| | Explosion Hazard | Yes ____ No __X__ | | |
| Ground Water | Ingestion | Yes __X__ No ___ | -Potable water well located approximately 240 feet downgradient of source area is impacted with benzene above RBSL. -On-site building appears to be located above area of ground water impact. | COC concentrations in water well. |
| | Dermal Contact | Yes __X__ No ____ | | |
| | Volatile Inhalation | Yes __X__ No ____ | | |
| Surface Water | Ingestion | Yes ____ No __X__ | -No surface water bodies were identified within 1000 feet of the source area. - No pathway exists at present. | |
| | Dermal Contact | Yes ____ No __X__ | | |
| | Volatile Inhalation | Yes ____ No __X__ | | |
| Surficial Soil | Ingestion | Yes ____ No __X__ | -Surficial soil was not sampled, but the investigation results indicate that impact is restricted to deeper horizons. | |
| | Dermal Contact | Yes ____ No __X__ | | |
| | Volatile Inhalation | Yes ____ No __X__ | | |
| | Leaching to Ground Water | Yes ____ No __X__ | | |
| Subsurface Soil | Ingestion | Yes ____ No __X__ | -Depth to impact is 8 feet below surface grade and deeper, thus subsurface soil is not expected to pose an ingestion or dermal exposure pathway. -No buildings are located above the area of highest soil COC concentrations. -Benzene, toluene, ethylbenzene, total xylenes and naphthalene concentrations in soil exceed calculated site-specific soil leachability target levels. | - COC concentrations in soil and site specific parameters |
| | Dermal Contact | Yes ____ No __X__ | | |
| | Volatile Inhalation | Yes ____ No __X__ | | |
| | Leaching to Ground Water | Yes __X__ No ____ | | |

## Site Conceptual Model - FUTURE LAND USE

| Media (for exposure) | Exposure Route | Pathway Selected for Evaluation? (Yes or No) | Exposure point or Reason for Non-Selection | Data Requirements (If pathway selected) |
|---|---|---|---|---|
| Air | Inhalation | Yes ____ No X | -COC were identified in the soil and ground water media, but only at depths well below the surface. | |
| | Explosion Hazard | Yes ____ No X | | |
| Ground Water | Ingestion | Yes X No ____ | -Downgradient water well is already impacted with COC above RBSL. | - COC concentrations in ground water and site specific parameters |
| | Dermal Contact | Yes X No ____ | | |
| | Volatile Inhalation | Yes X No ____ | | |
| Surface Water | Ingestion | Yes ____ No X | -No surface water bodies were identified within 1000 feet of the source area. | |
| | Dermal Contact | Yes ____ No X | | |
| | Volatile Inhalation | Yes ____ No X | | |
| Surficial Soil | Ingestion | Yes ____ No X | -Surficial soil was not sampled, but the investigation results indicate that impact is restricted to deeper horizons. | |
| | Dermal Contact | Yes ____ No X | | |
| | Volatile Inhalation | Yes ____ No X | | |
| | Leaching to Ground Water | Yes ____ No X | | |
| Subsurface Soil | Ingestion | Yes ____ No X | -Depth to impact is 8 to 12 feet below surface grade, thus subsurface soil is not expected to pose an ingestion or dermal exposure pathway. | |
| | Dermal Contact | Yes ____ No X | | |
| | Volatile Inhalation | Yes ____ No X | -No building or structure is located over area of highest soil impact. | |
| | Leaching to Ground Water | Yes X No ____ | -Benzene and naphthalene concentrations in soil exceed calculated site specific soil leachability target levels. | - COC concentrations in soil and site specific parameters |

### 8.1 Air

There is no evidence to indicate that air represents a potential exposure pathway, because the COC have been identified only in the subsurface soil and ground water media. However, air has not been sampled and analyzed at the site.

### 8. 2 Surficial Soil

There is no evidence to indicate that surface soil represents a potential exposure pathway, because the COC have been identified only in the subsurface soil and ground water media.

### 8.3 Surface Water

Surface water was not identified during the potential receptor survey at the Crawford's Country Store, or within 1,000 feet of the site with the exception of a small lake or pond approximately 1,000 feet upgradient of the site. Therefore, there is no evidence to indicate that surface water represents a potential exposure pathway, because COC have been identified only in the subsurface soil and ground water media.

### 8. 4 Subsurface Soil

The Tier I RBSLs for sandy soils were exceeded, based on the analytical results for benzene and naphthalene (see Section 6.2). Therefore, a Tier II Risk Evaluation for COC is required.

#### 8.4.1 Tier II Soil Evaluation

The potential for residual benzene, toluene, ethylbenzene, total xylenes and naphthalene in the soil to impact ground water at the site was evaluated using a soil-leaching model (Risk Based Corrective Action for Petroleum Releases, January 1998). The results, which are presented in *Appendix VI*, indicate that benzene, toluene, ethylbenzene, total xylenes and naphthalene exceed calculated site-specific target levels and may continue to pose a continuing source to dissolved phase impact.

## 8.5 Ground Water

Concentrations of benzene, toluene, ethylbenzene, total xylenes, MTBE, and naphthalene were detected in ground water at concentrations greater than their South Carolina Tier I RBSLs (see Section 6.4). Therefore, a Tier II Risk Evaluation for COC concentrations present in ground water is required.

In addition, the concentrations for benzene were compared to the Tier I RBSL data presented in the "Example Tier I RBSL Look-up Table," ASTM E 1739-95, "Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites." Based on this comparison, benzene concentrations in ground water exceed ASTM Tier I RBSLs for vapor intrusion from ground water to buildings and enclosed spaces. At present, there is one building (the Crawford's Store) located above the area of the contaminant plume with the highest COC concentrations; therefore, a current pathway potential exists for COC vapor intrusion to buildings. This potential pathway is addressed in section 8.5.1.2.

### 8.5.1 Ground Water Tier II Evaluation

#### 8.5.1.1 Fate and Transport Modeling

A SOLUTE fate and transport model was developed to assess potential plume migration and natural attenuation. A site specific, one-dimensional ground water fate and transport model was performed utilizing the ONED-1 program in SOLUTE. Dissolved phase benzene, toluene, ethylbenzene, total xylenes, MTBE and naphthalene were evaluated individually (these three analyses constitute the COC at this site).

SOLUTE was developed to provide an analytic solution to the advection-dispersion equation assuming a non-conservative (possibly decaying) tracer. A non-conservative tracer is a chemical that can be sorbed onto soil particles in the flow path of the chemical. As the constituent is sorbed, less of it remains in the dissolved phase to be transported farther downgradient. If a tracer can decay, it is implied that natural processes of biodegradation and natural attenuation need to be accounted for in solving the transport equations. There are certain inherent assumptions involved in using an analytic model.

For instance, analytic models are valid only for uniform ground water flow through a homogeneous, isotropic medium, where the density and viscosity of the flowing fluid is constant over time and space. Such conditions may or may not actually exist at any given site. In essence, one-dimensional analytic models generally provide a "first cut," order-of-magnitude approximation for the fate and transport of the dissolved chemicals in the subsurface.

The input parameters for the SOLUTE fate and transport model assume a long-duration source, consistent with the results of the soil leachability model. In addition, the following input parameters were used:

- Chemical half-lives referenced in the Handbook of Environmental Degradation Rates.
- Retardation factors calculated from TOC analysis.
- Highest concentrations of COC detected at the site, from MW-2, MW-3, MW-4, and MW-9.

The results of the modeling indicate that each COC will naturally attenuate to concentrations that are below their RBSLs within the following distances from the respective monitoring well with the highest concentration:

- Benzene: 1350 feet.
- Toluene: 230 feet.
- Ethylbenzene: 75 feet.
- Total Xylenes: 65 feet.
- MTBE: 810 feet.
- Naphthalene: 240 feet.

As predicted, the Crawford's water well has been impacted, and the McCullough water well is predicted to be impacted by benzene and MTBE in approximately 10 years.

### 8.5.1.2. Site Specific Volatilization Model

To further evaluate the potential human health risk due to volatilization of benzene in ground water, a site specific volatilization model for ground water was developed. The model input parameters include:

- The equations used to develop the Tier I Risk Based Screening Levels (RBSLs) which are presented in ASTM E 1739-95, "Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites." (Specifically, Table X2.1 in Appendix X2.)

- The exposure parameters presented in Tables X2.2 and X2.3 in Appendix X2 of ASTM E 1739-95.

- The volatilization factors, leaching factors, and effective diffusion coefficients presented in Appendix X2 of ASTM E 1739-95.

- Soil, building, surface, and subsurface values presented in Appendix X2 of ASTM E 1739-95, with the exception of the following site specific values:

  -Thickness of the vadose zone: 452.2 centimeters.
  -Depth to ground water: 457.2 centimeters.
  -Ground water Darcy Velocity: 1755 centimeters per year.
  -Soil Bulk Density: 1.64 grams per cubic centimeter.
  -Total soil porosity: 0.42 cubic centimeter per cubic centimeter.
  -Estimated residual water content: 0.09 cubic centimeter – water/cubic centimeter.

The results of the site specific risk model are presented in *Appendix VI, Site Specific Volatilization Model* of this Rapid Assessment report. The model results indicate the following with regard to a potential human health risk due to benzene vapors:

- The highest benzene concentrations detected in groundwater (9.9 mg/l) at the site, for the MW-2 sample, exceed the calculated site specific RBSLS for vapor intrusion of benzene into enclosed spaces (0.0943 mg/l).

* Based on the ASTM RBCA model.
* excel spreadsheet

### 8.5.1.3 Site Specific Target Levels / Points of Compliance

Site Specific Target Levels (SSTLs) have been calculated for the COC in ground water from MW-2, to protect the Crawford Property water well from impact above RBSL concentrations using the inverse of Domenico's equation. The input parameters and model output are summarized in *Appendix VI.* The SSTLs for MW-2 are as follows:

MW-2 SSTLs

- Benzene-84.3 ug/l
- Toluene-16,852 ug/l
- Ethylbenzene-11,797 ug/l.
- Total Xylenes-168,523 ug/l
- MTBE-674 ug/l
- Naphthalene-421 ug/l

The downgradient vertical distribution of the plume should be further evaluated to establish an effective point of compliance. The lack of impacted ground water in MW-13, directly upgradient of the impacted Crawford Property water well, may suggest that the plume is "sinking" below MW-13, possibly due to past use of the water well drawing contamination downward (as previously noted, the residence is not occupied and the well is not currently used). Discrete interval ground water sampling and analysis within the vicinity of the Crawford Property water well would facilitate design and location of a monitoring well to serve as a point of compliance to protect the McCullough water well. Construction details of the Crawford or McCullough wells are not known by the property owners.

MW-7 is recommended as an upgradient compliance point to protect and assess potential plume migration towards the onsite drinking water well. The recommended SSTLs for MW-7 are the SC RBSL for ground water.

# 9.0 CONCLUSIONS AND RECOMMENDATIONS

## 9.1 Conclusions

During December, 1997, MM&A performed a Rapid Assessment to further assess the Crawford's Country Store site, as directed by the South Carolina Department of Health and Environmental Control (DHEC). Based on the data obtained from the Rapid Assessment activities, the area of highest soil and dissolved phase impact appears to be localized around the former UST basin.

The soil analytical results indicate that benzene, toluene, ethylbenzene, total xylenes and naphthalene are present above RBSLs, and soil leachability results indicate that they may continue to be a source of dissolved phase impact in ground water.

Free product was encountered in ground water monitoring wells OMW-1, MW-2, and MW-3. A bail-down procedure performed on OMW-1 indicates that there is approximately 0.60 feet of free product in the formation adjacent to OMW-1, and the estimated recovery rate for the free product in the well is approximately 6.12 gallons per day.

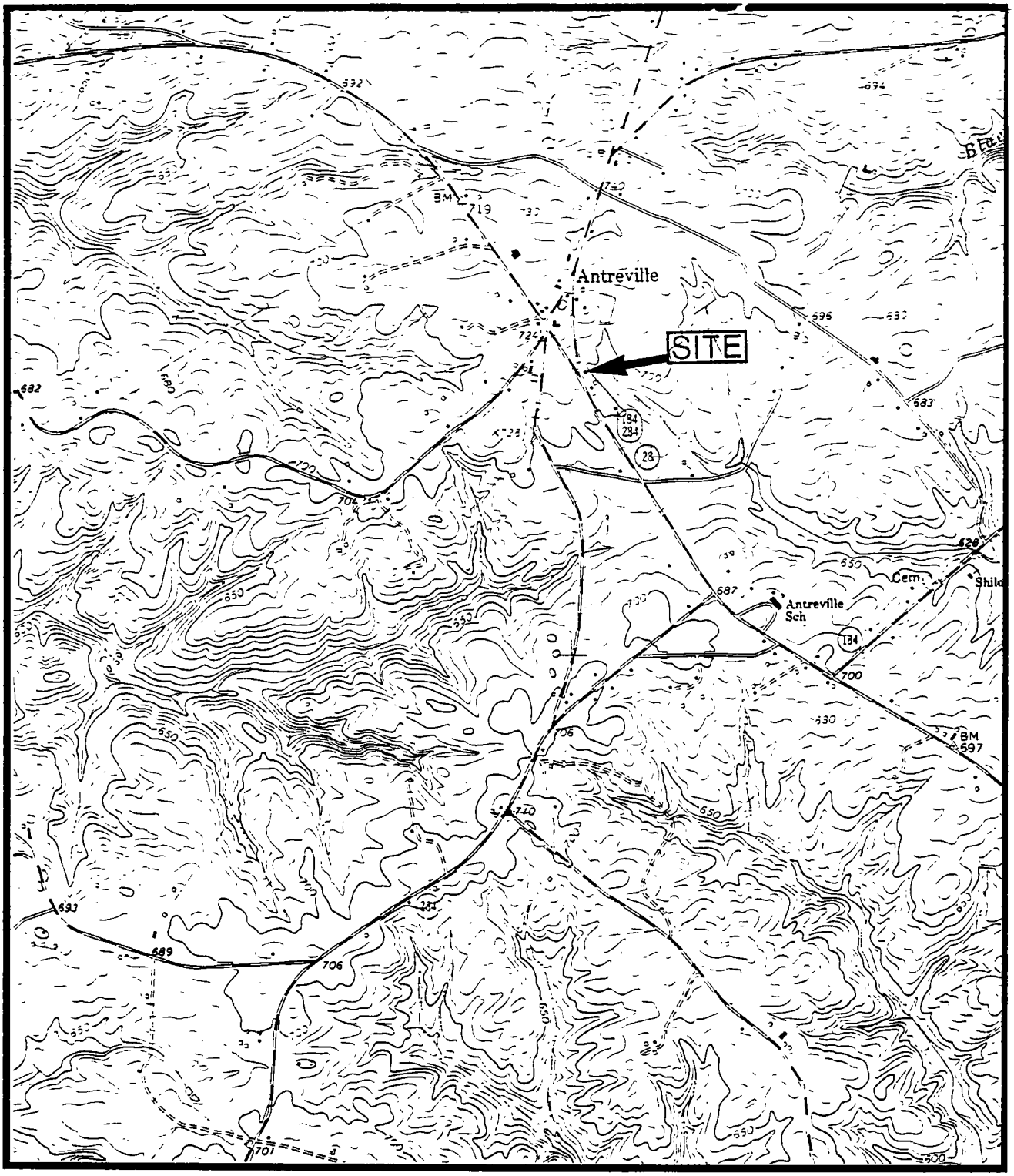
The ground water analytical results indicate that dissolved phase concentrations of benzene, toluene, ethylbenzene, total xylenes, MTBE, naphthalene, and lead exceed TIER I RBSLs. Three potable water sources were identified, one approximately 170 feet upgradient of the source area, and the others approximately 230 feet and 1,000 feet downgradient of the source area. A sample procured from the nearest downgradient water well (Crawford Property water well) revealed detectable concentrations of benzene, toluene, total xylenes, MTBE and lead. Concentrations of benzene and lead in this sample exceed South Carolina RBSL. Results of sampling of the more distal supply well are pending and will be submitted under separate cover when available. Fate and transport modeling indicates that COC will naturally attenuate over time between 65 feet and 1350 feet of the source area, which is beyond the property line.

### 9.2 Recommendations

Based on the data obtained from the Rapid Assessment work activities, the following recommendations are made:

- Employ active remediation to remove free product present in monitoring wells OMW-1, MW-2, and MW-3.
- Continue monitoring to assess current COC concentrations in ground water, and update fate and transport modeling.
- Determine the well depth and casing depth of the Crawford Property residence well.
- Determine if the plume is "sinking" within the area of MW-13 to facilitate the proper construction and location of a monitoring well to serve as an effective point of compliance.
- Provide an alternate water supply to the Crawford Property residence (and the McCullough well if analytical results indicate impact, although not expected).

# *Appendix I*
# *Tables*




SCDHEC – CRAWFORD'S COUNTRY STORE

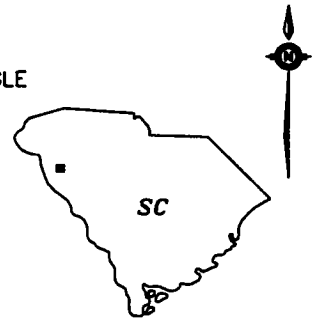
SOUTHEAST SECTION OF USGS 7.5' ANTREVILLE, SC QUADRANGLE

Prepared by:

MARSHALL MILLER & ASSOCIATES

2,000' 0 2,000'

SCALE 1:24,000




# VICINITY MAP

**Table 6**
**Ground Water Analytical Results (µg/l)**
**Crawfords Country Store**
**Collected December, 1997**

| Sample ID | B | T | E | X | Naphthalene | MTBE | Lead | EDB |
|---|---|---|---|---|---|---|---|---|
| DMW-1 | 14.9 | 85.5 | 5.24 | 24.8 | BDL | 96.0 | 23 | BDL |
| MW-2 | 9900 | 42300 | 2040 | 12100 | 71.2 | 242000 | 15 | BDL |
| MW-3 | 9820 | 54500 | 2160 | 11900 | 445 | 81200 | 15 | BDL |
| MW-4 | 8140 | 21000 | 1510 | 11500 | 813 | 215000 | 7 | BDL |
| MW-5 | 5930 | 47600 | 2100 | 12600 | 125 | BDL | 12 | BDL |
| MW-6 | 5.49 | 137 | 6.00 | 149 | BDL | BDL | 11 | BDL |
| MW-7 | 1.09 | 1.68 | BDL | 1.10 | BDL | BDL | 5 | BDL |
| MW-8 | BDL | 2.35 | 1.21 | 5.40 | BDL | BDL | 6 | BDL |
| MW-9 | 76.5 | 14000 | 2390 | 20700 | 384 | 114 | 4 | BDL |
| MW-10 | 6220 | 46300 | 2320 | 14800 | 542 | 938 | 9 | BDL |
| MW-11 | 1.35 | 3.43 | BDL | 4.67 | BDL | BDL | 4 | BDL |
| MW-12 | 7970 | 382 | 266 | 1540 | 119 | 99900 | 8 | BDL |
| MW-13 | BDL | 1.41 | BDL | 1.63 | BDL | 82.3 | 6 | BDL |
| MW-14 | 1.14 | 1.36 | BDL | 2.74 | BDL | 76.5 | 6 | BDL |
| MW-15 | 1.01 | 1.57 | BDL | 2.45 | BDL | BDL | 17 | BDL |
| MW-16 | BDL | 1.20 | BDL | 1.32 | BDL | BDL | 7 | BDL |
| DMW-17 | 1.57 | 3.76 | 2.29 | 12.7 | BDL | BDL | 8 | BDL |
| CLS-WW | BDL | 1.19 | BDL | BDL | BDL | BDL | 11 | BDL |
| CP-WW | 81.3 | 1.09 | BDL | 9.59 | BDL | 34.5 | 15 | BDL |

**Legend:**

BTEX - Benzene, Toluene, Ethylbenzene , Total Xylenes
MTBE – Methyl Tertiary Butyl Ether
BDL – Below Detection Limit
PAH – Polynuclear Aromatic Hydrocarbons
Exceeds the Tier I RBSL's; MTBE = 40 µg/l, Benzene = 5 µg/l, Ethylbenzene = 700 µg/l, Toluene = 1,000 µg/l, Naphthalene = 25 µg/l, Total Xylenes = 10,000 µg/l, Lead = 5 µg/l

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**Table 3**
**Ground Water Monitoring Well Total Depths**
**Crawfords Country Store**
**December 1997**

| Monitoring Well Identification | Total Depth |
|---|---|
| MW-2 | 25' |
| MW-3 | 25' |
| MW-4 | 25' |
| MW-5 | 25' |
| MW-6 | 25' |
| MW-7 | 25' |
| MW-8 | 25' |
| MW-9 | 25' |
| MW-10 | 25' |
| MW-11 | 25' |
| MW-12 | 25' |
| MW-13 | 25' |
| MW-14 | 25' |
| MW-15 | 25' |
| MW-16 | 25' |
| DMW-17 | 75' |
| **Total Drilling Depth:** | **450'** |

**Table 1**
**Potentiometric Data**
**Crawfords Country Store**
**SCDHEC ID. #12335**
**Collected December 1, 1997**

| | OMW-1 | MW-2 | MW-3 | MW-4 | MW-5 | MW-6 | MW-7 | MW-8 | MW-9 | MW-10 | MW-11 | MW-12 | MW-13 | MW-14 | MW-15 | MW-16 | DMW-17* |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Static Water Level from TOC | 17.13** | 17.43** | 17.0** | 17.6 | 15.04 | 14.37 | 13.96 | 12.53 | 16.17 | 17.40 | 15.74 | 17.03 | 21.05 | 7.27 | 5.1 | 9.69 | 15.53* |
| TOC Elevation | 99.82 | 99.83 | 99.98 | 99.59 | 99.42 | 99.47 | 99.47 | 102.42 | 100.53 | 99.65 | 96.47 | 98.63 | 100.80 | 89.38 | 87.33 | 93.74 | 100.08 |
| Groundwater Elevation | 82.69** | 82.40** | 82.98** | 81.99 | 84.38 | 85.10 | 85.51 | 89.89 | 84.36 | 82.25 | 80.73 | 81.6 | 79.75 | 82.11 | 82.23 | 84.05 | 84.55* |

**Legend:**
TOC – Top of Casing
MW – Monitoring Well
N/A – Not Applicable
All elevations are relative to arbitrary datum.
* Telescoping monitoring well NA to shallow water elevations
** Adjusted static water level for presence of free product.

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**Table 2**
**Crawfords Country Store**
**Soil Boring/Field Screening Total Depths**

| Soil Boring (SB)/ Field Screening (FS) | Total Depth (ft) |
|---|---|
| SB-1 | 24' |
| SB-2 | 16' |
| SB-3 | 16' |
| SB-4 | 16' |
| SB-5 | 24' |
| SB-6 | 24' |
| SB-7 | 24' |
| SB-8 | 20' |
| SB-9 | 16' |
| SB-10 | 8' |
| SB-11 | 16' |
| SB-12 | 16' |
| FS-13 | 28' |
| FS-14 | 24' |
| FS-15 | 28' |
| FS-16 | 28' |
| FS-17 | 28' |
| FS-18 | 28' |
| FS-19 | 9' |
| FS-20 | 9' |
| FS-21 | 9' |
| FS-22 | 28' |
| FS-23 | 28' |
| FS-24 | 28' |
| FS-25 | 28' |
| **Soil Boring/ Field Screening Footage** | **523'** |

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**Table 4**
**Ground Water Field Screening PID Results**
**Crawfords Country Store**
**December 1997**

| Soil Boring (SB) / Ground Water Field Screening Point | PID Results (ppm) |
|---|---|
| SB-1 | 150 |
| SB-2 | 44 |
| SB-3 | 41 |
| SB-4 | 96 |
| SB-5 | 245 |
| SB-6 | 23 |
| SB-7 | 120 |
| SB-8 | F.P.* |
| SB-9 | 60 |
| SB-10 | 20 |
| SB-11 | 14 |
| SB-12 | 22 |
| FS-13 | 20 |
| FS-14 | 50 |
| FS-15 | 48 |
| FS-16 | 1.9 |
| FS-17 | 2.8 |
| FS-18 | 1.9 |
| FS-19 | 2.7 |
| FS-20 | 3.0 |
| FS-21 | 3.9 |
| FS-22 | 20 |
| FS-23 | 5.2 |
| FS-24 | 28 |
| FS-25 | 1.4 |

**Legend:**
*Free product

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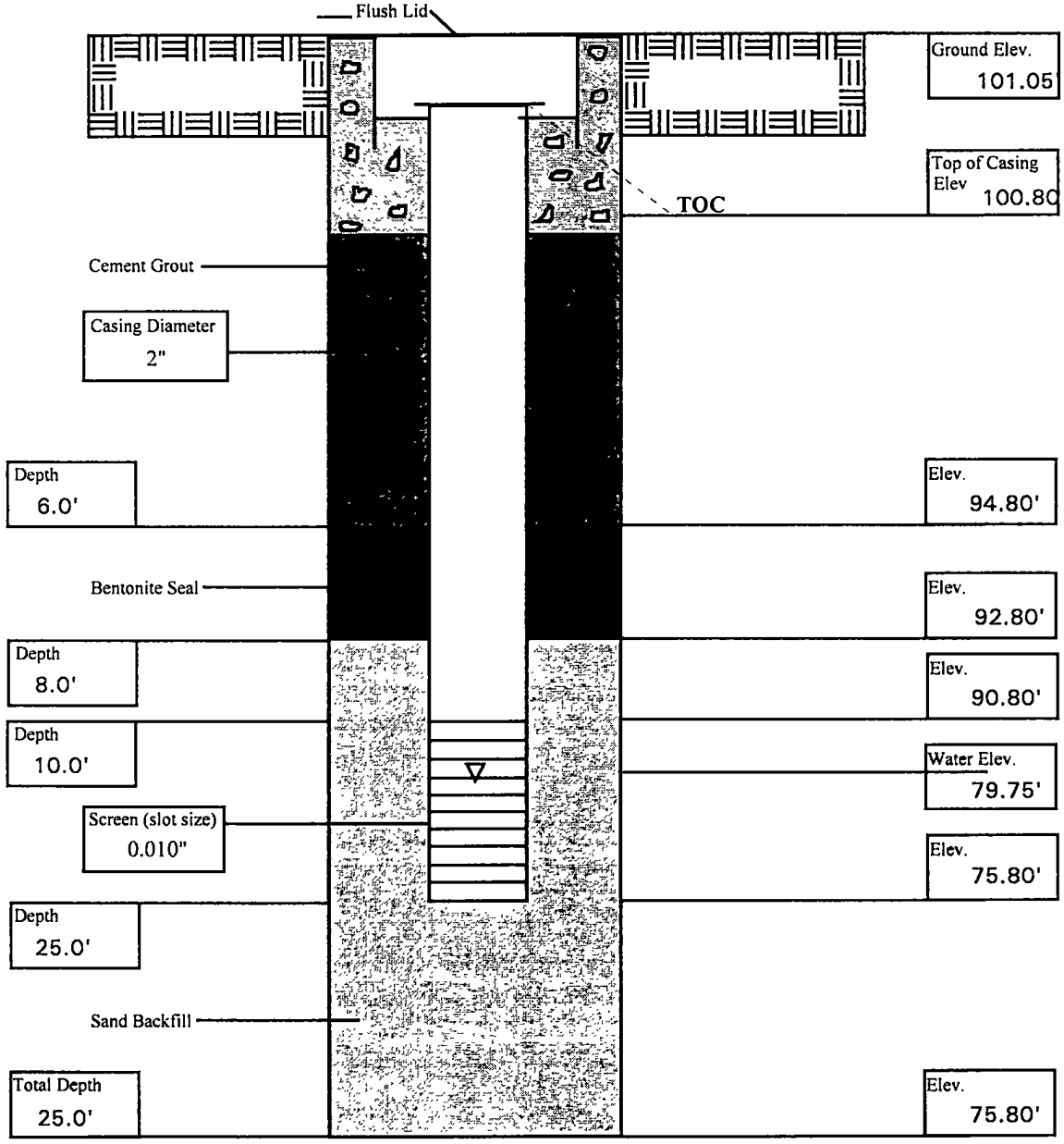
# Monitor Well Construction Diagram

| Client: | Project: | PC/Facility I.D. Number: | Project Number: |
|---|---|---|---|
| SCDHEC | Rapid Assessment | 12335 | A89128 |

| Well Number: | Location: | Date Started: | Date Completed: |
|---|---|---|---|
| MW-13 | Crawford's Country Store | 11/20/97 | 11/21/97 |

| Drilling Method: | Hole Diameter: | Geologist/Engineer: | Driller: |
|---|---|---|---|
| Hollow Stem Auger | ± 6" | J. Owery | American Environmenta |

| Remarks: | Latitude: | Longitude: |
|---|---|---|
| 15 feet screen and 10' riser | N 34° 18.128' | W 82° 32.449' |

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# Monitor Well Construction Diagram

| Client: | Project: | PC/Facility I.D. Number: | Project Number: |
|---|---|---|---|
| SCDHEC | Rapid Assessment | 12335 | A89128 |

| Well Number: | Location: | Date Started: | Date Completed: |
|---|---|---|---|
| MW-14 | Crawford's Country Store | 11/20/97 | 11/21/97 |

| Drilling Method: | Hole Diameter: | Geologist/Engineer: | Driller: |
|---|---|---|---|
| Hollow Stem Auger | ± 6" | J. Owery | American Environmenta |

| Remarks: | Latitude: | Longitude: |
|---|---|---|
| 15 feet screen and 10' riser | N 34° 18.152' | W 82° 32.446' |

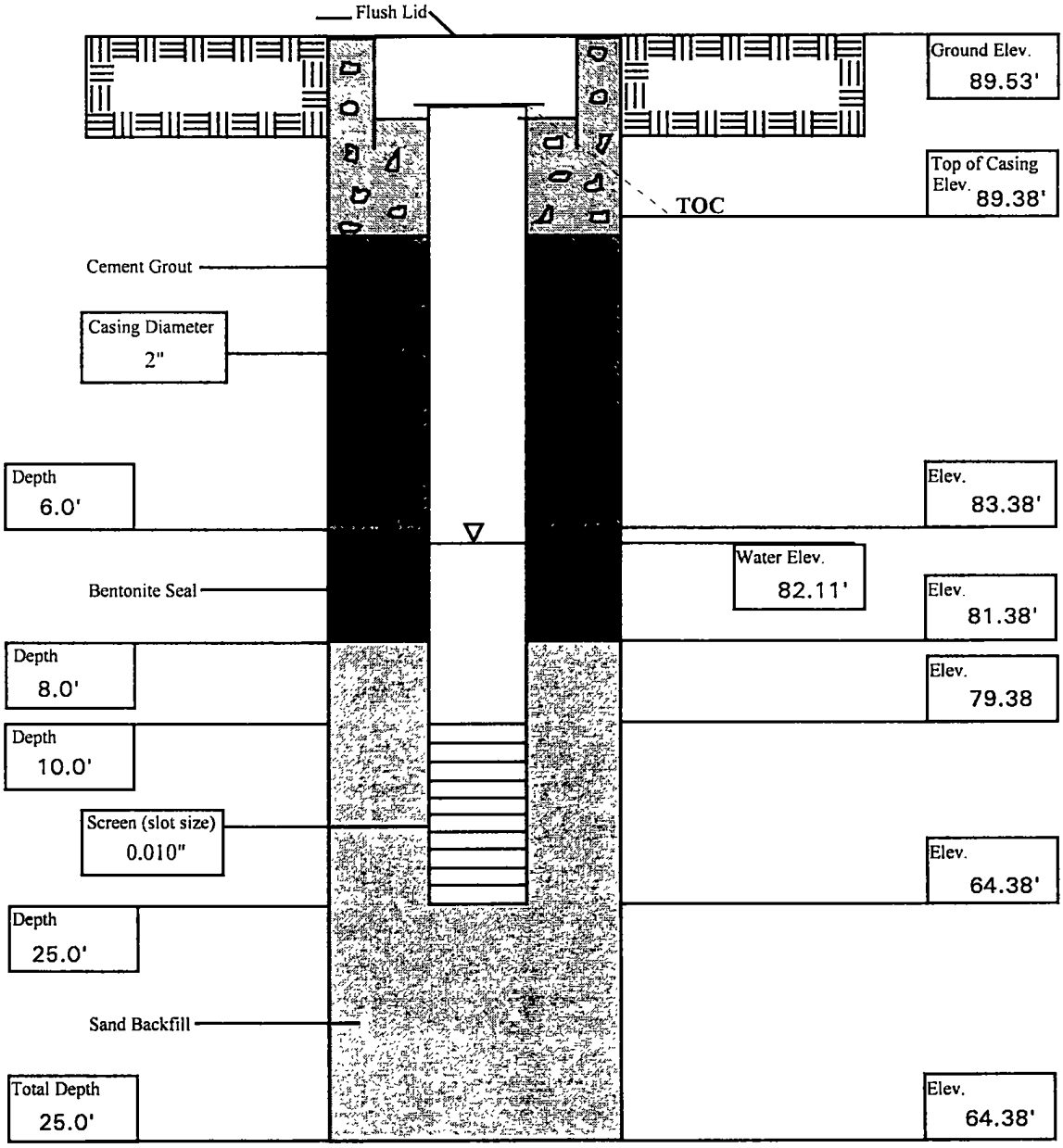


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**Table 5**
**Soil Analytical Results, mg/kg**
**Crawfords Country Store**
**December, 1997**

| | SB-1 | SB-2 | SB-3 | SB-4 | SB-5 | SB-7 | SB-9 | SB-10 | SB-11 | SB-12 | FS-4 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Depth (ft) | 8 | 12 | 12 | 12 | 8 | 8 | 12 | 8 | 12 | 12 | 12 |
| Benzene | 0.026 | BDL | BDL | 4.17 | 0.401 | 0.172 | BDL | BDL | BDL | BDL | |
| Toluene | 0.019 | 0.009 | BDL | 119.0 | 1.940 | 0.145 | 0.030 | BDL | 0.023 | 0.014 | |
| Ethylbenzene | BDL | BDL | BDL | 43.70 | 0.372 | 0.062 | BDL | BDL | BDL | BDL | |
| Total Xylenes | 0.018 | 0.008 | BDL | 262.00 | 2.120 | 0.374 | 0.005 | BDL | 0.019 | 0.008 | |
| Naphthalene | 0.006 | BDL | 0.007 | 7.50 | 0.551 | 0.204 | BDL | BDL | BDL | BDL | |
| TPH 3550 | NA | NA | NA | NA | BDL | NA | NA | NA | NA | NA | |
| PAH | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | BDL | |
| TOC | NA | NA | NA | NA | NA | NA | NA | NA | NA | BDL | BDL |

**Legend:**
NA – Not Applicable
BDL – Below Detection Levels
PAH – Polyaromatic Hydrocarbons
TOC – Top of Casing

Exceeds RBSL's for sandy soils where depth to groundwater from worst case soil sample is less than five feet.
Benzene = 0.005 mg/kg, Toluene = 1.622 mg/kg, Ethylbenzene = 1.260 mg/kg, Total Xylenes = 42.47 mg/kg, Naphthalene = 0.21 mg/kg

Exceeds RBSL's for sandy soils, where depth to ground water from worst case soil sample is between five to 10 feet.
Benzene = 0.005 mg/kg, toluene = 1.640 mg/kg, ethylbenzene = 1.292 mg/kg, total xylenes = 42.898 mg/kg, naphthalene = 0.211 mg/kg

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**Table 7**
**Free Phase Product Drawdown in OMW-1**
**Crawfords Country Store**
**December 1, 1997**

| Time (minutes) | Top of Fluid Elevation | Oil Water Interface Elevation |
|---|---|---|
| 0 | 80.82 | 80.67 |
| .50 | 81.12 | 80.88 |
| 1 | 81.22 | 80.99 |
| 2 | 81.49 | 81.15 |
| 3 | 81.72 | 81.30 |
| 5 | 82.04 | 81.54 |
| 8 | 82.32 | 81.78 |
| 12 | 82.54 | 81.97 |
| 20 | 82.77 | 82.14 |
| 30 | 82.87 | 82.18 |
| 45 | 82.92 | 82.17 |
| 60 | 82.95 | 82.13 |

## Table 8

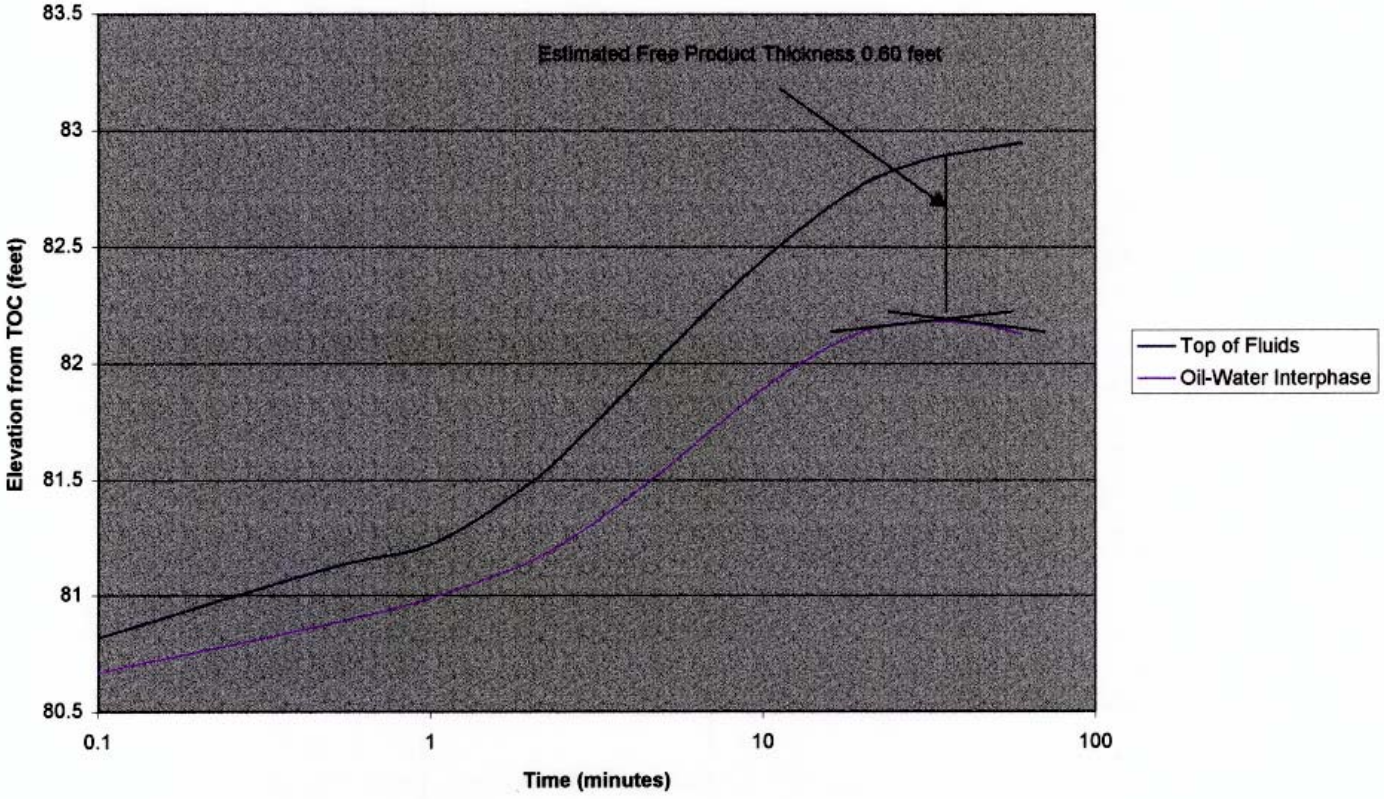
Free Product Recovery Rate For OMW-1
Crawford's Country Store

| | |
|---|---|
| Inside Diameter of Well Screen | = 2inches |
| Radius | = 1inch |
| | = .083 foot |
| Maximum thickness from table. | =0.82 feet |
| 80% maximum thickness recovery. | =0.656 feet |
| Time corresponding to 80% interpolated from table. | =25 min |
| Gallons per foot of oil thickness in well screen. | =0.162 gal/ft |
| pi*(0.083)^2*7.48 gal/ft^3 | |
| Average recovery rate to 80% recovery. | = 0.00425 gal/min or 6.12 gal/day |
| 0.162gal/ft x 0..656 ft / 25 min | |

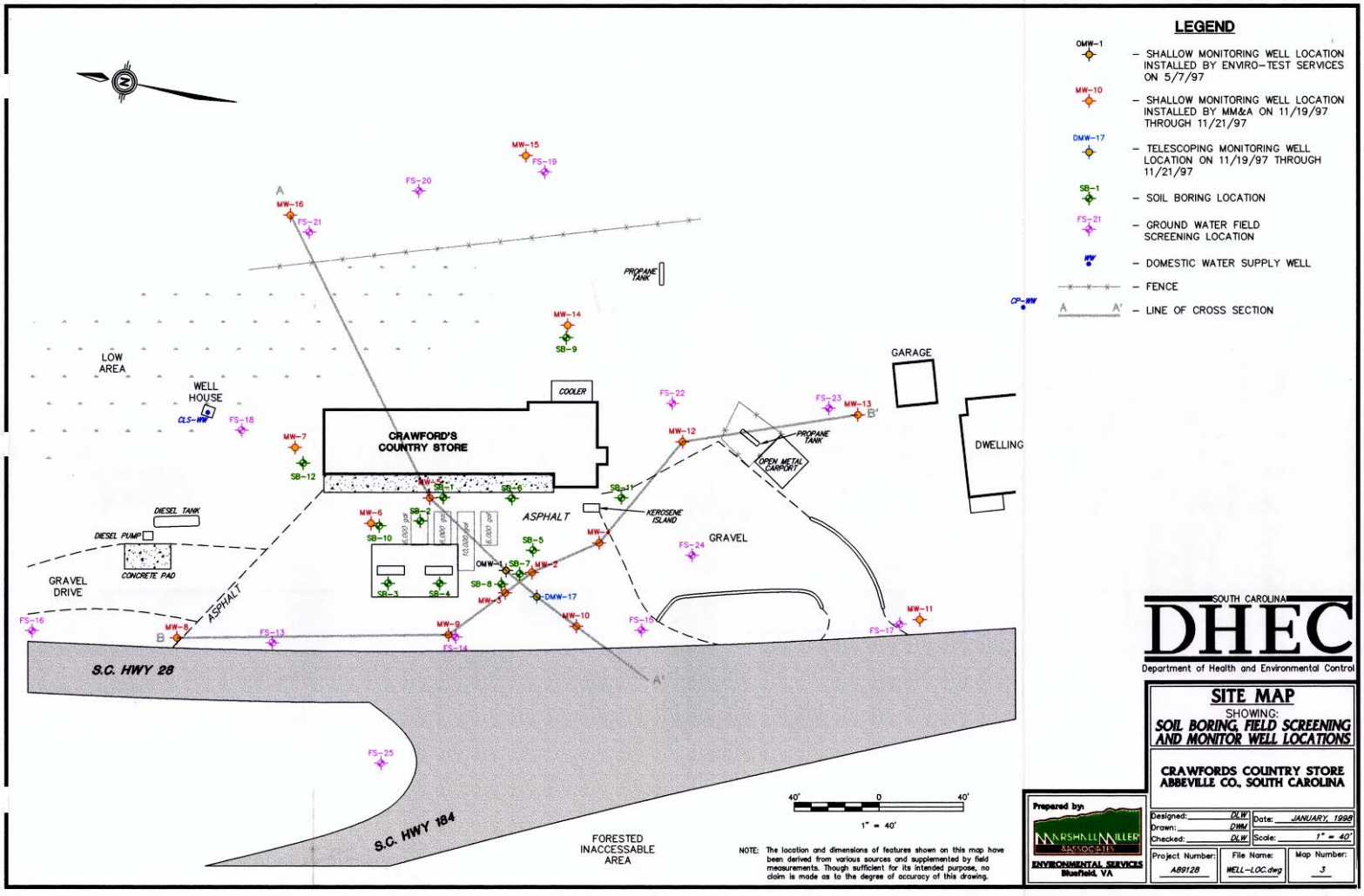
| OMW-1 Time | Free Product Thickness |
|---|---|
| 0 | 0.15 |
| 0.5 | 0.24 |
| 1 | 0.23 |
| 2 | 0.34 |
| 3 | 0.42 |
| 5 | 0.5 |
| 8 | 0.54 |
| 12 | 0.57 |
| 20 | 0.63 |
| 30 | 0.69 |
| 45 | 0.75 |
| 60 | 0.82 |

MARSHALL MILLER & ASSOCIATES

**Crawford Country Store**
**Free Product Bail Down Test in OMW-1**




MARSHALL MILLER & ASSOCIATES




SOUTH CAROLINA DHEC
Department of Health and Environmental Control

# SITE MAP

SHOWING:

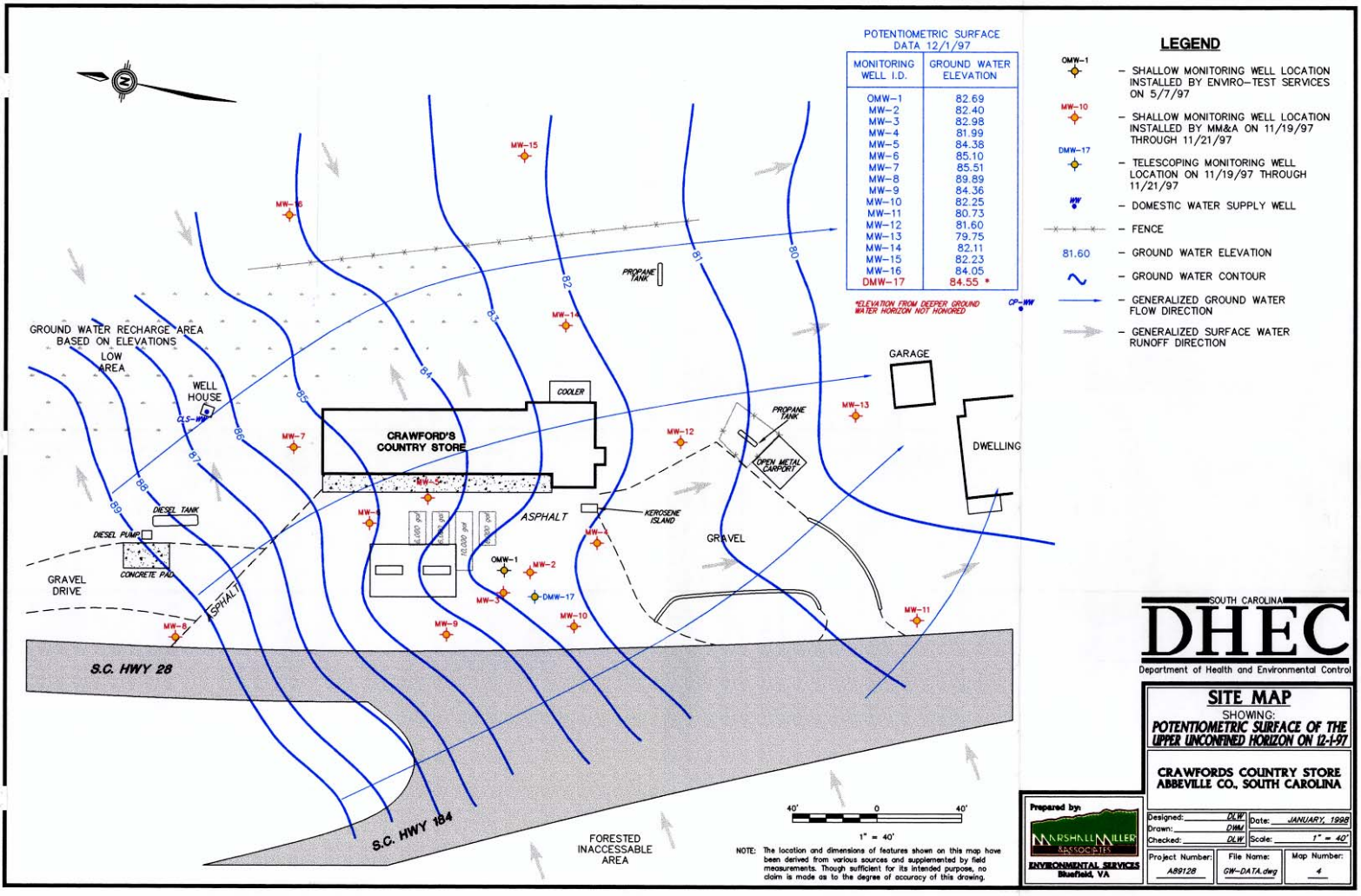
**SOIL BORING, FIELD SCREENING AND MONITOR WELL LOCATIONS**

**CRAWFORDS COUNTRY STORE**
**ABBEVILLE CO., SOUTH CAROLINA**

Prepared by:
MARSHALL MILLER & ASSOCIATES
ENVIRONMENTAL SERVICES
Bluefield, VA

| | | | |
|---|---|---|---|
| Designed: DLW | Date: JANUARY, 1998 | | |
| Drawn: DMW | Scale: 1" = 40' | | |
| Checked: DLW | | | |
| Project Number: A89128 | File Name: WELL-LOC.dwg | Map Number: 3 | |

# *Appendix II*
# *Maps*




POTENTIOMETRIC SURFACE DATA 12/1/97

| MONITORING WELL I.D. | GROUND WATER ELEVATION |
|---|---|
| OMW-1 | 82.69 |
| MW-2 | 82.40 |
| MW-3 | 82.98 |
| MW-4 | 81.99 |
| MW-5 | 84.38 |
| MW-6 | 85.10 |
| MW-7 | 85.51 |
| MW-8 | 89.89 |
| MW-9 | 84.36 |
| MW-10 | 82.25 |
| MW-11 | 80.73 |
| MW-12 | 81.60 |
| MW-13 | 79.75 |
| MW-14 | 82.11 |
| MW-15 | 82.23 |
| MW-16 | 84.05 |
| DMW-17 | 84.55 * |

*ELEVATION FROM DEEPER GROUND WATER HORIZON NOT HONORED

CP-MW

## LEGEND

- OMW-1 – SHALLOW MONITORING WELL LOCATION INSTALLED BY ENVIRO-TEST SERVICES ON 5/7/97
- MW-10 – SHALLOW MONITORING WELL LOCATION INSTALLED BY MM&A ON 11/19/97 THROUGH 11/21/97
- DMW-17 – TELESCOPING MONITORING WELL LOCATION ON 11/19/97 THROUGH 11/21/97
- MW – DOMESTIC WATER SUPPLY WELL
- FENCE
- 81.60 – GROUND WATER ELEVATION
- GROUND WATER CONTOUR
- GENERALIZED GROUND WATER FLOW DIRECTION
- GENERALIZED SURFACE WATER RUNOFF DIRECTION

NOTE: The location and dimensions of features shown on this map have been derived from various sources and supplemented by field measurements. Though sufficient for its intended purpose, no claim is made as to the degree of accuracy of this drawing.

SOUTH CAROLINA DHEC
Department of Health and Environmental Control

# SITE MAP

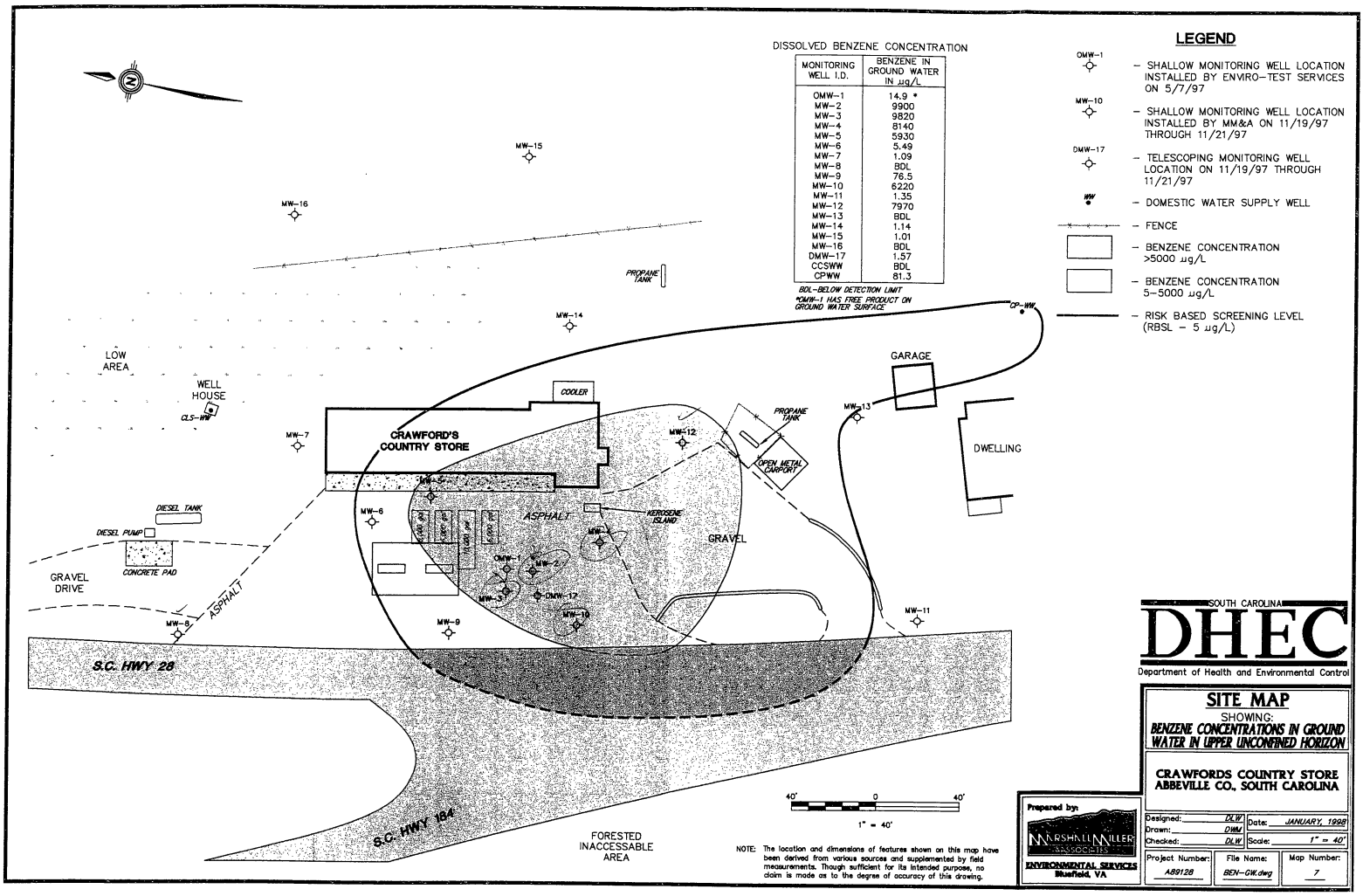
SHOWING:

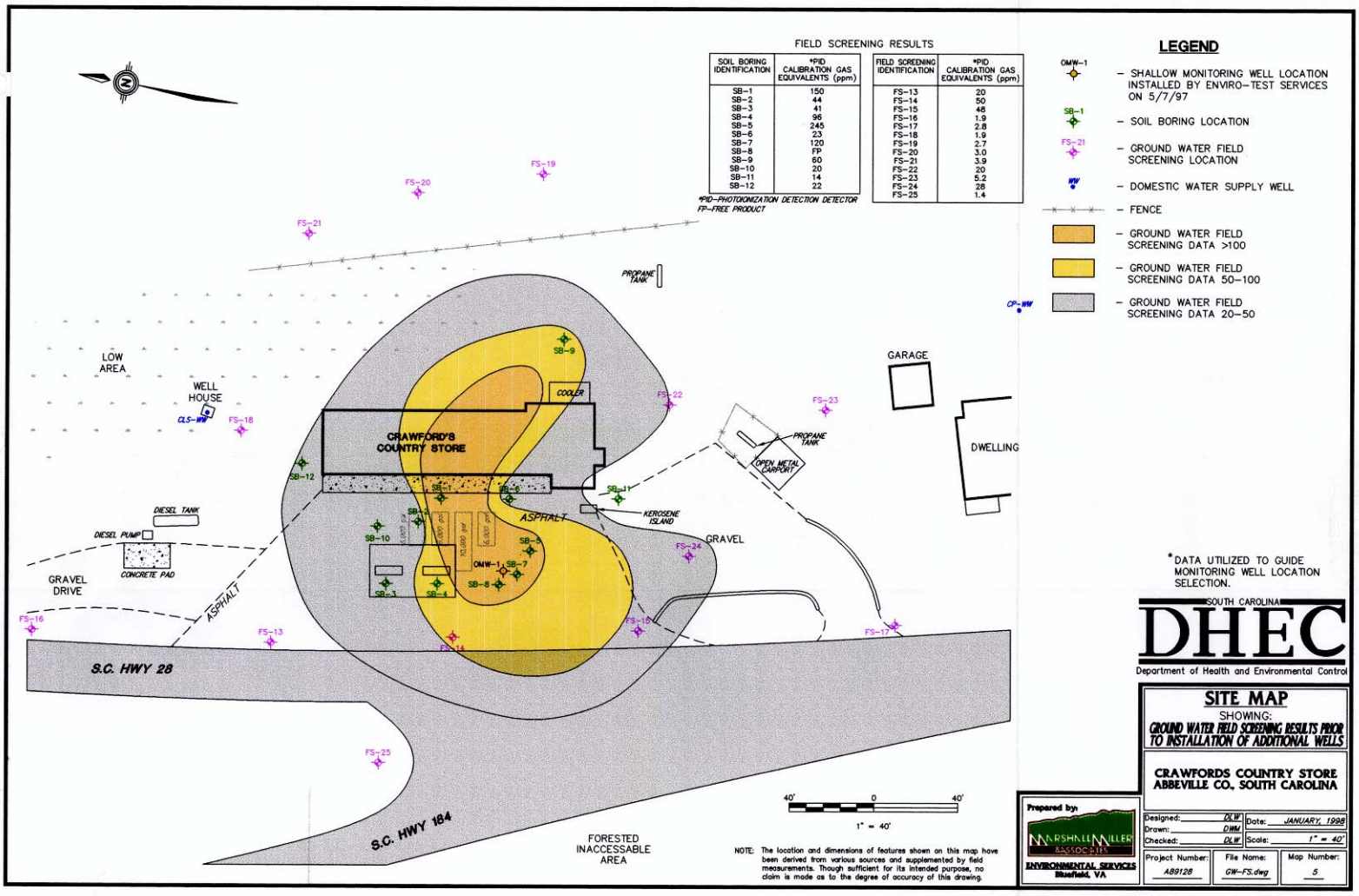
**POTENTIOMETRIC SURFACE OF THE UPPER UNCONFINED HORIZON ON 12-1-97**

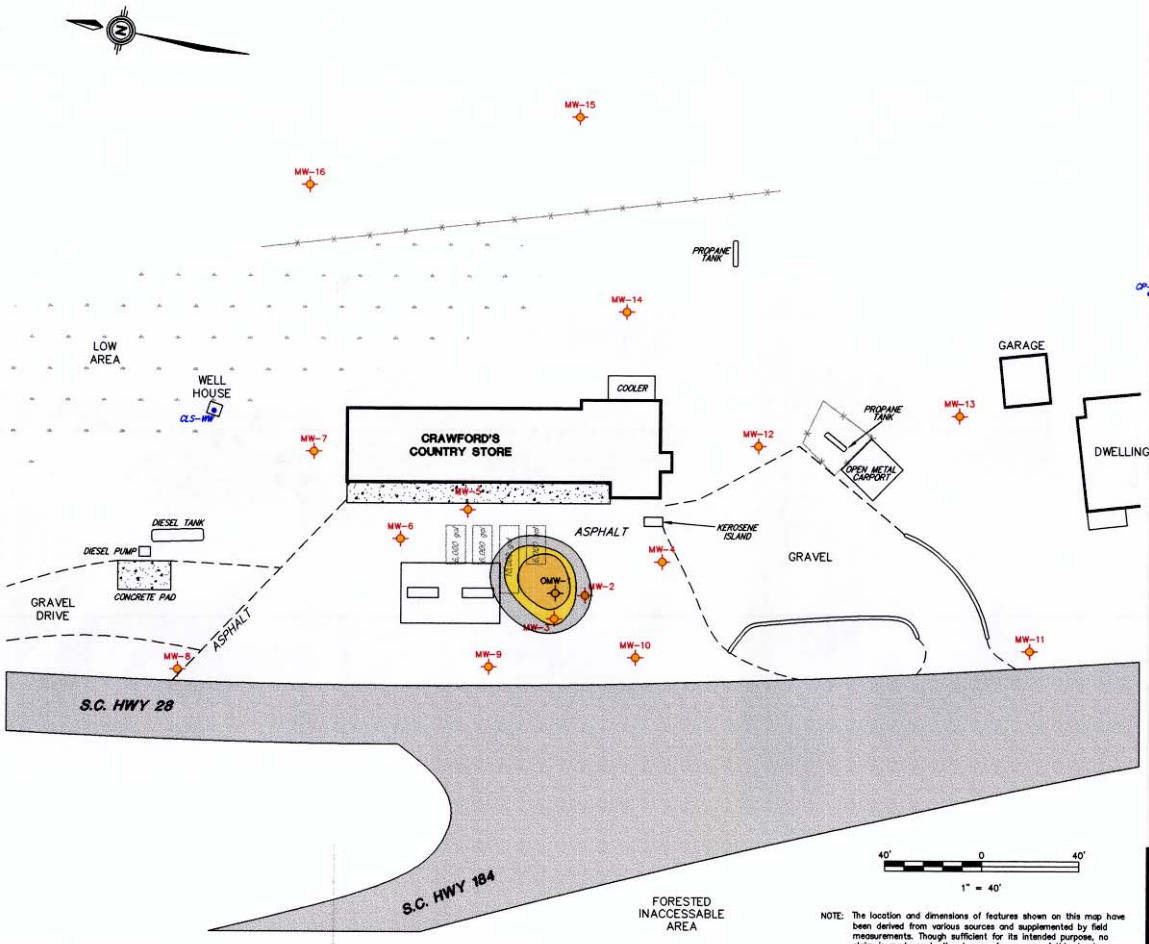
**CRAWFORDS COUNTRY STORE**
**ABBEVILLE CO., SOUTH CAROLINA**

Prepared by:
MARSHALL MILLER & ASSOCIATES
ENVIRONMENTAL SERVICES
Bluefield, VA

| | | | |
|---|---|---|---|
| Designed: DLW | Date: JANUARY, 1998 | | |
| Drawn: DMH | | | |
| Checked: DLW | Scale: 1" = 40' | | |
| Project Number: A89128 | File Name: GW-DATA.dwg | Map Number: 4 | |


DISSOLVED BENZENE CONCENTRATION
MONITORING WELL I.D. | BENZENE IN GROUND WATER IN µg/L
OMW-1 14.9 *
MW-2 9900
MW-3 9820
MW-4 8140
MW-5 5930
MW-6 5.49
MW-7 1.09
MW-8 BDL
MW-9 76.5
MW-10 6220
MW-11 1.35
MW-12 7970
MW-13 BDL
MW-14 1.14
MW-15 1.01
MW-16 BDL
DMW-17 1.57
CCSWW BDL
CPWW 81.3
BDL-BELOW DETECTION LIMIT
*OMW-1 HAS FREE PRODUCT ON GROUND WATER SURFACE
LEGEND
OMW-1 - SHALLOW MONITORING WELL LOCATION INSTALLED BY ENVIRO-TEST SERVICES ON 5/7/97
MW-10 - SHALLOW MONITORING WELL LOCATION INSTALLED BY MM&A ON 11/19/97 THROUGH 11/21/97
DMW-17 - TELESCOPING MONITORING WELL LOCATION ON 11/19/97 THROUGH 11/21/97
WW - DOMESTIC WATER SUPPLY WELL
- FENCE
- BENZENE CONCENTRATION >5000 µg/L
- BENZENE CONCENTRATION 5-5000 µg/L
- RISK BASED SCREENING LEVEL (RBSL - 5 µg/L)
N
MW-15
MW-16
PROPANE TANK
MW-14
CP-WW
LOW AREA
WELL HOUSE
CLS-WW
COOLER
GARAGE
MW-13
PROPANE TANK
MW-7
CRAWFORD'S COUNTRY STORE
MW-12
OPEN METAL CARPORT
DWELLING
MW-5
DIESEL TANK
DIESEL PUMP
MW-6
ASPHALT
KEROSENE ISLAND
MW-4
GRAVEL
CONCRETE PAD
GRAVEL DRIVE
OMW-1
MW-2
MW-3
DMW-17
MW-10
ASPHALT
MW-8
MW-9
MW-11
S.C. HWY 28
S.C. HWY 184
FORESTED INACCESSABLE AREA
40' 0 40'
1" = 40'
NOTE: The location and dimensions of features shown on this map have been derived from various sources and supplemented by field measurements. Though sufficient for its intended purpose, no claim is made as to the degree of accuracy of this drawing.
SOUTH CAROLINA
DHEC
Department of Health and Environmental Control
SITE MAP
SHOWING:
BENZENE CONCENTRATIONS IN GROUND WATER IN UPPER UNCONFINED HORIZON
CRAWFORDS COUNTRY STORE
ABBEVILLE CO., SOUTH CAROLINA
Prepared by:
MARSHALL MILLER & ASSOCIATES
ENVIRONMENTAL SERVICES
Bluefield, VA
Designed: DLW
Drawn: DMM
Checked: DLW
Date: JANUARY, 1998
Scale: 1" = 40'
Project Number: AB9128
File Name: BEN-GW.dwg
Map Number: 7


FIELD SCREENING RESULTS
SOIL BORING IDENTIFICATION
*PID CALIBRATION GAS EQUIVALENTS (ppm)
SB-1 150
SB-2 44
SB-3 41
SB-4 96
SB-5 245
SB-6 23
SB-7 120
SB-8 FP
SB-9 60
SB-10 20
SB-11 14
SB-12 22
FIELD SCREENING IDENTIFICATION
*PID CALIBRATION GAS EQUIVALENTS (ppm)
FS-13 20
FS-14 50
FS-15 48
FS-16 1.9
FS-17 2.8
FS-18 1.9
FS-19 2.7
FS-20 3.0
FS-21 3.9
FS-22 20
FS-23 5.2
FS-24 28
FS-25 1.4
*PID-PHOTOIONIZATION DETECTION DETECTOR
FP-FREE PRODUCT
LEGEND
OMW-1 - SHALLOW MONITORING WELL LOCATION INSTALLED BY ENVIRO-TEST SERVICES ON 5/7/97
SB-1 - SOIL BORING LOCATION
FS-21 - GROUND WATER FIELD SCREENING LOCATION
WW - DOMESTIC WATER SUPPLY WELL
- FENCE
- GROUND WATER FIELD SCREENING DATA >100
- GROUND WATER FIELD SCREENING DATA 50-100
- GROUND WATER FIELD SCREENING DATA 20-50
CP-WW
LOW AREA
WELL HOUSE
CLS-WW
CRAWFORD'S COUNTRY STORE
COOLER
PROPANE TANK
GARAGE
DWELLING
OPEN METAL CARPORT
KEROSENE ISLAND
ASPHALT
GRAVEL
DIESEL TANK
DIESEL PUMP
CONCRETE PAD
GRAVEL DRIVE
ASPHALT
S.C. HWY 28
S.C. HWY 184
FORESTED INACCESSABLE AREA
10,000 gal
10,000 gal
6,000 gal
40' 0 40'
1" = 40'
*DATA UTILIZED TO GUIDE MONITORING WELL LOCATION SELECTION.
NOTE: The location and dimensions of features shown on this map have been derived from various sources and supplemented by field measurements. Though sufficient for its intended purpose, no claim is made as to the degree of accuracy of this drawing.
SOUTH CAROLINA
DHEC
Department of Health and Environmental Control
SITE MAP
SHOWING:
GROUND WATER FIELD SCREENING RESULTS PRIOR TO INSTALLATION OF ADDITIONAL WELLS
CRAWFORDS COUNTRY STORE
ABBEVILLE CO., SOUTH CAROLINA
Prepared by:
MARSHALL MILLER & ASSOCIATES
ENVIRONMENTAL SERVICES
Bluefield, VA
Designed: DLW
Drawn: DMW
Checked: DLW
Date: JANUARY, 1998
Scale: 1" = 40'
Project Number: AB9128
File Name: GW-FS.dwg
Map Number: 5




## LEGEND

- OMW-1 – SHALLOW MONITORING WELL LOCATION INSTALLED BY ENVIRO-TEST SERVICES ON 5/7/97
- MW-10 – SHALLOW MONITORING WELL LOCATION INSTALLED BY MM&A ON 11/19/97 THROUGH 11/21/97
- MW – DOMESTIC WATER SUPPLY WELL
- FENCE
- FREE PRODUCT THICKNESS >1 FOOT
- FREE PRODUCT THICKNESS 0.10–1 FEET
- FREE PRODUCT THICKNESS 0.01 – 0.10 FEET

CP-MW

MEASURED FREE PRODUCT THICKNESS

| MONITORING WELL I.D. | FREE PRODUCT THICKNESS |
|---|---|
| OMW-1 | 2.15 |
| MW-2 | 0.01 |
| MW-3 | 0.10 |
| MW-4 | 0.0 |
| MW-5 | 0.0 |
| MW-6 | 0.0 |
| MW-7 | 0.0 |
| MW-8 | 0.0 |
| MW-9 | 0.0 |
| MW-10 | 0.0 |
| MW-11 | 0.0 |
| MW-12 | 0.0 |
| MW-13 | 0.0 |
| MW-14 | 0.0 |
| MW-15 | 0.0 |
| MW-16 | 0.0 |

NOTE: The location and dimensions of features shown on this map have been derived from various sources and supplemented by field measurements. Though sufficient for its intended purpose, no claim is made as to the degree of accuracy of this drawing.

SOUTH CAROLINA DHEC
Department of Health and Environmental Control

# SITE MAP

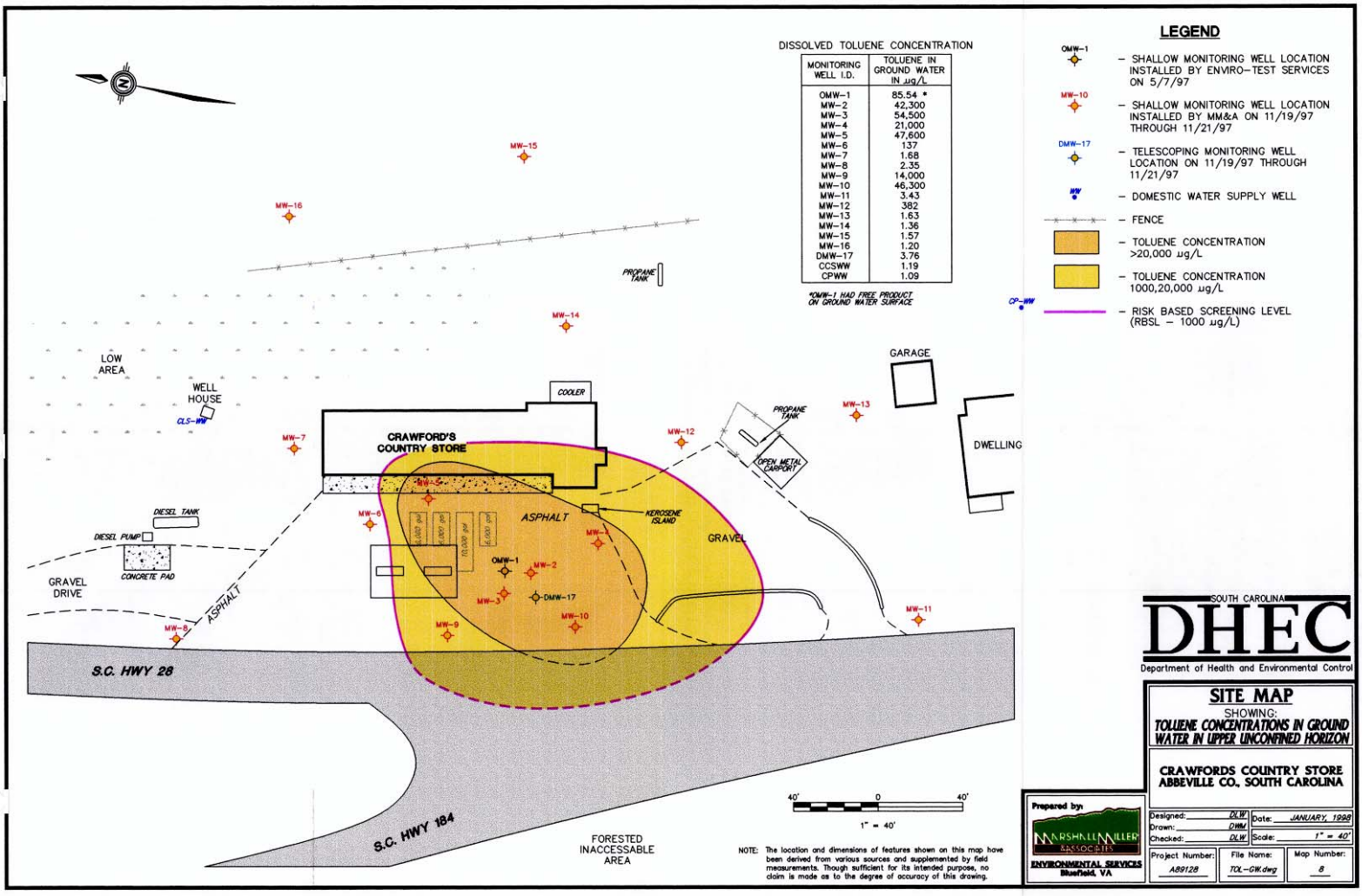
SHOWING:

**MEASURED FREE PRODUCT THICKNESS**

**CRAWFORDS COUNTRY STORE**
**ABBEVILLE CO., SOUTH CAROLINA**

Prepared by:
MARSHALL MILLER & ASSOCIATES
ENVIRONMENTAL SERVICES
Bluefield, VA

| | | | |
|---|---|---|---|
| Designed: DLW | Date: JANUARY, 1998 | | |
| Drawn: DWM | | | |
| Checked: DLW | Scale: 1" = 40' | | |
| Project Number: A89128 | File Name: LNAPL.dwg | Map Number: 6 | |




DISSOLVED TOLUENE CONCENTRATION

| MONITORING WELL I.D. | TOLUENE IN GROUND WATER IN µg/L |
|---|---|
| OMW-1 | 85.54 * |
| MW-2 | 42,300 |
| MW-3 | 54,500 |
| MW-4 | 21,000 |
| MW-5 | 47,600 |
| MW-6 | 137 |
| MW-7 | 1.68 |
| MW-8 | 2.35 |
| MW-9 | 14,000 |
| MW-10 | 46,300 |
| MW-11 | 3.43 |
| MW-12 | 382 |
| MW-13 | 1.63 |
| MW-14 | 1.36 |
| MW-15 | 1.57 |
| MW-16 | 1.20 |
| DMW-17 | 3.76 |
| CCSWW | 1.19 |
| CPWW | 1.09 |

*OMW-1 HAD FREE PRODUCT ON GROUND WATER SURFACE

## LEGEND

- OMW-1 – SHALLOW MONITORING WELL LOCATION INSTALLED BY ENVIRO-TEST SERVICES ON 5/7/97
- MW-10 – SHALLOW MONITORING WELL LOCATION INSTALLED BY MM&A ON 11/19/97 THROUGH 11/21/97
- DMW-17 – TELESCOPING MONITORING WELL LOCATION ON 11/19/97 THROUGH 11/21/97
- WW – DOMESTIC WATER SUPPLY WELL
- FENCE
- TOLUENE CONCENTRATION >20,000 µg/L
- TOLUENE CONCENTRATION 1000,20,000 µg/L
- RISK BASED SCREENING LEVEL (RBSL – 1000 µg/L)

NOTE: The location and dimensions of features shown on this map have been derived from various sources and supplemented by field measurements. Though sufficient for its intended purpose, no claim is made as to the degree of accuracy of this drawing.

SOUTH CAROLINA DHEC
Department of Health and Environmental Control

# SITE MAP

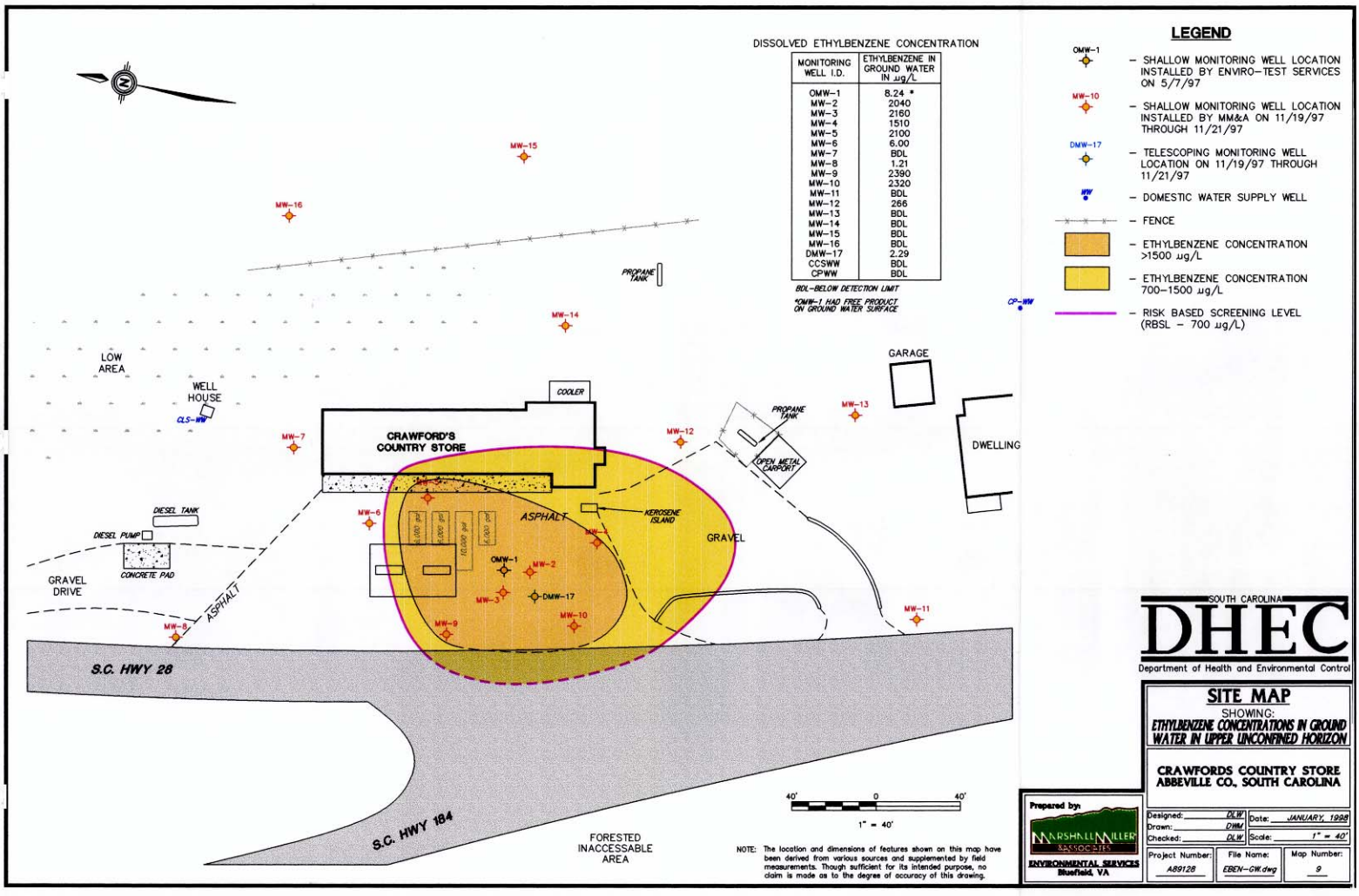
SHOWING:

TOLUENE CONCENTRATIONS IN GROUND WATER IN UPPER UNCONFINED HORIZON

CRAWFORDS COUNTRY STORE
ABBEVILLE CO., SOUTH CAROLINA

Prepared by:
MARSHALL MILLER & ASSOCIATES
ENVIRONMENTAL SERVICES
Bluefield, VA

| | | | |
|---|---|---|---|
| Designed: DLW | Date: JANUARY, 1998 | | |
| Drawn: DWM | | | |
| Checked: DLW | Scale: 1" = 40' | | |
| Project Number: AB9128 | File Name: TOL-GW.dwg | Map Number: 8 | |




SOUTH CAROLINA
DHEC
Department of Health and Environmental Control

# SITE MAP

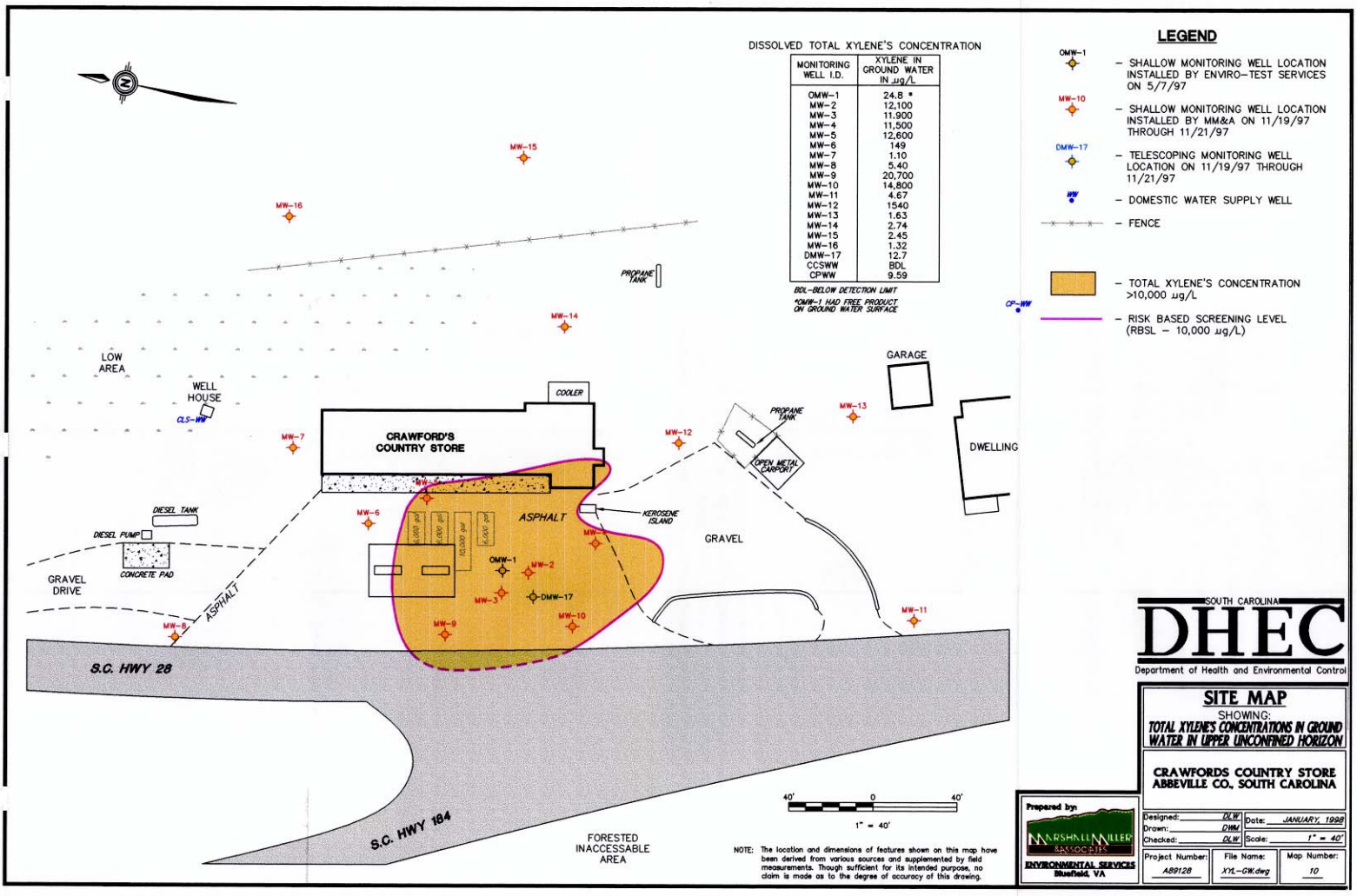
SHOWING:

**ETHYLBENZENE CONCENTRATIONS IN GROUND WATER IN UPPER UNCONFINED HORIZON**

**CRAWFORDS COUNTRY STORE**
**ABBEVILLE CO., SOUTH CAROLINA**

Prepared by:
MARSHALL MILLER & ASSOCIATES
ENVIRONMENTAL SERVICES
Bluefield, VA

| | | | |
|---|---|---|---|
| Designed: DLW | Date: JANUARY, 1998 | | |
| Drawn: DWH | | | |
| Checked: DLW | Scale: 1" = 40' | | |
| Project Number: A89128 | File Name: EBEN-GW.dwg | Map Number: 9 | |




SOUTH CAROLINA
DHEC
Department of Health and Environmental Control

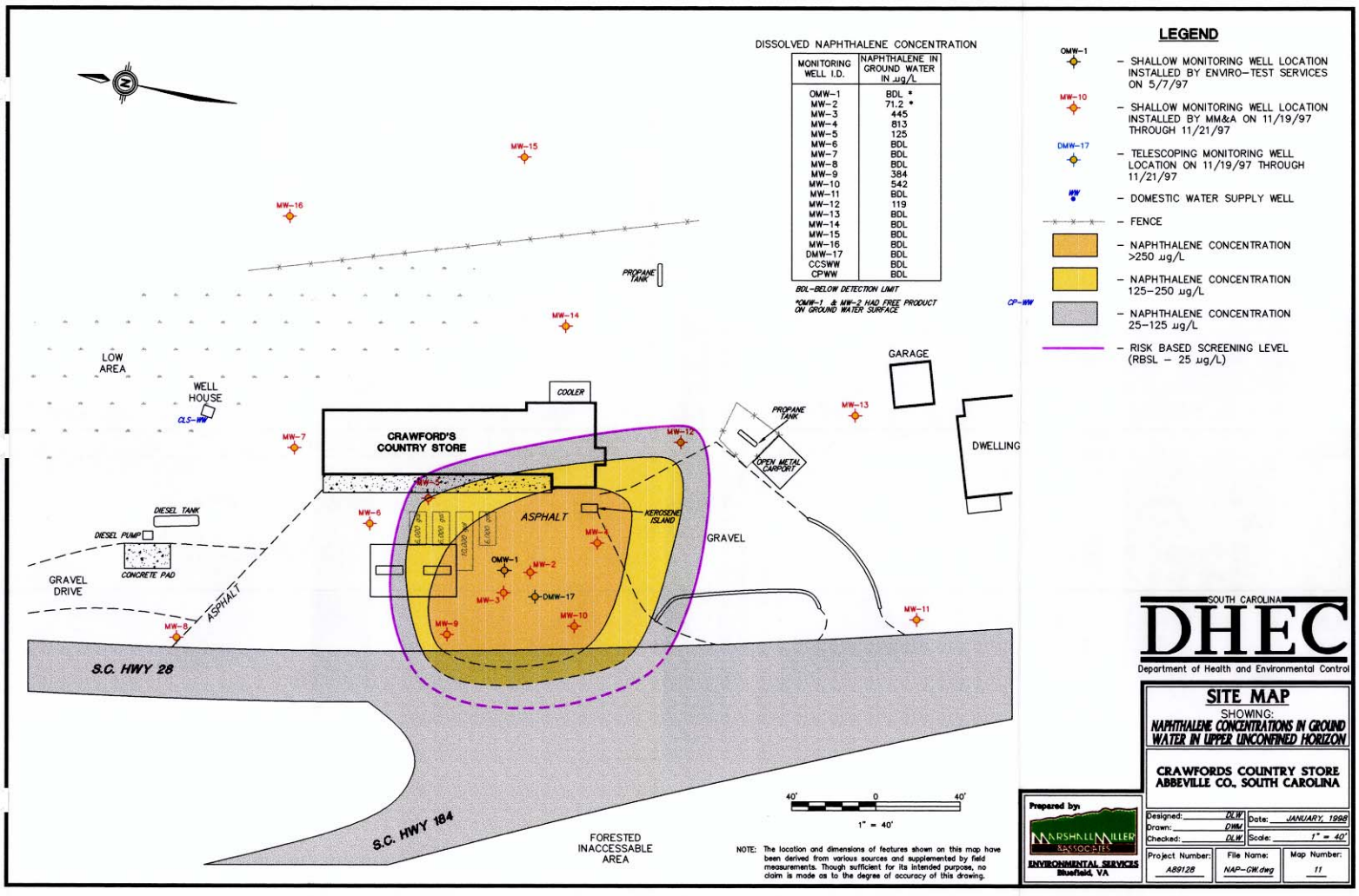
# SITE MAP

SHOWING:
TOTAL XYLENE'S CONCENTRATIONS IN GROUND WATER IN UPPER UNCONFINED HORIZON

CRAWFORDS COUNTRY STORE
ABBEVILLE CO., SOUTH CAROLINA

Prepared by:
MARSHALL MILLER & ASSOCIATES
ENVIRONMENTAL SERVICES
Bluefield, VA

| | | | |
|---|---|---|---|
| Designed: DLW | Date: JANUARY, 1998 | | |
| Drawn: DMW | | | |
| Checked: DLW | Scale: 1" = 40' | | |
| Project Number: A89128 | File Name: XYL-GW.dwg | Map Number: 10 | |




SOUTH CAROLINA DHEC
Department of Health and Environmental Control

# SITE MAP

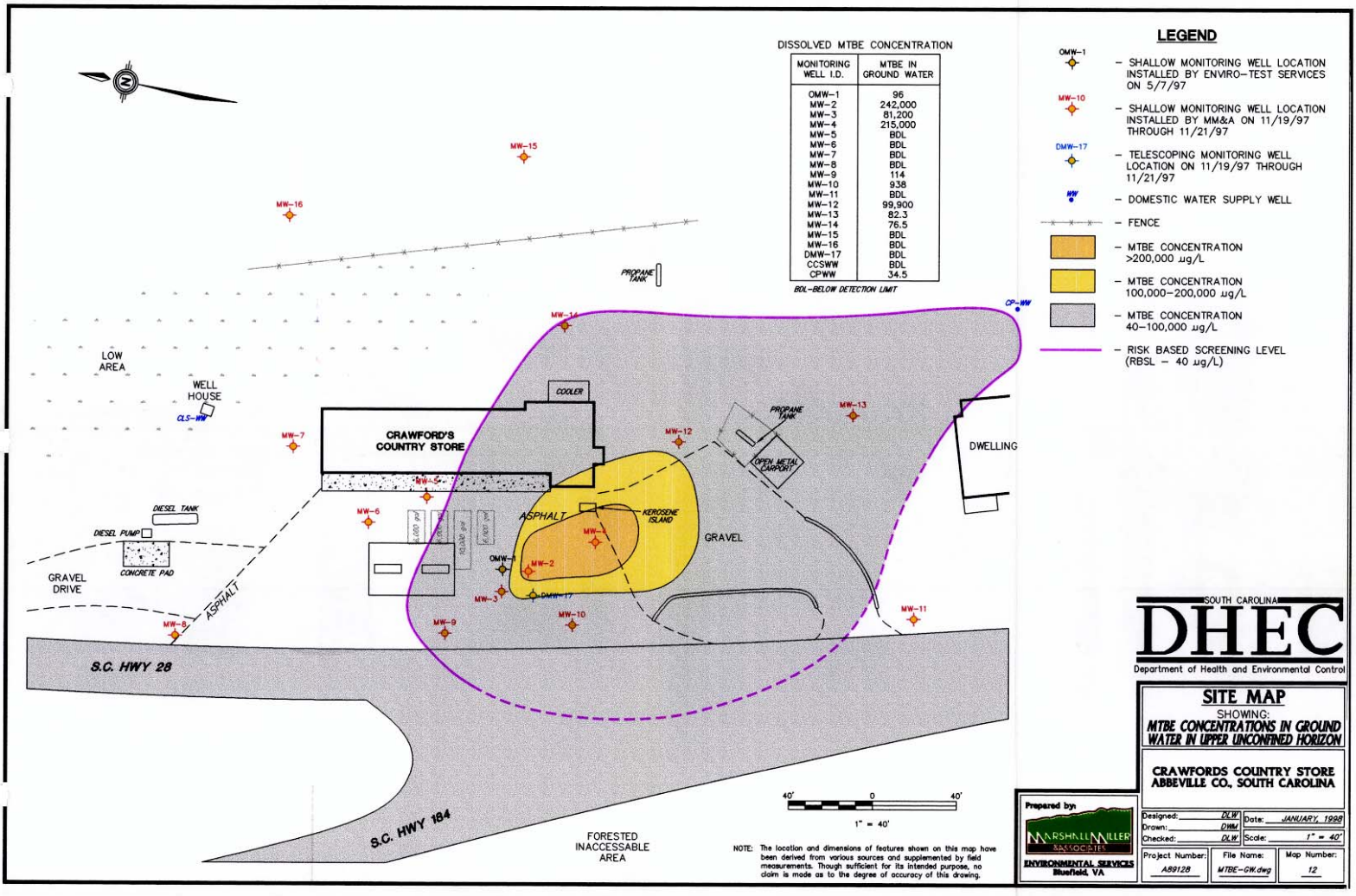
SHOWING:

**NAPHTHALENE CONCENTRATIONS IN GROUND WATER IN UPPER UNCONFINED HORIZON**

**CRAWFORDS COUNTRY STORE**
**ABBEVILLE CO., SOUTH CAROLINA**

Prepared by:
MARSHALL MILLER & ASSOCIATES
ENVIRONMENTAL SERVICES
Bluefield, VA

| | | | |
|---|---|---|---|
| Designed: DLW | Date: JANUARY, 1998 | | |
| Drawn: DMW | | | |
| Checked: DLW | Scale: 1" = 40' | | |
| Project Number: AB9128 | File Name: NAP-GW.dwg | Map Number: 11 | |




DISSOLVED MTBE CONCENTRATION

| MONITORING WELL I.D. | MTBE IN GROUND WATER |
|---|---|
| OMW-1 | 96 |
| MW-2 | 242,000 |
| MW-3 | 81,200 |
| MW-4 | 215,000 |
| MW-5 | BDL |
| MW-6 | BDL |
| MW-7 | BDL |
| MW-8 | BDL |
| MW-9 | 114 |
| MW-10 | 938 |
| MW-11 | BDL |
| MW-12 | 99,900 |
| MW-13 | 82.3 |
| MW-14 | 76.5 |
| MW-15 | BDL |
| MW-16 | BDL |
| DMW-17 | BDL |
| CCSWW | BDL |
| CPWW | 34.5 |

BDL-BELOW DETECTION LIMIT

## LEGEND

- OMW-1 – SHALLOW MONITORING WELL LOCATION INSTALLED BY ENVIRO-TEST SERVICES ON 5/7/97
- MW-10 – SHALLOW MONITORING WELL LOCATION INSTALLED BY MM&A ON 11/19/97 THROUGH 11/21/97
- DMW-17 – TELESCOPING MONITORING WELL LOCATION ON 11/19/97 THROUGH 11/21/97
- WW – DOMESTIC WATER SUPPLY WELL
- FENCE
- MTBE CONCENTRATION >200,000 µg/L
- MTBE CONCENTRATION 100,000-200,000 µg/L
- MTBE CONCENTRATION 40-100,000 µg/L
- RISK BASED SCREENING LEVEL (RBSL - 40 µg/L)

NOTE: The location and dimensions of features shown on this map have been derived from various sources and supplemented by field measurements. Though sufficient for its intended purpose, no claim is made as to the degree of accuracy of this drawing.

SOUTH CAROLINA DHEC
Department of Health and Environmental Control

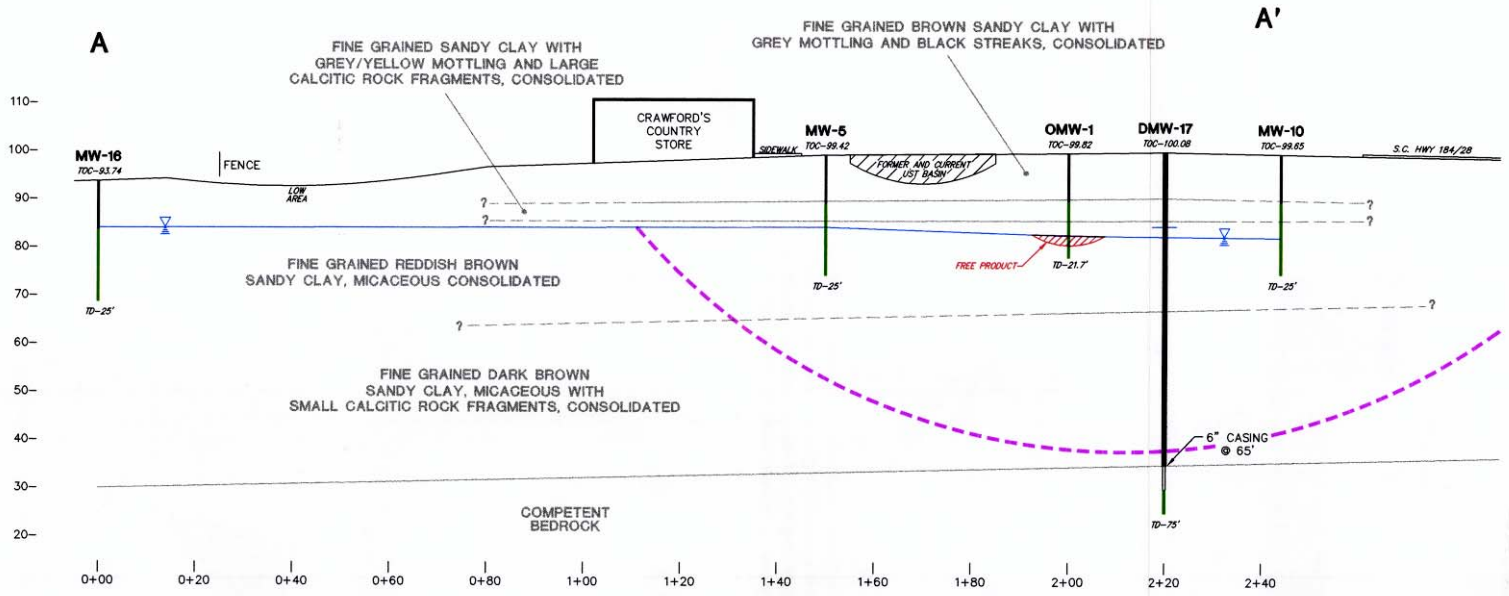
# SITE MAP

SHOWING:
**MTBE CONCENTRATIONS IN GROUND WATER IN UPPER UNCONFINED HORIZON**

**CRAWFORDS COUNTRY STORE**
**ABBEVILLE CO., SOUTH CAROLINA**

Prepared by: MARSHALL MILLER & ASSOCIATES
ENVIRONMENTAL SERVICES
Bluefield, VA

| | | | |
|---|---|---|---|
| Designed: DLW | Date: JANUARY, 1998 | | |
| Drawn: DMM | | | |
| Checked: DLW | Scale: 1" = 40' | | |
| Project Number: A89128 | File Name: MTBE-GW.dwg | Map Number: 12 | |




## LEGEND

| | |
|---|---|
| MW-16 | – MONITORING WELL IDENTIFICATION |
| TOC-93.74 | – TOP OF CASING ELEVATION |
| TD-25' | – TOTAL DEPTH OF WELL |
| | – GROUND WATER LEVEL |
| | – SCREEN |
| | – APPROXIMATE EXTENT OF CHEMICALS OF CONCERN |

SOUTH CAROLINA
DHEC
Department of Health and Environmental Control

NOTE: The location and dimensions of features shown on this map have been derived from various sources and supplemented by field measurements. Though sufficient for its intended purpose, no claim is made as to the degree of accuracy of this drawing.

# CROSS-SECTION A-A'

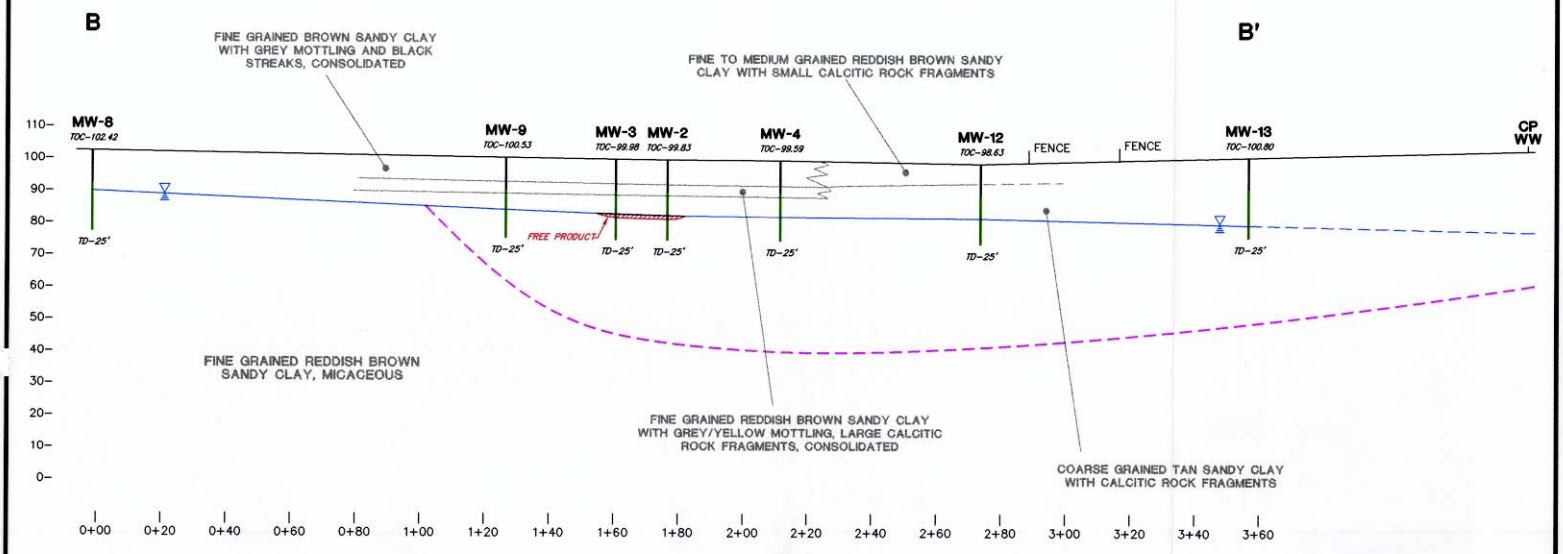
SHOWING:

**APPROXIMATE EXTENT OF COC**

**CRAWFORDS COUNTRY STORE**
**ABBEVILLE CO., SOUTH CAROLINA**

Prepared by:
MARSHALL MILLER & ASSOCIATES
ENVIRONMENTAL SERVICES
Bluefield, VA

| | | | |
|---|---|---|---|
| Designed: DLW/DMW | Date: JANUARY, 1998 | | |
| Drawn: DMW | Scale: 1" = 20' | | |
| Checked: DMW | | | |
| Project Number: AB9128 | File Name: XS-AA.dwg | Map Number: 13 | |




## LEGEND

| | |
|---|---|
| MW-8 | – MONITORING WELL IDENTIFICATION |
| TOC-102.42 | – TOP OF CASING ELEVATION |
| TD-25' | – TOTAL DEPTH OF WELL |
| | – GROUND WATER LEVEL |
| | – SCREEN |
| | – APPROXIMATE EXTENT OF CHEMICALS OF CONCERN |

SOUTH CAROLINA
DHEC
Department of Health and Environmental Control

NOTE: The location and dimensions of features shown on this map have been derived from various sources and supplemented by field measurements. Though sufficient for its intended purpose, no claim is made as to the degree of accuracy of this drawing.

# CROSS-SECTION B-B'

SHOWING:

***APPROXIMATE EXTENT OF COC***

**CRAWFORDS COUNTRY STORE**
**ABBEVILLE CO., SOUTH CAROLINA**

Prepared by:
MARSHALL MILLER & ASSOCIATES
ENVIRONMENTAL SERVICES
Bluefield, VA

| | | | |
|---|---|---|---|
| Designed: | DLW,DWM | Date: | JANUARY, 1998 |
| Drawn: | DWM | | |
| Checked: | DWM | Scale: | 1" = 30' |
| Project Number: | File Name: | Map Number: | |
| AB9128 | XS-BB.dwg | 14 | |

*Appendix III*
*Soil Boring Logs*
*Ground Water Sampling Forms*

Water Sampling Field Data Record Sheet

Technician(s): Jim Owrey  Location No.: MW-15

Job No.: A89128  Blank No.:

Time:  Date(s): 12-1-97

Additional notes (especially weather) on back . yes / no

WELL DATA:

Type Water Pipe: PVC  Diameter Water Pipe: 2"

Condition of Guard Pipe, Lock, Water Pipe, Etc.:

Measured from:

Depth of Well: 25  Top of Guard Pipe:

Depth of Water: 5.1  Top of Water Pipe: ✓

Height of Water: 19.9  Top of Ground:

Volume of Water in Well: 3.18 (Y = 3.14 r2h)

2" = .16 gal/ft, 4" = .65 gal/ft

EVACUATION DATA:

✓ Bailer  Pump  Airlift  Other

Volume Removed or Time Pumped:

~ 6.5 gallons

Equipment Cleaned: ✓ Field  Lab

✓ Distilled Water  Sample Water  AKONOX  Other

SAMPLING DATA:  Date Sampled: 12-1-97  Time:

Color:  Odor:

| | | | | | |
|---|---|---|---|---|---|
| pH | | | | | |
| Dissolved O2 | | | | | |
| Temperature | | | | | |
| Conductivity uMHOS/cm | | | | | |

Samples Collected:

| Preservative | Volume | Parameters | Filtered | Iced | Lab No. |
|---|---|---|---|---|---|
| HCl | 40ml | BTEX NAPMTBE | | | |
| HCl | 40ml | EDB | | | |
| HNO3 | 250ml | Lead | | | |
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Water Sampling Field Data Record Sheet

Technician(s): Jim Owrey  Location No.: MW-16

Job No.: A89128  Blank No.:

Time:  Date(s): 12-1-97

Additional notes (especially weather) on back . yes / no

WELL DATA:

Type Water Pipe: PVC  Diameter Water Pipe: 2"

Condition of Guard Pipe, Lock, Water Pipe, Etc:

Measured from:

Depth of Well: 25  Top of Guard Pipe:

Depth of Water: 9.69  Top of Water Pipe: ✓

Height of Water: 15.31  Top of Ground:

Volume of Water in Well: 2.44 . (V = 3.14 r2h)

2" = .16 gal/ft, 4" = .65 gal/ft

EVACUATION DATA:

✓ Bailer  Pump  Airlift  Other

Volume Removed or Time Pumped:

~4.5 gallons

Equipment Cleaned: ✓ Field  Lab

✓ Distilled Water  Sample Water  AKONOX  Other

SAMPLING DATA:  Date Sampled: 12-1-97  Time:

Color:  Odor:

| | | | | | |
|---|---|---|---|---|---|
| pH | | | | | |
| Dissolved O2 | | | | | |
| Temperature | | | | | |
| Conductivity uMHOS/cm | | | | | |

Samples Collected:

| Preservative | Volume | Parameters | Filtered | Iced | Lab No. |
|---|---|---|---|---|---|
| HCl | 40ml | BTEX NAP MTBE | | | |
| HCl | 40ml | EDB | | | |
| HNO3 | 250ml | Lead | | | |
| | | | | | |
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| | | | | | |

Water Sampling Field Data Record Sheet

Technician(s): Jim Owrey  Location No.: DMW-17

Job No.: A89128  Blank No.:

Time:  Date(s): 12-1-97

Additional notes (especially weather) on back . yes / no

WELL DATA:

Type Water Pipe: PVC  Diameter Water Pipe: 2"

Condition of Guard Pipe, Lock, Water Pipe, Etc.:

Measured from:

Depth of Well: 25  Top of Guard Pipe:

Depth of Water: 15.53  Top of Water Pipe: ✓

Height of Water: 9.47  Top of Ground:

Volume of Water in Well: 1.5 (V = 3.14 r2h)

2" = .16 gal/ft, 4" = .65 gal/ft

EVACUATION DATA:

✓ Bailer  Pump  Airlift  Other

Volume Removed or Time Pumped:

~4.5 gallon

Equipment Cleaned: ✓ Field  Lab

✓ Distilled Water  Sample Water  AKONOX  Other

SAMPLING DATA:  Date Sampled: 12-1-97  Time:

Color:  Odor:

| | | | | | |
|---|---|---|---|---|---|
| pH | | | | | |
| Dissolved O2 | | | | | |
| Temperature | | | | | |
| Conductivity uMHOS/cm | | | | | |

Samples Collected:

| Preservative | Volume | Parameters | Filtered | Iced | Lab No. |
|---|---|---|---|---|---|
| HCl | 40ml | BTEX NAPMTBE | | | |
| HCl | 40ml | EDB | | | |
| HNO3 | 250ml | Lead | | | |
| | | | | | |
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# *Appendix IV*
# *Monitoring Well Construction Diagrams*

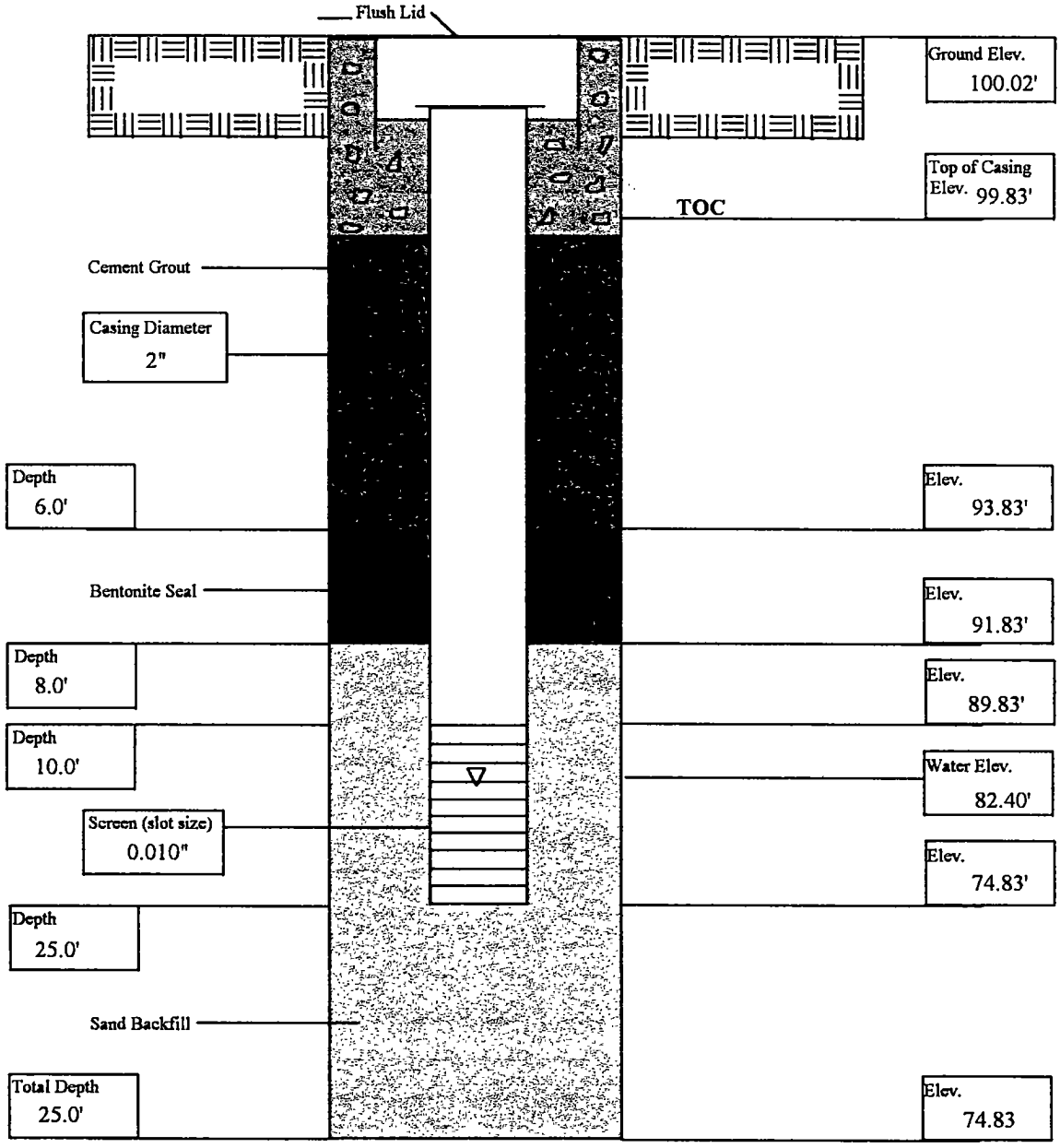
# Monitor Well Construction Diagram

| Client: | Project: | PC/Facility I.D. Number: | Project Number: |
|---|---|---|---|
| SCDHEC | Rapid Assessment | 12335 | A89128 |

| Well Number: | Location: | Date Started: | Date Completed: |
|---|---|---|---|
| MW-2 | Crawford's Country Store | 11/19/97 | 11/20/97 |

| Drilling Method: | Hole Diameter: | Geologist/Engineer: | Driller: |
|---|---|---|---|
| Hollow Stem Auger | ± 6" | J. Owery | American Environmental |

| Remarks: | Latitude: | Longitude: |
|---|---|---|
| 15 feet screen and 10' riser | N 34° 18.152' | W 82° 32.471' |




MARSHALL MILLER & ASSOCIATES

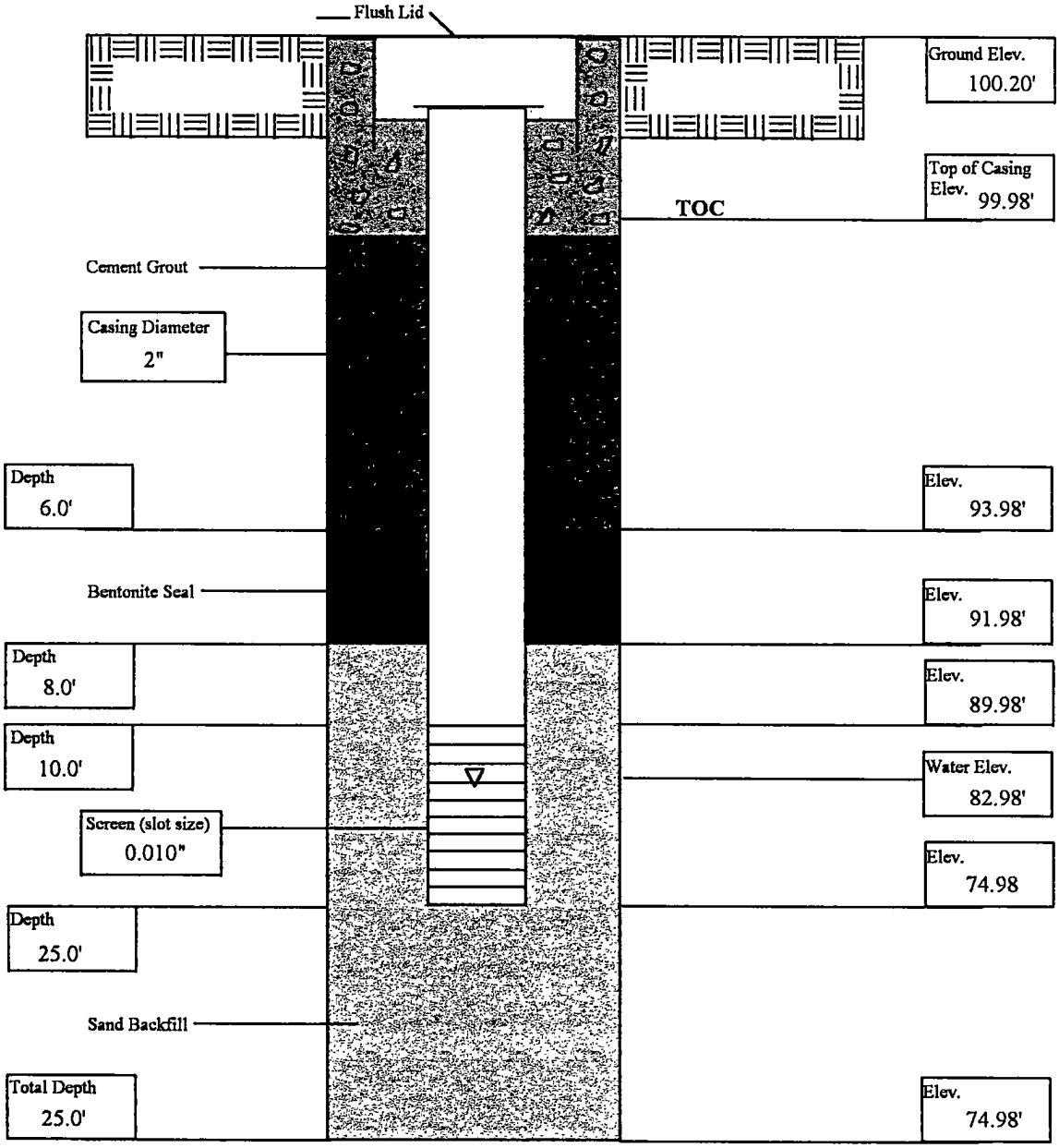
# Monitor Well Construction Diagram

| Client: | Project: | PC/Facility I.D. Number: | Project Number: |
|---|---|---|---|
| SCDHEC | Rapid Assessment | 12335 | A89128 |

| Well Number: | Location: | Date Started: | Date Completed: |
|---|---|---|---|
| MW-3 | Crawford's Country Store | 11/19/97 | 11/20/97 |

| Drilling Method: | Hole Diameter: | Geologist/Engineer: | Driller: |
|---|---|---|---|
| Hollow Stem Auger | ± 6" | J. Owery | American Environmental |

| Remarks: | Latitude: | Longitude: |
|---|---|---|
| 15 feet screen and 10' riser | N 34° 18.154' | W 82° 32.475' |




MARSHALL MILLER & ASSOCIATES

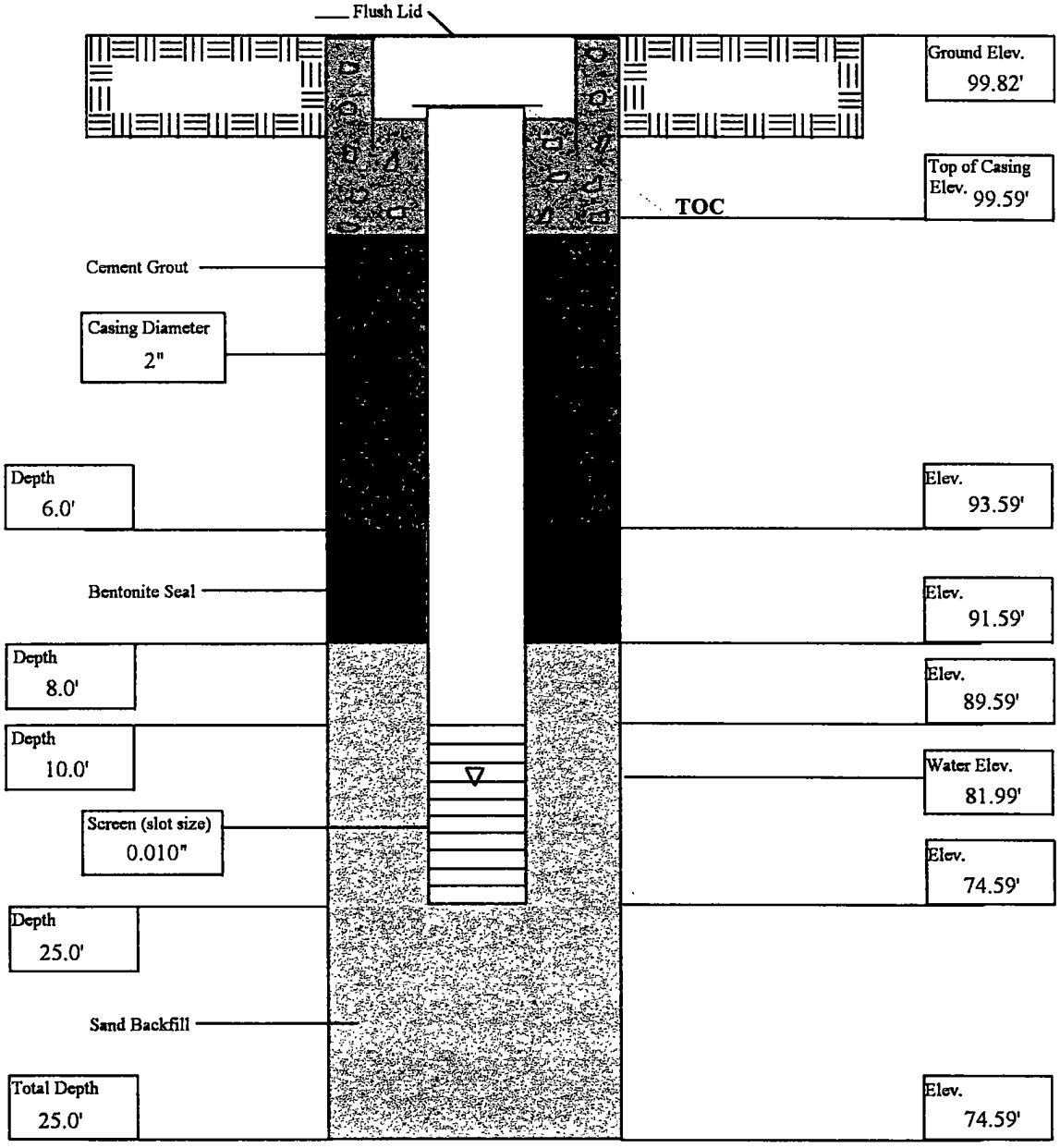
# Monitor Well Construction Diagram

| Client: | Project: | PC/Facility I.D. Number: | Project Number: |
|---|---|---|---|
| SCDHEC | Rapid Assessment | 12335 | A89128 |

| Well Number: | Location: | Date Started: | Date Completed: |
|---|---|---|---|
| MW-4 | Crawford's Country Store | 11/19/97 | 11/20/97 |

| Drilling Method: | Hole Diameter: | Geologist/Engineer: | Driller: |
|---|---|---|---|
| Hollow Stem Auger | ± 6" | J. Owery | American Environmental |

| Remarks: | Latitude: | Longitude: |
|---|---|---|
| 15 feet screen and 10' riser | N 34° 18.147' | W 82° 32.465' |




MARSHALL MILLER & ASSOCIATES

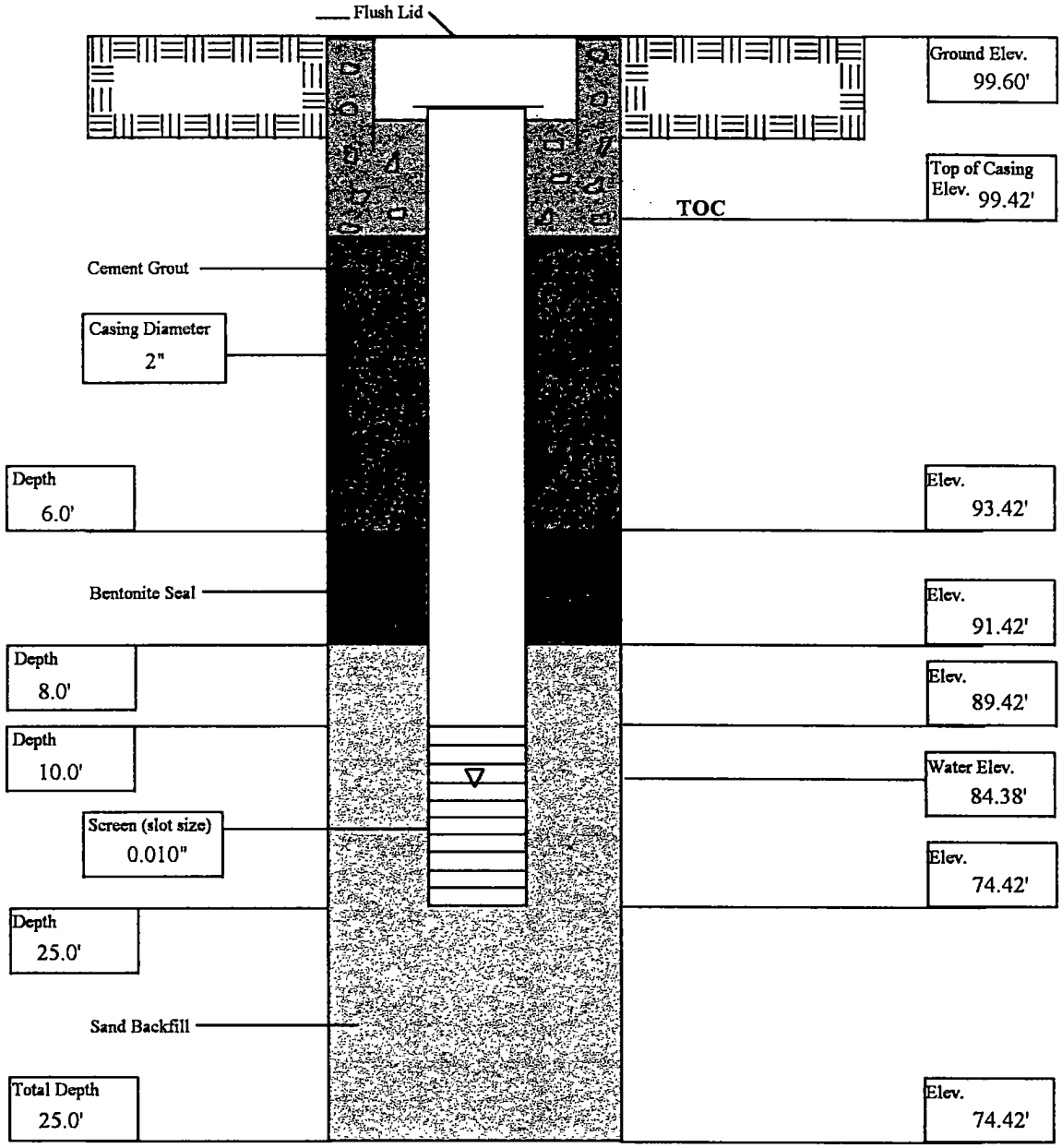
# Monitor Well Construction Diagram

| Client: | Project: | PC/Facility I.D. Number: | Project Number: |
|---|---|---|---|
| SCDHEC | Rapid Assessment | 12335 | A89128 |

| Well Number: | Location: | Date Started: | Date Completed: |
|---|---|---|---|
| MW-5 | Crawford's Country Store | 11/19/97 | 11/20/97 |

| Drilling Method: | Hole Diameter: | Geologist/Engineer: | Driller: |
|---|---|---|---|
| Hollow Stem Auger | ± 6" | J. Owery | American Environmental |

| Remarks: | Latitude: | Longitude: |
|---|---|---|
| 15 feet screen and 10' riser | N 34° 18.161' | W 82° 32.465' |




MARSHALL MILLER & ASSOCIATES

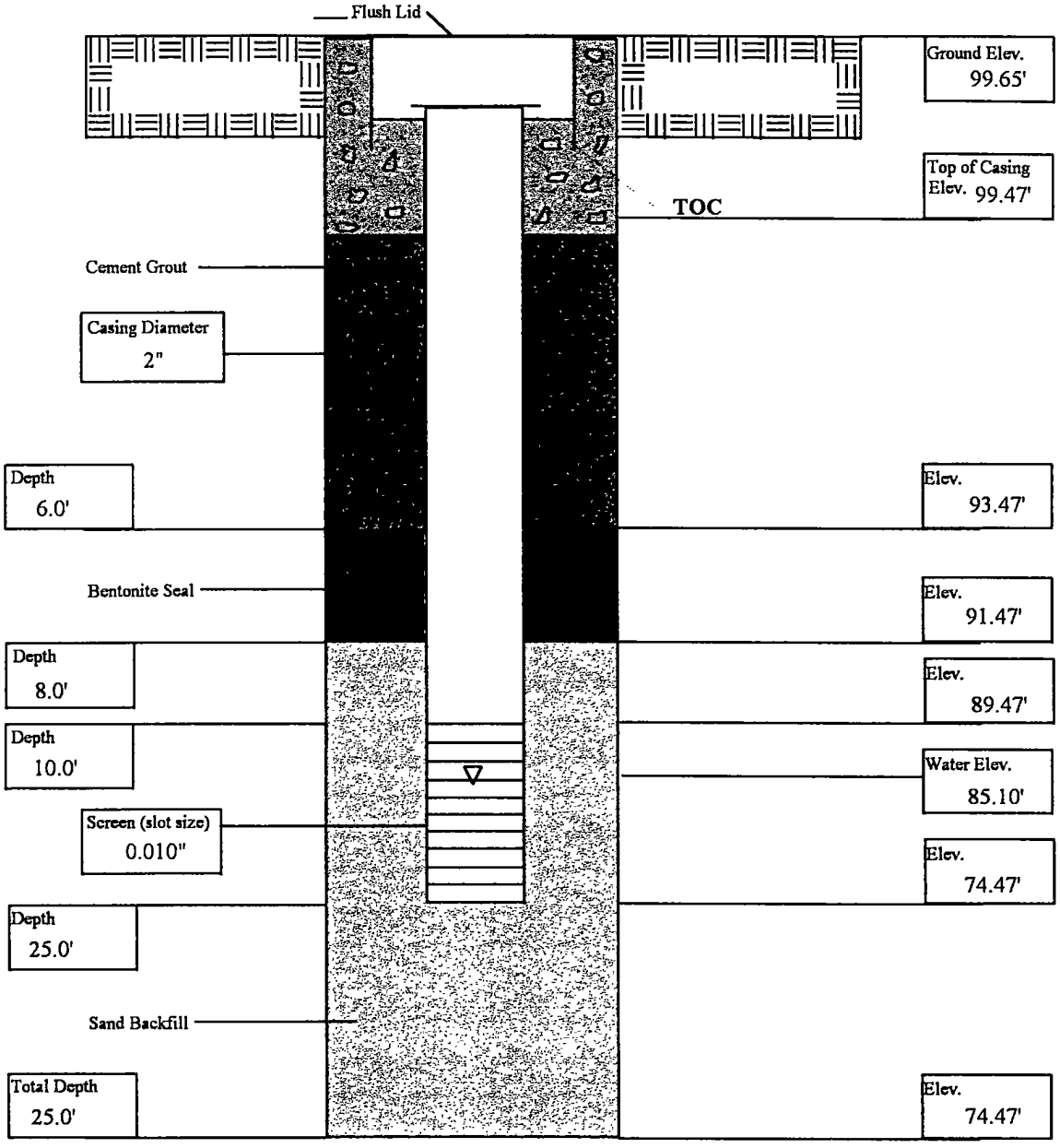
# Monitor Well Construction Diagram

| Client: | Project: | PC/Facility I.D. Number: | Project Number: |
|---|---|---|---|
| SCDHEC | Rapid Assessment | 12335 | A89128 |

| Well Number: | Location: | Date Started: | Date Completed: |
|---|---|---|---|
| MW-6 | Crawford's Country Store | 11/19/97 | 11/20/97 |

| Drilling Method: | Hole Diameter: | Geologist/Engineer: | Driller: |
|---|---|---|---|
| Hollow Stem Auger | ± 6" | J. Owery | American Environmental |

| Remarks: | Latitude: | Longitude: |
|---|---|---|
| 15 feet screen and 10' riser | N 34° 18.165' | W 82° 32.468' |




MARSHALL MILLER & ASSOCIATES

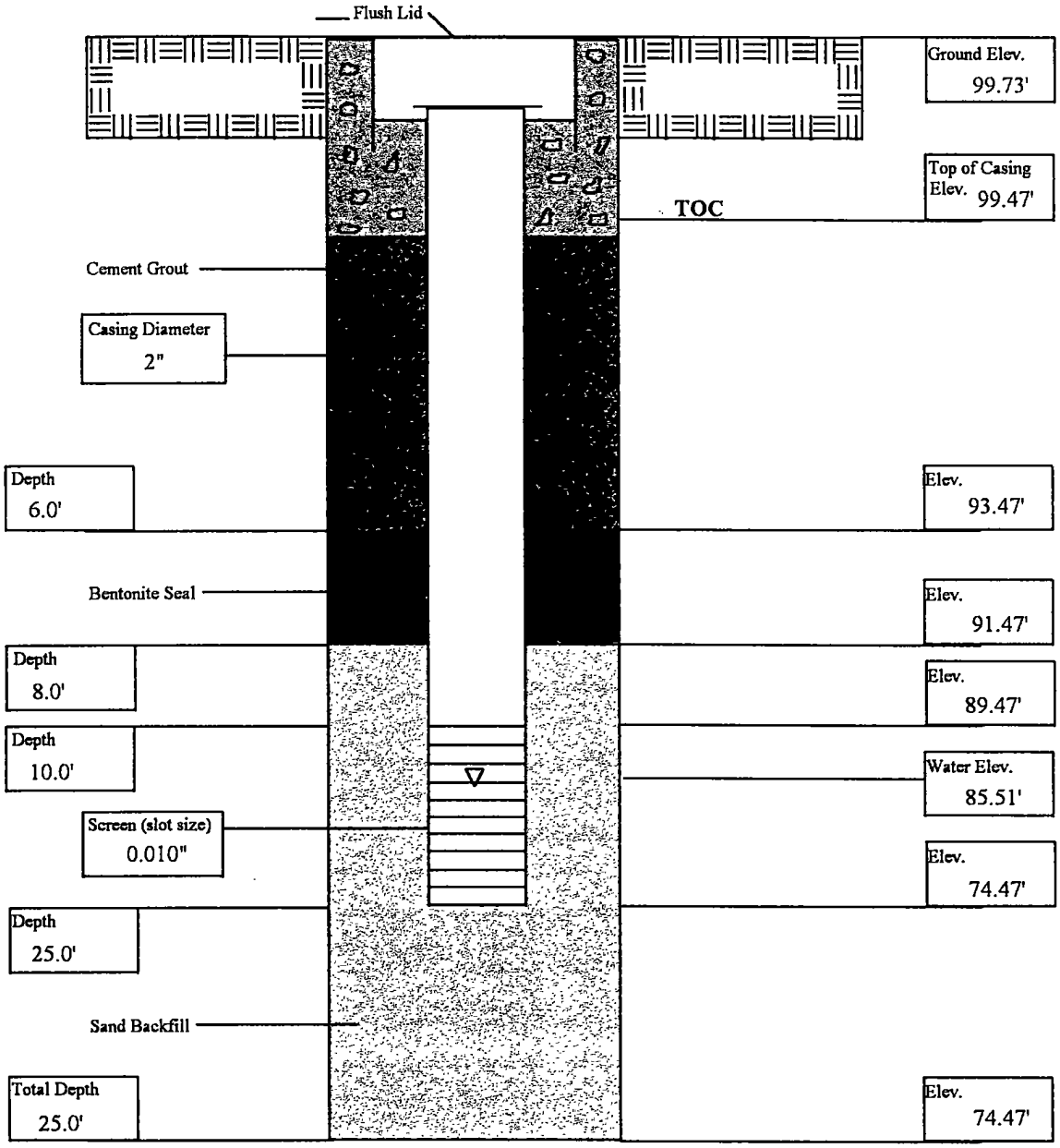
# Monitor Well Construction Diagram

| Client: | Project: | PC/Facility I.D. Number: | Project Number: |
|---|---|---|---|
| SCDHEC | Rapid Assessment | 12335 | A89128 |

| Well Number: | Location: | Date Started: | Date Completed: |
|---|---|---|---|
| MW-7 | Crawford's Country Store | 11/19/97 | 11/20/97 |

| Drilling Method: | Hole Diameter: | Geologist/Engineer: | Driller: |
|---|---|---|---|
| Hollow Stem Auger | ± 6" | J. Owery | American Environmental |

| Remarks: | Latitude: | Longitude: |
|---|---|---|
| 15 feet screen and 10' riser | N 34° 18.171' | W 82° 32.462' |

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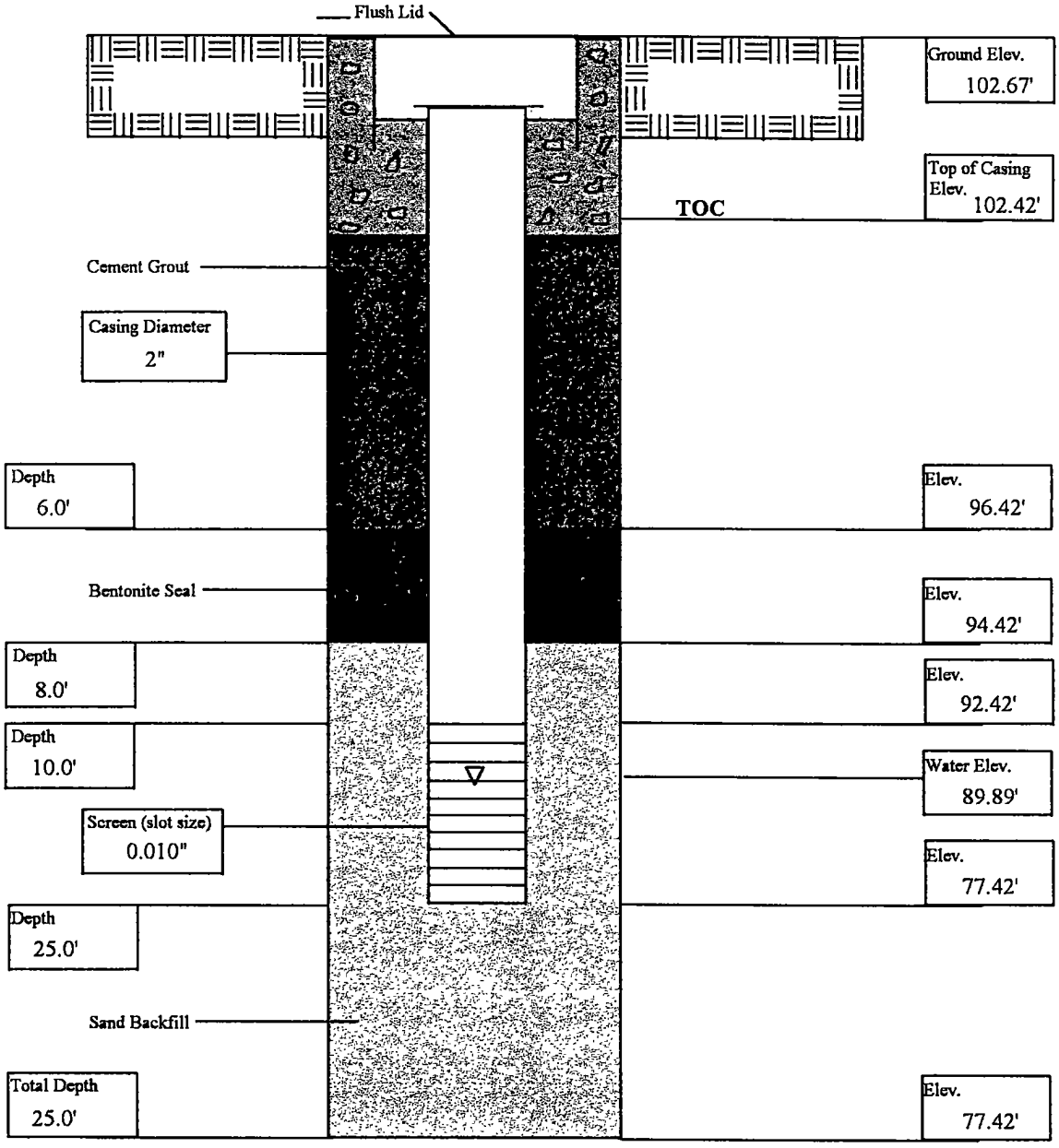
# Monitor Well Construction Diagram

| Client: | Project: | PC/Facility I.D. Number: | Project Number: |
|---|---|---|---|
| SCDHEC | Rapid Assessment | 12335 | A89128 |

| Well Number: | Location: | Date Started: | Date Completed: |
|---|---|---|---|
| MW-8 | Crawford's Country Store | 11/20/97 | 11/21/97 |

| Drilling Method: | Hole Diameter: | Geologist/Engineer: | Driller: |
|---|---|---|---|
| Hollow Stem Auger | ± 6" | J. Owery | American Environmental |

| Remarks: | Latitude: | Longitude: |
|---|---|---|
| 15 feet screen and 10' riser | N 34° 18.178' | W 82° 32.482' |




MARSHALL MILLER & ASSOCIATES

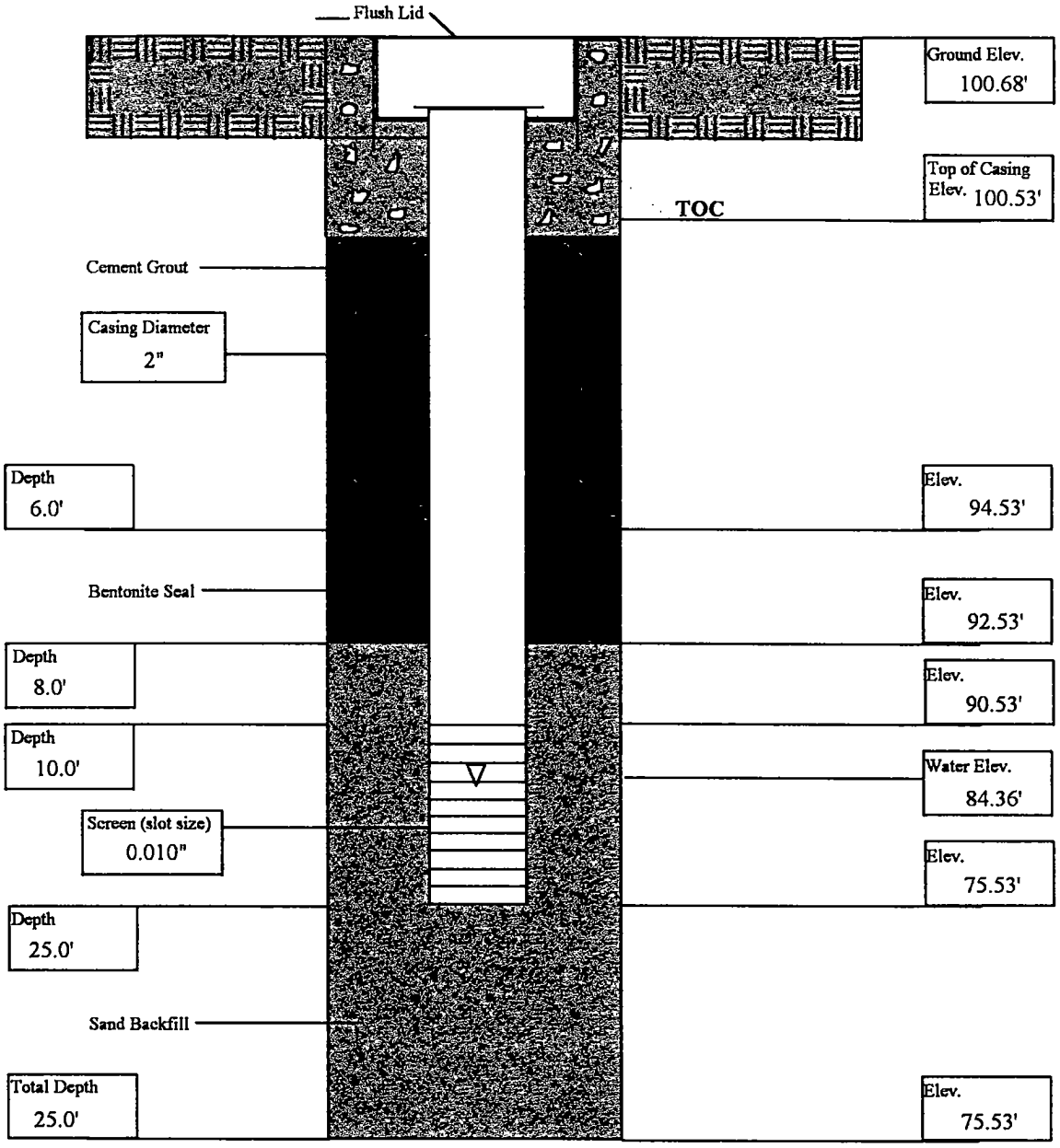
# Monitor Well Construction Diagram

| Client: | Project: | PC/Facility I.D. Number: | Project Number: |
|---|---|---|---|
| SCDHEC | Rapid Assessment | 12335 | A89128 |

| Well Number: | Location: | Date Started: | Date Completed: |
|---|---|---|---|
| MW-9 | Crawford's Country Store | 11/20/97 | 11/21/97 |

| Drilling Method: | Hole Diameter: | Geologist/Engineer: | Driller: |
|---|---|---|---|
| Hollow Stem Auger | ± 6" | J. Owery | American Environmental |

| Remarks: | Latitude: | Longitude: |
|---|---|---|
| 15 feet screen and 10' riser | N 34° 18.158' | W 82° 32.478' |




MARSHALL MILLER & ASSOCIATES

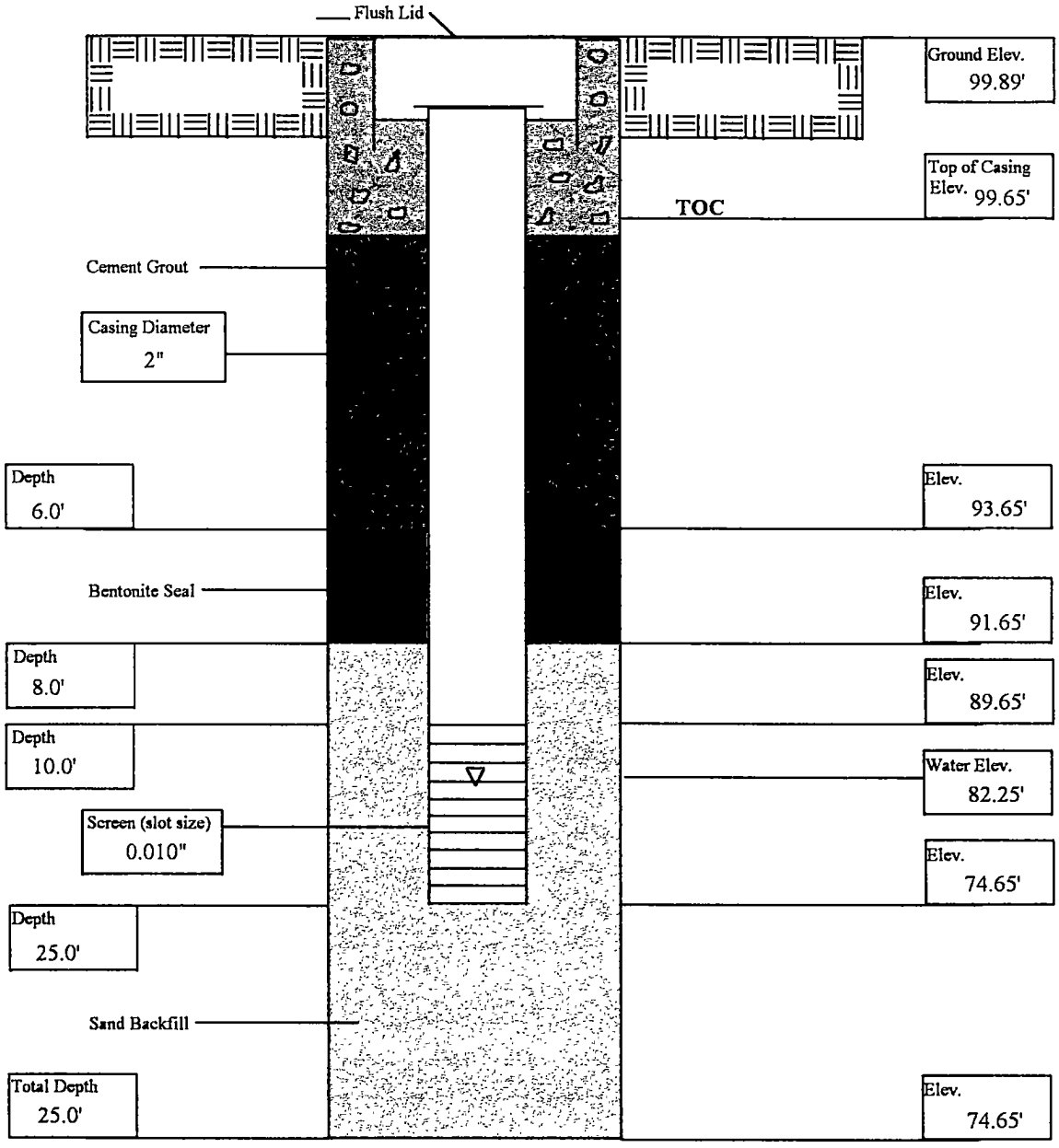
# Monitor Well Construction Diagram

| Client: | Project: | PC/Facility I.D. Number: | Project Number: |
|---|---|---|---|
| SCDHEC | Rapid Assessment | 12335 | A89128 |

| Well Number: | Location: | Date Started: | Date Completed: |
|---|---|---|---|
| MW-10 | Crawford's Country Store | 11/20/97 | 11/21/97 |

| Drilling Method: | Hole Diameter: | Geologist/Engineer: | Driller: |
|---|---|---|---|
| Hollow Stem Auger | ± 6" | J. Owery | American Environmental |

| Remarks: | Latitude: | Longitude: |
|---|---|---|
| 15 feet screen and 10' riser | N 34° 18.148' | W 82° 32.477' |




MARSHALL MILLER & ASSOCIATES

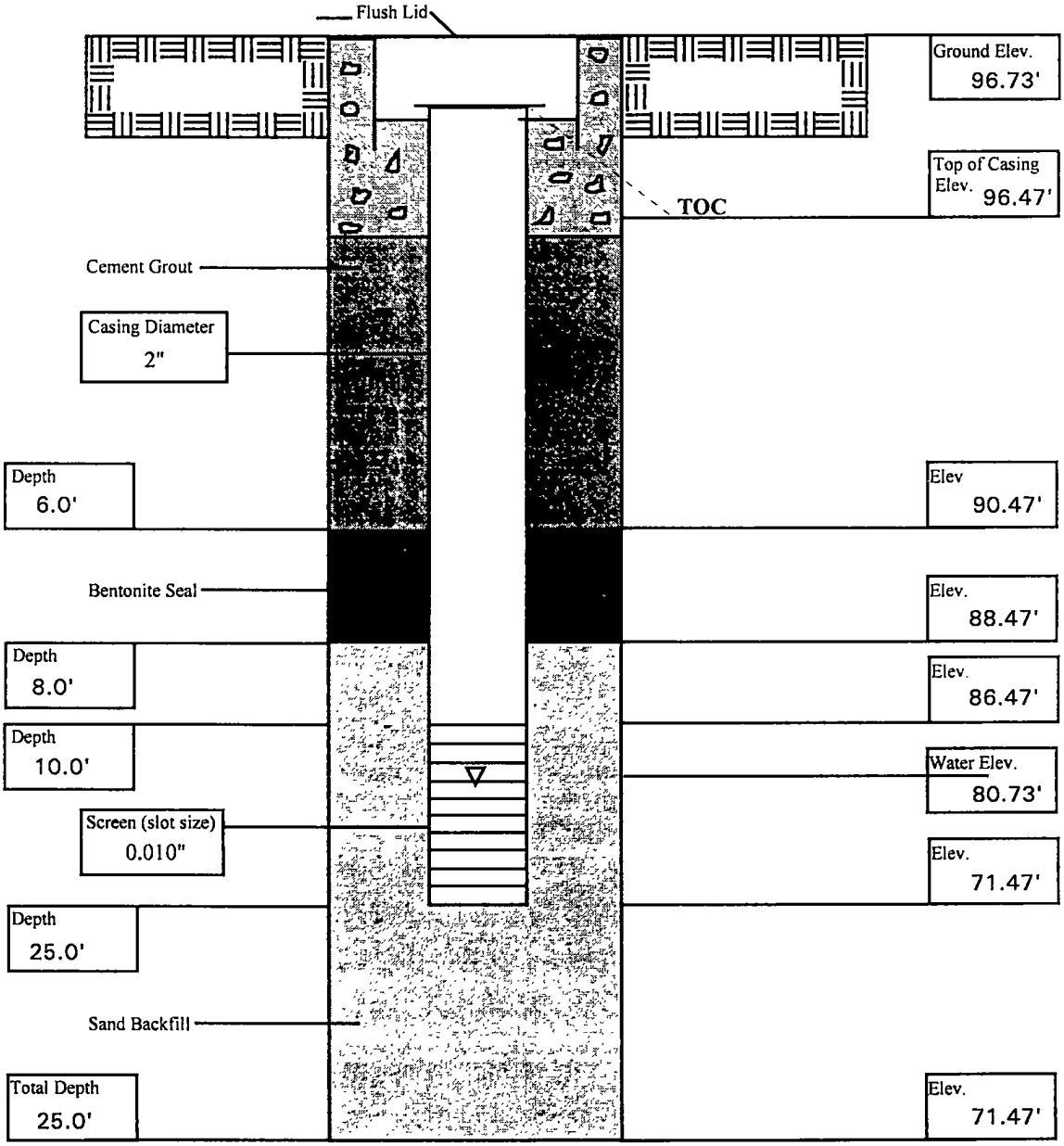
# Monitor Well Construction Diagram

| Client: | Project: | PC/Facility I.D. Number: | Project Number: |
|---|---|---|---|
| SCDHEC | Rapid Assessment | 12335 | A89128 |

| Well Number: | Location: | Date Started: | Date Completed: |
|---|---|---|---|
| MW-11 | Crawford's Country Store | 11/20/97 | 11/21/97 |

| Drilling Method: | Hole Diameter: | Geologist/Engineer: | Driller: |
|---|---|---|---|
| Hollow Stem Auger | ± 6" | J. Owery | American Environmenta |

| Remarks: | Latitude: | Longitude: |
|---|---|---|
| 15 feet screen and 10' riser | N 34° 18.121' | W 82° 32.467' |




MARSHALL MILLER & ASSOCIATES

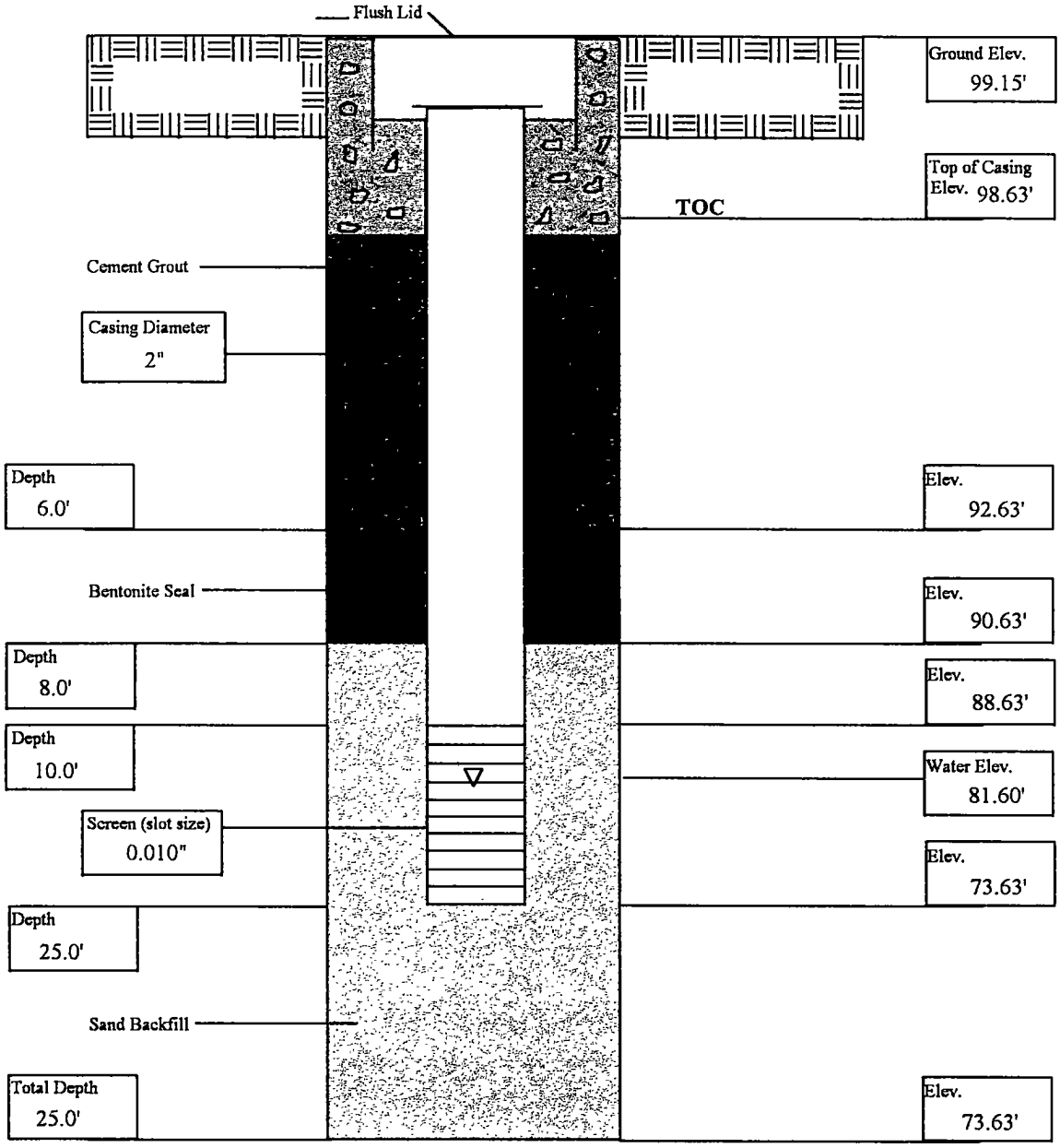
# Monitor Well Construction Diagram

| Client: | Project: | PC/Facility I.D. Number: | Project Number: |
|---|---|---|---|
| SCDHEC | Rapid Assessment | 12335 | A89128 |

| Well Number: | Location: | Date Started: | Date Completed: |
|---|---|---|---|
| MW-12 | Crawford's Country Store | 11/20/97 | 11/21/97 |

| Drilling Method: | Hole Diameter: | Geologist/Engineer: | Driller: |
|---|---|---|---|
| Hollow Stem Auger | ± 6" | J. Owery | American Environmental |

| Remarks: | Latitude: | Longitude: |
|---|---|---|
| 15 feet screen and 10' riser | N 34° 18.141' | W 82° 32.455' |




MARSHALL MILLER & ASSOCIATES

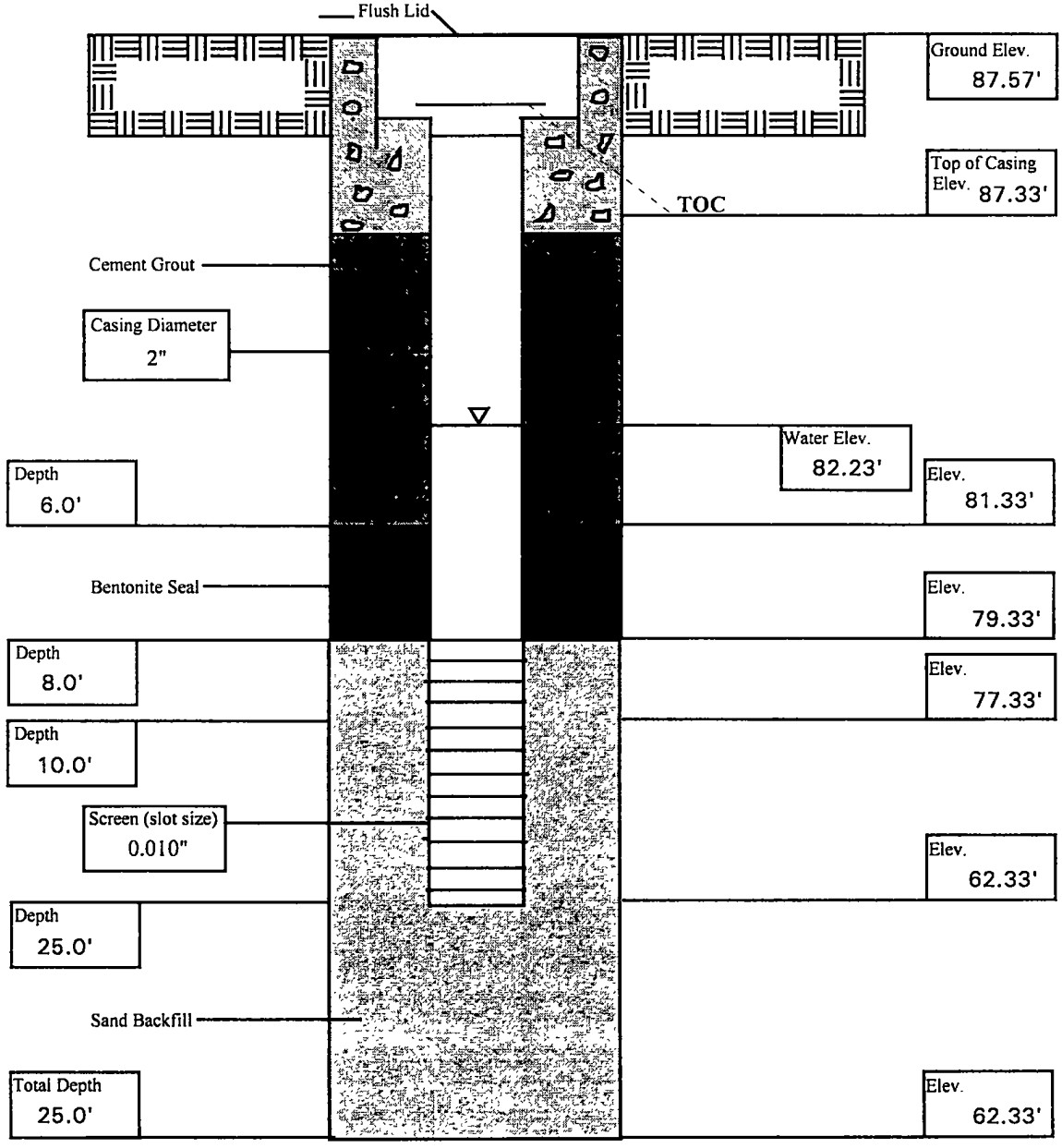
# Monitor Well Construction Diagram

| Client: | Project: | PC/Facility I.D. Number: | Project Number: |
|---|---|---|---|
| SCDHEC | Rapid Assessment | 12335 | A89128 |

| Well Number: | Location: | Date Started: | Date Completed: |
|---|---|---|---|
| MW-15 | Crawford's Country Store | 11/20/97 | 11/21/97 |

| Drilling Method: | Hole Diameter: | Geologist/Engineer: | Driller: |
|---|---|---|---|
| Hollow Stem Auger | ± 6" | J. Owery | American Environmenta |

| Remarks: | Latitude: | Longitude: |
|---|---|---|
| 15 feet screen and 10' riser | N 34° 18.158' | W 82° 32.431' |




MARSHALL MILLER & ASSOCIATES

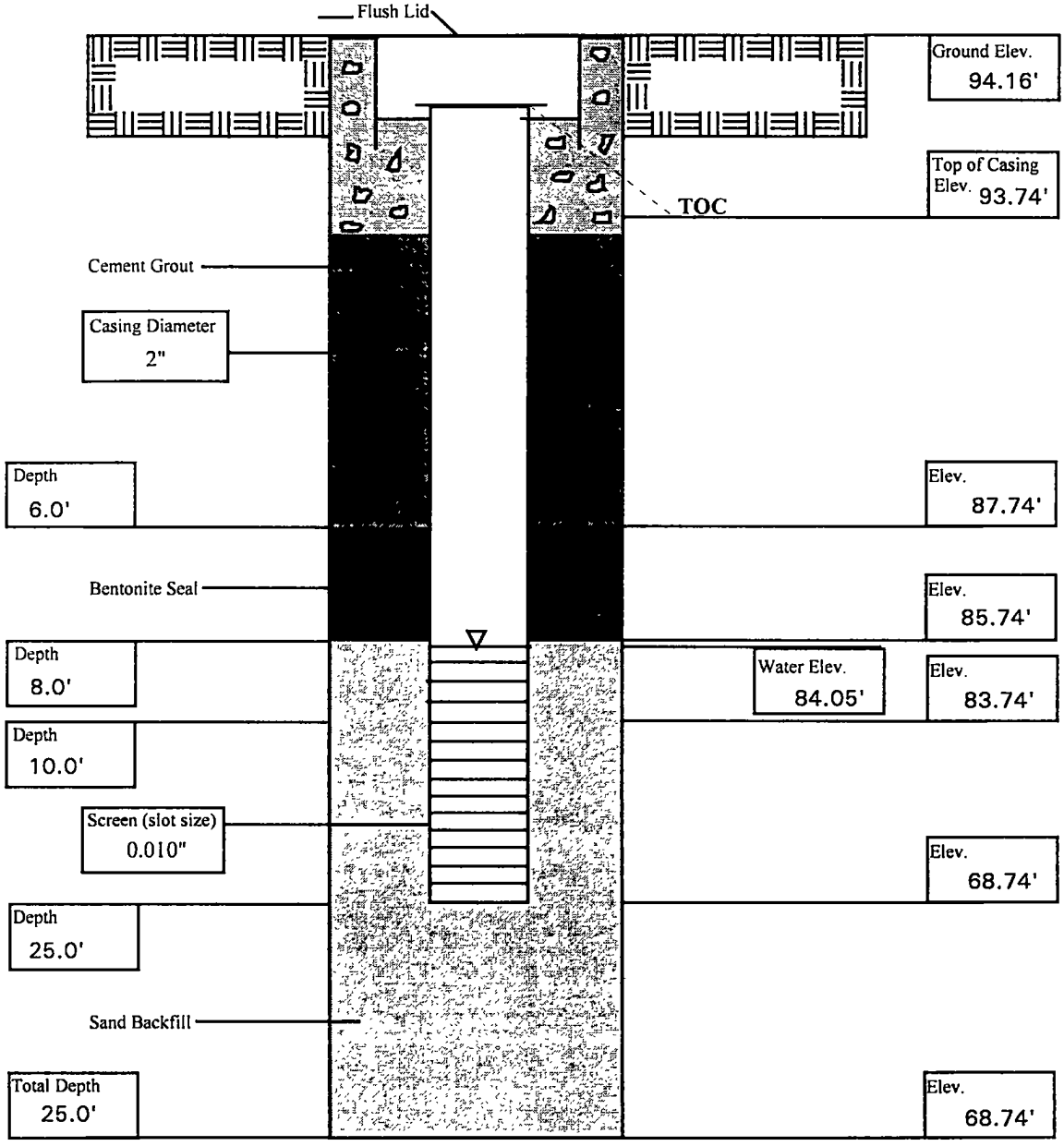
# Monitor Well Construction Diagram

| Client: | Project: | PC/Facility I.D. Number: | Project Number: |
|---|---|---|---|
| SCDHEC | Rapid Assessment | 12335 | A89128 |

| Well Number: | Location: | Date Started: | Date Completed: |
|---|---|---|---|
| MW-16 | Crawford's Country Store | 11/20/97 | 11/21/97 |

| Drilling Method: | Hole Diameter: | Geologist/Engineer: | Driller: |
|---|---|---|---|
| Hollow Stem Auger | ± 6" | J. Owery | American Environmenta |

| Remarks: | Latitude: | Longitude: |
|---|---|---|
| 15 feet screen and 10' riser | N 34° 18.175' | W 82° 32.441' |




MARSHALL MILLER & ASSOCIATES

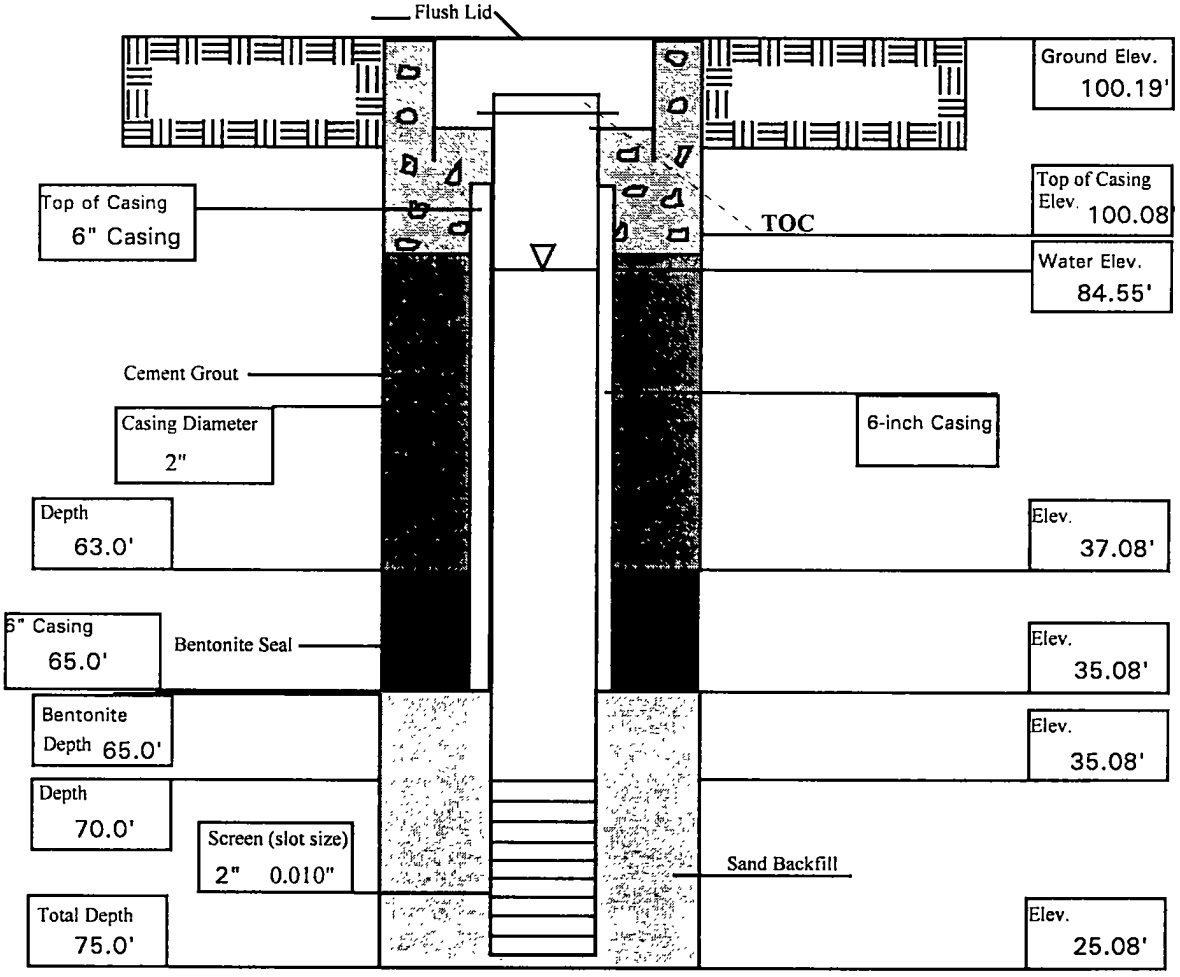
# Monitor Well Construction Diagram

| Client: | Project: | PC/Facility I.D. Number: | Project Number: |
|---|---|---|---|
| SCDHEC | Rapid Assessment | 12335 | A89128 |

| Well Number: | Location: | Date Started: | Date Completed: |
|---|---|---|---|
| DMW-17 | Crawford's Country Store | 11/19/97 | 11/21/97 |

| Drilling Method: | Hole Diameter: | Geologist/Engineer: | Driller: |
|---|---|---|---|
| Air/Mud Rotary | ± 8" | J. Owery | American Environmental |

| Remarks: | Laterial: | Longitude: |
|---|---|---|
| Type III | N 34° 18.151' | W 82° 32.473' |




MARSHALL MILLER & ASSOCIATES

# Soil Boring Log

**Company** SCDHEC
**Project** Crawfords Country Store
**Project No.** A89128
**Facility I.D.**

| | | | |
|---|---|---|---|
| Date Started | 11/10/97 | Hole No. | SB-1 |
| Date Completed | 11/10/97 | Type of Hole | Geoprobe |
| Logged by | J. Owrey | Dia. of Hole | ±2" |
| Ground Elev. | | Top of Casing | |

| From | To | Thickness | Description |
|---|---|---|---|
| 0.0 | 4.0 | 4.0 | *Clay, sandy, brown with gray mottling, black streaking, fine grain, consolidated, firm, dry, PID = 2.5 ppm* |
| 4.0 | 8.0 | 4.0 | *Clay, sandy, brown with gray mottling, black streaking, fine grain, consolidated, firm, moist, PID = 150 ppm* |
| 8.0 | 12.0 | 4.0 | *Clay, sandy, reddish brown with gray/yellow mottling, fine grain, large calcite rock fragments, consolidated, firm, moist, PID = 30 ppm* |
| 12.0 | 16.0 | 4.0 | *Clay, sandy, reddish brown with yellow mottling, fine grain, micaceous, consolidated, firm, moist, PID = 7 ppm* |
| 16.0 | 20.0 | 4.0 | *Clay, sandy, reddish brown, fine grain, micaceous, consolidated, soft, moist, PID = 80 ppm* |
| 20.0 | 24.0 | 4.0 | *Clay, sandy, reddish brown, with white mottling, fine to medium grain, layered, loose pack, saturated, PID = 100 ppm* |
| 24.0 | TD | | *Boring terminated* |



MARSHALL MILLER & ASSOCIATES

**Project No.** A89128

| | | | |
|---|---|---|---|
| Date Started | 11/10/97 | Hole No. | SB-2 |
| Date Completed | 11/10/97 | Type of Hole | Geoprobe |
| Logged by | J. Owrey | Dia. of Hole | ±2" |
| Ground Elev. | | Top of Casing | |

| From | To | Thickness | Description |
|---|---|---|---|
| 0.0 | 4.0 | 4.0 | *Clay, sandy, brown with gray mottling, black streaking, fine grain, consolidated, firm, dry, PID = 12.8 ppm* |
| 4.0 | 8.0 | 4.0 | *Clay, sandy, brown with gray mottling, black streaking, fine grain, consolidated, firm, moist, PID = 23.8 ppm* |
| 8.0 | 12.0 | 4.0 | *Clay, sandy, reddish brown with gray/yellow mottling, fine grain, large calcite rock fragments, consolidated, firm, moist, PID = 44.8ppm* |
| 12.0 | 16.0 | 4.0 | *Clay, sandy, reddish brown with yellow mottling, fine grain, micaceous, consolidated, firm, moist, PID = 12 ppm* |
| 16.0 | TD | | *Boring terminated* |



MARSHALL MILLER & ASSOCIATES

**Project No.** A89128

| | | | |
|---|---|---|---|
| Date Started | 11/10/97 | Hole No. | SB-3 |
| Date Completed | 11/10/97 | Type of Hole | Geoprobe |
| Logged by | J. Owrey | Dia. of Hole | ±2" |
| Ground Elev. | | Top of Casing | |

| From | To | Thickness | Description |
|---|---|---|---|
| 0.0 | 4.0 | 4.0 | *Clay, sandy, brown with gray mottling, black streaking, fine grain, consolidated, firm, dry, PID = 11.5 ppm* |
| 4.0 | 8.0 | 4.0 | *Clay, sandy, brown with gray mottling, black streaking, fine grain, consolidated, firm, moist, PID = 21.8 ppm* |
| 8.0 | 12.0 | 4.0 | *Clay, sandy, reddish brown with gray/yellow mottling, fine grain, large calcite rock fragments, consolidated, firm, moist, PID = 41.6 ppm* |
| 12.0 | 16.0 | 4.0 | *Clay, sandy, reddish brown with yellow mottling, fine grain, micaceous, consolidated, firm, moist, PID = 8.0 ppm* |
| 16.0 | TD | | *Boring terminated* |

**Project No.** A89128

| | | | |
|---|---|---|---|
| Date Started | 11/10/97 | Hole No. | SB-4 |
| Date Completed | 11/10/97 | Type of Hole | Geoprobe |
| Logged by | J. Owrey | Dia. of Hole | ±2" |
| Ground Elev. | | Top of Casing | |

| From | To | Thickness | Description |
|---|---|---|---|
| 0.0 | 4.0 | 4.0 | *Clay, sandy, brown with gray mottling, black streaking, fine grain, consolidated, firm, dry, PID = 75.6 ppm* |
| 4.0 | 8.0 | 4.0 | *Clay, sandy, brown with gray mottling, black streaking, fine grain, consolidated, firm, moist, PID = 23.7 ppm* |
| 8.0 | 12.0 | 4.0 | *Clay, sandy, reddish brown with gray/yellow mottling, fine grain, large calcite rock fragments, consolidated, firm, moist, PID = 96.0 ppm* |
| 12.0 | 16.0 | 4.0 | *Clay, sandy, reddish brown with yellow mottling, fine grain, micaceous, consolidated, firm, moist, PID = 13 ppm* |
| 16.0 | TD | | *Boring terminated* |

**Project No.** A89128

| | | | |
|---|---|---|---|
| Date Started | 11/10/97 | Hole No. | SB-5 |
| Date Completed | 11/10/97 | Type of Hole | Geoprobe |
| Logged by | J. Owrey | Dia. of Hole | ±2" |
| Ground Elev. | | Top of Casing | |

| From | To | Thickness | Description |
|---|---|---|---|
| 0.0 | 4.0 | 4.0 | *Clay, sandy, brown with gray mottling, black streaking, fine grain, consolidated, firm, dry, PID = 30.0 ppm* |
| 4.0 | 8.0 | 4.0 | *Clay, sandy, brown with gray mottling, black streaking, fine grain, consolidated, firm, moist, PID = 245 ppm* |
| 8.0 | 12.0 | 4.0 | *Clay, sandy, reddish brown with gray/yellow mottling, fine grain, large calcite rock fragments, consolidated, firm, moist, PID = 160 ppm* |
| 12.0 | 16.0 | 4.0 | *Clay, sandy, reddish brown with yellow mottling, fine grain, micaceous, consolidated, firm, moist, PID = 90.0 ppm* |
| 16.0 | 20.0 | 4.0 | *Clay, sandy, reddish brown, fine grain, micaceous, consolidated, soft, moist, PID = 55 ppm* |
| 20.0 | 24.0 | 4.0 | *Clay, sandy, reddish brown, with white mottling, fine to medium grain, layered, loose pack, saturated, PID = 45 ppm* |
| 24.0 | TD | | *Boring terminated* |



MARSHALL MILLER & ASSOCIATES

**Project No.** A89128

| | | | |
|---|---|---|---|
| Date Started | 11/10/97 | Hole No. | SB-6 |
| Date Completed | 11/10/97 | Type of Hole | Geoprobe |
| Logged by | J. Owrey | Dia. of Hole | ±2" |
| Ground Elev. | | Top of Casing | |

| From | To | Thickness | Description |
|---|---|---|---|
| 0.0 | 4.0 | 4.0 | *Clay, sandy, brown with small rock fragments, fine grain, consolidated, plastic, moist, PID = 4.0 ppm* |
| 4.0 | 8.0 | 4.0 | *Clay, sandy, brown with calcite rock fragments and biotite, fine grain, consolidated, plastic, moist, PID = 12.0 ppm* |
| 8.0 | 12.0 | 4.0 | *Clay, sandy, reddish brown with gray/yellow mottling, fine grain, large calcite rock fragments, consolidated, firm, saturated encountered pocket, PID = 23 ppm* |
| 12.0 | 16.0 | 4.0 | *Clay, sandy, reddish brown with yellow mottling, fine grain, micaceous, consolidated, firm, moist, PID = 20.0 ppm* |
| 16.0 | 20.0 | 4.0 | *Clay, sandy, reddish brown, fine grain, micaceous, consolidated, soft, moist, PID = 21 ppm* |
| 20.0 | 24.0 | 4.0 | *Clay, sandy, reddish brown, with white mottling, fine to medium grain, layered, loose pack, saturated, PID = 45 ppm* |
| 24.0 | TD | | *Boring terminated* |



MARSHALL MILLER & ASSOCIATES

**Project No.** A89128

| | | | |
|---|---|---|---|
| Date Started | 11/10/97 | Hole No. | SB-7 |
| Date Completed | 11/10/97 | Type of Hole | Geoprobe |
| Logged by | J. Owrey | Dia. of Hole | ±2" |
| Ground Elev. | | Top of Casing | |

| From | To | Thickness | Description |
|---|---|---|---|
| 0.0 | 4.0 | 4.0 | *Clay, sandy, brown with gray mottling, black streaking, fine grain, consolidated, firm, dry, PID = 19.2 ppm* |
| 4.0 | 8.0 | 4.0 | *Clay, sandy, brown with gray mottling, black streaking, fine grain, consolidated, firm, moist, PID = 120 ppm* |
| 8.0 | 12.0 | 4.0 | *Clay, sandy, reddish brown with gray/yellow mottling, fine grain, large calcite rock fragments, consolidated, firm, moist, PID = 68 ppm* |
| 12.0 | 16.0 | 4.0 | *Clay, sandy, reddish brown with yellow mottling, fine grain, micaceous, consolidated, firm, moist, PID = 15 ppm* |
| 16.0 | 20.0 | 4.0 | *Clay, sandy, reddish brown, fine grain, micaceous, consolidated, soft, moist, PID = 50 ppm* |
| 20.0 | 24.0 | 4.0 | *Clay, sandy, reddish brown, with white mottling, fine to medium grain, layered, loose pack, saturated, PID = 35 ppm* |
| 24.0 | TD | | *Boring terminated* |



MARSHALL MILLER & ASSOCIATES

**Project No.** A89128

| | | | |
|---|---|---|---|
| Date Started | 11/10/97 | Hole No. | SB-8 |
| Date Completed | 11/10/97 | Type of Hole | Geoprobe |
| Logged by | J. Owrey | Dia. of Hole | ±2" |
| Ground Elev. | | Top of Casing | |

| From | To | Thickness | Description |
|---|---|---|---|
| 0.0 | 4.0 | 4.0 | *Clay, sandy, brown with gray mottling, black streaking, fine grain, consolidated, firm, dry, PID = 150 ppm* |
| 4.0 | 8.0 | 4.0 | *Clay, sandy, brown with gray mottling, black streaking, fine grain, consolidated, firm, moist, PID = 160 ppm* |
| 8.0 | 12.0 | 4.0 | *Clay, sandy, reddish brown with gray/yellow mottling, fine grain, large calcite rock fragments, consolidated, firm, moist, PID = 80 ppm* |
| 12.0 | 16.0 | 4.0 | *Clay, sandy, reddish brown with yellow mottling, fine grain, micaceous, consolidated, firm, moist, PID = 30 ppm* |
| 16.0 | 20.0 | 4.0 | *Clay, sandy, reddish brown, fine grain, micaceous, consolidated, soft, moist, free product encountered, PID = 300+ ppm* |
| 20.0 | TD | | *Boring terminated* |



MARSHALL MILLER & ASSOCIATES

**Project No.** A89128

| | | | |
|---|---|---|---|
| Date Started | 11/10/97 | Hole No. | SB-9 |
| Date Completed | 11/10/97 | Type of Hole | Geoprobe |
| Logged by | J. Owery | Dia. of Hole | ±2" |
| Ground Elev. | | Top of Casing | |

| From | To | Thickness | Description |
|---|---|---|---|
| 0.0 | 4.0 | 4.0 | *Clay, sandy, brown with small rock fragments, fine grain, consolidated, firm, moist, PID = 19.0 ppm* |
| 4.0 | 8.0 | 4.0 | *Clay, sandy, brown with large calcite rock fragments, micaceous, fine grain, consolidated, firm, moist, PID = 75 ppm* |
| 8.0 | 12.0 | 4.0 | *Clay, sandy, brown with large calcite rock fragments, gray mottling, fine grain, consolidated, firm, moist, PID = 200 ppm* |
| 12.0 | 16.0 | 4.0 | *Clay, sandy, brown with large calcite rock fragments, gray mottling, medium to large grain, consolidated, firm, moist, PID = 40 ppm* |
| 16.0 | TD | | *Boring terminated* |



MARSHALL MILLER & ASSOCIATES

**Project No.** A89128

| | | | |
|---|---|---|---|
| Date Started | 11/11/97 | Hole No. | SB-10 |
| Date Completed | 11/11/97 | Type of Hole | Geoprobe |
| Logged by | J. Owrey | Dia. of Hole | ±2" |
| Ground Elev. | | Top of Casing | |

| From | To | Thickness | Description |
|---|---|---|---|
| 0.0 | 4.0 | 4.0 | *Clay, sandy, brown with gray mottling, black streaking, fine grain, consolidated, firm, dry, PID = 5.0 ppm* |
| 4.0 | 8.0 | 4.0 | *Clay, sandy, brown with gray mottling, black streaking, fine grain, consolidated, firm, moist, PID = 20.0 ppm* |
| 8.0 | 12.0 | 4.0 | *Clay, sandy, reddish brown with gray/yellow mottling, fine grain, large calcite rock fragments, consolidated, firm, moist, PID = 10.0 ppm* |
| 12.0 | 16.0 | 4.0 | *Clay, sandy, reddish brown with yellow mottling, fine grain, micaceous, consolidated, firm, moist, PID = 5.0 ppm* |
| 16.0 | TD | | *Boring terminated* |



MARSHALL MILLER & ASSOCIATES

**Project No.** A89128

| | | | |
|---|---|---|---|
| Date Started | 11/11/97 | Hole No. | SB-11 |
| Date Completed | 11/11/97 | Type of Hole | Geoprobe |
| Logged by | J. Owrey | Dia. of Hole | ±2" |
| Ground Elev. | | Top of Casing | |

| From | To | Thickness | Description |
|---|---|---|---|
| 0.0 | 4.0 | 4.0 | *Clay, reddish brown with small calcite rock fragments, fine to medium grain, consolidated, firm, moist, PID = 5.0 ppm* |
| 4.0 | 8.0 | 4.0 | *Clay, reddish brown with white mottling, medium calcite rock fragments, medium to large grain, consolidated, firm, moist, PID = 11.5 ppm* |
| 8.0 | 12.0 | 4.0 | *Sandy clay, tan with calcite rock fragments, large grain, loose pack, moist, PID = 13.9 ppm* |
| 12.0 | 16.0 | 4.0 | *Sandy clay, tan with calcite rock fragments, large grain, loose pack, moist, PID = 6.0 ppm* |
| 16.0 | TD | | *Boring terminated* |



MARSHALL MILLER & ASSOCIATES

**Project No.** A89128

| | | | |
|---|---|---|---|
| Date Started | 11/11/97 | Hole No. | SB-12 |
| Date Completed | 11/11/97 | Type of Hole | Geoprobe |
| Logged by | J. Owrey | Dia. of Hole | ±2" |
| Ground Elev. | | Top of Casing | |

| From | To | Thickness | Description |
|---|---|---|---|
| 0.0 | 4.0 | 4.0 | *Clay, reddish brown with small calcite rock fragments, fine to medium grain, consolidated, firm, moist, PID = 18.0 ppm* |
| 4.0 | 8.0 | 4.0 | *Clay, sandy, reddish brown with gray mottling, biotite, fine grain, consolidated, firm, moist, PID = 20.0 ppm* |
| 8.0 | 12.0 | 4.0 | *Clay, sandy, reddish brown with gray mottling, biotite, fine grain, consolidated, firm, moist, PID = 22.0 ppm* |
| 12.0 | 16.0 | 4.0 | *Sandy clay, tan with calcite rock fragments, large grain, loose pack, moist, PID = 7.8 ppm* |
| 16.0 | TD | | *Boring terminated* |



MARSHALL MILLER & ASSOCIATES

**Project No.** A89128

| | | | |
|---|---|---|---|
| Date Started | 11/21/97 | Hole No. | DMW-17 |
| Date Completed | 11/21/97 | Type of Hole | Air/Mud Rotary |
| Logged by | J. Owrey | Dia. of Hole | ±8" |
| Ground Elev. | | Top of Casing | |

| From | To | Thickness | Description |
|---|---|---|---|
| 0.0 | 8.0 | 8.0 | *Sandy clay, fine grain, reddish brown with gray streaking, dry* |
| 8.0 | 20.0 | 12.0 | *Sandy clay, fine grain, micaceous, reddish brown with gray streaking, moist* |
| 20.0 | 24.0 | 4.0 | *Sandy clay, fine to medium grain, loose pack, micaceous, reddish brown with gray streaking, saturated* |
| 24.0 | 30.0 | 6.0 | *Sandy clay, fine to medium grain, loose pack, micaceous, reddish brown with gray streaking, saturated* |
| 30.0 | 42.0 | 12.0 | *Sandy clay, dark brown with small calcite rock fragments, micaceous, fine grain, consolidated, soft, moist* |
| 42.0 | 65.0 | 23.0 | *Sandy clay, dark brown with small calcite rock fragments, micaceous, fine grain, consolidated, soft, moist* |
| 65.0 | 75.0 | 10.0 | *Competent sandstone with calcite rock fragments, groundwater field screened at 75', PID = 0.0 ppm* |
| 75.0 | TD | | *Boring terminated* |

# Water Sampling Field Data Record Sheet

Technician(s): JIM OWREY
Location No.: OMW-1
Job No.: A89128
Blank No.:
Time:
Date(s): 12-1-97
Additional notes (especially weather) on back. yes / no

WELL DATA:

Type Water Pipe: PVC
Diameter Water Pipe: 2"
Condition of Guard Pipe, Lock, Water Pipe, Etc.:

Measured from:
Depth of Well: 21.7
Top of Guard Pipe:
Depth of Water: 17.13
Top of Water Pipe: ✓
Height of Water: 4.57
Top of Ground:
Volume of Water in Well: .7312 (Y = 3.14 r2h)
2" = .16 gal/ft, 4" = .65 gal/ft

EVACUATION DATA:

✓ Bailer ____ Pump ____ Airlift ____ Other
Volume Removed or Time Pumped:
~ 2.5 gallons

Equipment Cleaned: ✓ Field ____ Lab
✓ Distilled Water ____ Sample Water AKONOX Other

SAMPLING DATA:

Date Sampled: 12-1-97 Time:
Color: Odor:
pH
Dissolved O2
Temperature
Conductivity uMHOS/cm
Samples Collected:

| Preservative | Volume | Parameters | Filtered | Iced | Lab No. |
|---|---|---|---|---|---|
| HCl | 40ml | BTEX NAPMTBE | | | |
| HCl | 40ml | EDB | | | |
| HNO3 | 250ml | Lead | | | |
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Water Sampling Field Data Record Sheet

Technician(s): Jim Owrey  Location No.: MW-2

Job No.: A89128  Blank No.:

Time:  Date(s): 12-1-97

Additional notes (especially weather) on back. yes / no

WELL DATA:

Type Water Pipe: PVC  Diameter Water Pipe: 2"

Condition of Guard Pipe, Lock, Water Pipe, Etc.:

Measured from:

Depth of Well: 25  Top of Guard Pipe:

Depth of Water: 17.43  Top of Water Pipe: ✓

Height of Water: 7.57  Top of Ground:

Volume of Water in Well: 1.2 (Y = 3.14 r2h)

2" = .16 gal/ft, 4" = .65 gal/ft

EVACUATION DATA:

✓ Bailer  Pump  Airlift  Other

Volume Removed or Time Pumped:

~ 3.6 gallons

Equipment Cleaned: ✓ Field  Lab

✓ Distilled Water  Sample Water  AKONOX  Other

SAMPLING DATA:  Date Sampled: 12-1-97  Time:

Color:  Odor:

| | | | | | |
|---|---|---|---|---|---|
| pH | | | | | |
| Dissolved O2 | | | | | |
| Temperature | | | | | |
| Conductivity uMHOS/cm | | | | | |

Samples Collected:

| Preservative | Volume | Parameters | Filtered | Iced | Lab No. |
|---|---|---|---|---|---|
| HCl | 40ml | BTEX NAPMTBE | | | |
| HCl | 40ml | EDB | | | |
| HNO3 | 250ml | Lead | | | |
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Water Sampling Field Data Record Sheet

Technician(s): Jim Owrey  Location No.: MW-3

Job No.: A89128  Blank No.:

Time:  Date(s): 12-1-97

Additional notes (especially weather) on back . yes / no

WELL DATA:

Type Water Pipe: PVC  Diameter Water Pipe: 2"

Condition of Guard Pipe, Lock, Water Pipe, Etc:

Measured from:

Depth of Well: 25.0  Top of Guard Pipe:

Depth of Water: 17.0  Top of Water Pipe: ✓

Height of Water: 8.0  Top of Ground:

Volume of Water in Well: 1.28 . (Y = 3.14 r2h)

2" = .16 gal/ft, 4" = .65 gal/ft

EVACUATION DATA:

✓ Bailer  Pump  Airlift  Other

Volume Removed or Time Pumped:

~4 gallons

Equipment Cleaned: ✓ Field  Lab

✓ Distilled Water  Sample Water  AKONOX  Other

SAMPLING DATA:  Date Sampled: 12-1-97  Time:

Color:  Odor:

| | | | | | |
|---|---|---|---|---|---|
| pH | | | | | |
| Dissolved O2 | | | | | |
| Temperature | | | | | |
| Conductivity uMHOS/cm | | | | | |

Samples Collected:

| Preservative | Volume | Parameters | Filtered | Iced | Lab No. |
|---|---|---|---|---|---|
| HCl | 40ml | BTEX NAPMTBE | | | |
| HCl | 40ml | EDB | | | |
| HNO3 | 250ml | Lead | | | |
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Water Sampling Field Data Record Sheet

Technician(s): JIM OWREY  Location No.: MW-4

Job No.: A89128  Blank No.:

Time:  Date(s): 12-1-97

Additional notes (especially weather) on back . yes / no

WELL DATA:

Type Water Pipe: PVC  Diameter Water Pipe: 2"

Condition of Guard Pipe, Lock, Water Pipe, Etc:

Measured from:

Depth of Well: 25.0  Top of Guard Pipe:

Depth of Water: 17.6  Top of Water Pipe: ✓

Height of Water: 7.4  Top of Ground:

Volume of Water in Well: 1.2 (V = 3.14 r2h)

2" = .16 gal/ft, 4" = .65 gal/ft

EVACUATION DATA:

✓ Bailer  Pump  Airlift  Other

Volume Removed or Time Pumped:

~ 3.6 gallons

Equipment Cleaned: ✓ Field  Lab

✓ Distilled Water  Sample Water  AKONOX  Other

SAMPLING DATA:  Date Sampled: 12-1-97  Time:

Color:  Odor:

| | | | | | |
|---|---|---|---|---|---|
| pH | | | | | |
| Dissolved O2 | | | | | |
| Temperature | | | | | |
| Conductivity uMHOS/cm | | | | | |

Samples Collected:

| Preservative | Volume | Parameters | Filtered | Iced | Lab No. |
|---|---|---|---|---|---|
| HCl | 40ml | BTEX NAP MTBE | | | |
| HCl | 40ml | EDB | | | |
| $HNO_3$ | 250ml | Lead | | | |
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Water Sampling Field Data Record Sheet

Technician(s): JIM OWREY  Location No.: MW-5

Job No.: A89128  Blank No.:

Time:  Date(s): 12-1-97

Additional notes (especially weather) on back . yes / no

WELL DATA:

Type Water Pipe: PVC  Diameter Water Pipe: 2"

Condition of Guard Pipe, Lock, Water Pipe, Etc.:

Measured from:

Depth of Well: 25  Top of Guard Pipe:

Depth of Water: 15.04  Top of Water Pipe: ✓

Height of Water: 9.96  Top of Ground:

Volume of Water in Well: 1.59 . (Y = 3.14 r2h)

2" = .16 gal/ft, 4" = .65 gal/ft

EVACUATION DATA:

✓ Bailer  Pump  Airlift  Other

Volume Removed or Time Pumped:

~ 4.5 gallons

Equipment Cleaned: ✓ Field  Lab

✓ Distilled Water  Sample Water  AKONOX  Other

SAMPLING DATA:  Date Sampled: 12-1-97  Time:

Color:  Odor:

| | | | | | |
|---|---|---|---|---|---|
| pH | | | | | |
| Dissolved O2 | | | | | |
| Temperature | | | | | |
| Conductivity uMHOS/cm | | | | | |

Samples Collected:

| Preservative | Volume | Parameters | Filtered | Iced | Lab No. |
|---|---|---|---|---|---|
| HCl | 40ml | BTEX NAPMTBE | | | |
| HCl | 40ml | EDB | | | |
| HNO3 | 250ml | Lead | | | |
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Water Sampling Field Data Record Sheet

Technician(s): Jim Owrey  Location No.: MW-6

Job No.: A89128  Blank No.:

Time:  Date(s): 12-1-97

Additional notes (especially weather) on back . yes / no

WELL DATA:

Type Water Pipe: PVC  Diameter Water Pipe: 2"

Condition of Guard Pipe, Lock, Water Pipe, Etc.:

Measured from:

Depth of Well: 25.0  Top of Guard Pipe:

Depth of Water: 14.37  Top of Water Pipe: ✓

Height of Water: 10.63  Top of Ground:

Volume of Water in Well: 1.7 . (Y = 3.14 r2h)

2" = .16 gal/ft, 4" = .65 gal/ft

EVACUATION DATA:

✓ Bailer  Pump  Airlift  Other

Volume Removed or Time Pumped:

~ 5.1 gallon

Equipment Cleaned: ✓ Field  Lab

✓ Distilled Water  Sample Water  AKONOX  Other

SAMPLING DATA:  Date Sampled: 12-1-97  Time:

Color  Odor

| | | | | | |
|---|---|---|---|---|---|
| pH | | | | | |
| Dissolved O2 | | | | | |
| Temperature | | | | | |
| Conductivity uMHOS/cm | | | | | |

Samples Collected:

| Preservative | Volume | Parameters | Filtered | Iced | Lab No. |
|---|---|---|---|---|---|
| HCl | 40 ml | BTEX NAP MTBE | | | |
| HCl | 40 ml | EDB | | | |
| HNO3 | 250 ml | Lead | | | |
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Water Sampling Field Data Record Sheet

Technician(s): Jim Owrey  Location No.: MW-7

Job No.: A89128  Blank No.:

Time:  Date(s): 12-1-97

Additional notes (especially weather) on back . yes / no

WELL DATA:

Type Water Pipe: PVC  Diameter Water Pipe: 2"

Condition of Guard Pipe, Lock, Water Pipe, Etc.:

Measured from:

Depth of Well: 25  Top of Guard Pipe:

Depth of Water: 13.96  Top of Water Pipe: ✓

Height of Water: 11.04  Top of Ground:

Volume of Water in Well: . (Y = 3.14 r2h)

2" = .16 gal/ft, 4" = .65 gal/ft

EVACUATION DATA:

✓ Bailer  Pump  Airlift  Other

Volume Removed or Time Pumped:

1.8

~6 gallons

Equipment Cleaned: ✓ Field  Lab

✓ Distilled Water  Sample Water  AKONOX  Other

SAMPLING DATA:  Date Sampled: 12-1-97  Time:

Color:  Odor:

| | | | | | |
|---|---|---|---|---|---|
| pH | | | | | |
| Dissolved O2 | | | | | |
| Temperature | | | | | |
| Conductivity uMHOS/cm | | | | | |

Samples Collected:

| Preservative | Volume | Parameters | Filtered | Iced | Lab No. |
|---|---|---|---|---|---|
| HCl | 40ml | BTEX NAP MTBE | | | |
| HCl | 40ml | EDB | | | |
| HNO3 | 250ml | Lead | | | |
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Water Sampling Field Data Record Sheet

Technician(s): JIM OWREY  Location No.: MW-8

Job No.: A89128  Blank No.:

Time:  Date(s): 12-1-97

Additional notes (especially weather) on back. yes / no

WELL DATA:

Type Water Pipe: PVC  Diameter Water Pipe: 2"

Condition of Guard Pipe, Lock, Water Pipe, Etc.:

Measured from:

Depth of Well: 25.0  Top of Guard Pipe:

Depth of Water: 12.53  Top of Water Pipe: ✓

Height of Water: 12.47  Top of Ground:

Volume of Water in Well: 1.99 (Y = 3.14 r2h)

2" = .16 gal/ft, 4" = .65 gal/ft

EVACUATION DATA:

✓ Bailer  Pump  Airlift  Other

Volume Removed or Time Pumped:

6 gallons

Equipment Cleaned: ✓ Field  Lab

✓ Distilled Water  Sample Water  AKONOX  Other

SAMPLING DATA:  Date Sampled: 12-1-97  Time:

Color:  Odor:

| | | | | | |
|---|---|---|---|---|---|
| pH | | | | | |
| Dissolved O2 | | | | | |
| Temperature | | | | | |
| Conductivity uMHOS/cm | | | | | |

Samples Collected:

| Preservative | Volume | Parameters | Filtered | Iced | Lab No. |
|---|---|---|---|---|---|
| HCl | 40ml | BTEX NAPMTBE | | | |
| HCl | 40ml | EDB | | | |
| HNO3 | 250ml | Lead | | | |
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Water Sampling Field Data Record Sheet

Technician(s): JIM OWREY  Location No.: MW-9

Job No.: A89128  Blank No.:

Time:  Date(s): 12-1-97

Additional notes (especially weather) on back. yes / no

WELL DATA:

Type Water Pipe: PVC  Diameter Water Pipe: 2"

Condition of Guard Pipe, Lock, Water Pipe, Etc.:

Measured from:

Depth of Well: 25.0  Top of Guard Pipe:

Depth of Water: 16.17  Top of Water Pipe: ✓

Height of Water: 8.83  Top of Ground:

Volume of Water in Well: 1.4 (Y = 3.14 r2h)

2" = .16 gal/ft, 4" = .65 gal/ft

EVACUATION DATA:

✓ Bailer  Pump  Airlift  Other

Volume Removed or Time Pumped:

~4.5 gallons

Equipment Cleaned: ✓ Field  Lab

✓ Distilled Water  Sample Water  AKONOX  Other

SAMPLING DATA:  Date Sampled: 12-1-97  Time:

Color:  Odor:

| | | | | | |
|---|---|---|---|---|---|
| pH | | | | | |
| Dissolved O2 | | | | | |
| Temperature | | | | | |
| Conductivity uMHOS/cm | | | | | |

Samples Collected:

| Preservative | Volume | Parameters | Filtered | Iced | Lab No. |
|---|---|---|---|---|---|
| HCl | 40ml | BTEX NAP MTBE | | | |
| HCl | 40ml | EDB | | | |
| HNO3 | 250ml | Lead | | | |
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Water Sampling Field Data Record Sheet

Technician(s): JIM OWREY  Location No.: MW-10

Job No.: A89128  Blank No.:

Time:  Date(s): 12-1-97

Additional notes (especially weather) on back. yes / no

WELL DATA:

Type Water Pipe: PVC  Diameter Water Pipe: 2"

Condition of Guard Pipe, Lock, Water Pipe, Etc.:

Measured from:

Depth of Well: 25  Top of Guard Pipe:

Depth of Water: 17.40  Top of Water Pipe: ✓

Height of Water: 7.6  Top of Ground:

Volume of Water in Well: 1.2 (V = 3.14 r2h)

2" = .16 gal/ft, 4" = .65 gal/ft

EVACUATION DATA:

✓ Bailer  Pump  Airlift  Other:

Volume Removed or Time Pumped:

~ 4 gallons

Equipment Cleaned: ✓ Field  Lab

✓ Distilled Water:  Sample Water:  AKONOX  Other:

SAMPLING DATA:  Date Sampled: 12-1-97  Time:

Color:  Odor:

| | | | | | |
|---|---|---|---|---|---|
| pH | | | | | |
| Dissolved O2 | | | | | |
| Temperature | | | | | |
| Conductivity uMHOS/cm | | | | | |

Samples Collected:

| Preservative | Volume | Parameters | Filtered | Iced | Lab No. |
|---|---|---|---|---|---|
| HCl | 40 ml | BTEX NAP MTBE | | | |
| HCl | 40 ml | EDB | | | |
| HNO3 | 250 ml | Lead | | | |
| | | | | | |
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Water Sampling Field Data Record Sheet

Technician(s): Jim Owrey  Location No.: MW-11

Job No.: A89128  Blank No.:

Time:  Date(s): 12-1-97

Additional notes (especially weather) on back . yes / no

WELL DATA:

Type Water Pipe: PVC  Diameter Water Pipe: 2"

Condition of Guard Pipe, Lock, Water Pipe, Etc.:

Measured from:

Depth of Well: 25  Top of Guard Pipe:

Depth of Water: 15.74  Top of Water Pipe: ✓

Height of Water: 9.26  Top of Ground:

Volume of Water in Well: 1.48 . (V = 3.14 r2h)

2" = .16 gal/ft, 4" = .65 gal/ft

EVACUATION DATA:

✓ Bailer  Pump  Airlift  Other

Volume Removed or Time Pumped:

~4.5 gallons

Equipment Cleaned: ✓ Field  Lab

✓ Distilled Water  Sample Water  AKONOX  Other

SAMPLING DATA:  Date Sampled: 12-1-97  Time:

Color  Odor

| | | | | | |
|---|---|---|---|---|---|
| pH | | | | | |
| Dissolved O2 | | | | | |
| Temperature | | | | | |
| Conductivity uMHOS/cm | | | | | |

Samples Collected:

| Preservative | Volume | Parameters | Filtered | Iced | Lab No. |
|---|---|---|---|---|---|
| HCl | 40ml | BTEX NAPMTBE | | | |
| HCl | 40ml | EDB | | | |
| HNO3 | 250ml | Lead | | | |
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# Water Sampling Field Data Record Sheet

Technician(s): Jim Owrey  Location No.: MW-12

Job No.: A89128  Blank No.:

Time:  Date(s): 12-1-97

Additional notes (especially weather) on back . yes / no

WELL DATA:

Type Water Pipe: PVC  Diameter Water Pipe: 2"

Condition of Guard Pipe, Lock, Water Pipe, Etc.:

Measured from:

Depth of Well: 25  Top of Guard Pipe:

Depth of Water: 17.03  Top of Water Pipe: ✓

Height of Water: 7.97  Top of Ground:

Volume of Water in Well: 1.27 . (V = 3.14 r2h)

2" = .16 gal/ft, 4" = .65 gal/ft

EVACUATION DATA:

✓ Bailer  Pump  Airlift  Other

Volume Removed or Time Pumped:

~ 4 gallons

Equipment Cleaned:  ✓ Field  Lab

✓ Distilled Water  Sample Water  AKONOX  Other

SAMPLING DATA:  Date Sampled: 12-1-97  Time:

Color:  Odor:

| | | | | | |
|---|---|---|---|---|---|
| pH | | | | | |
| Dissolved O2 | | | | | |
| Temperature | | | | | |
| Conductivity uMHOS/cm | | | | | |

Samples Collected:

| Preservative | Volume | Parameters | Filtered | Iced | Lab No. |
|---|---|---|---|---|---|
| HCl | 40ml | BTEX NAPMTBE | | | |
| HCl | 40ml | EDB | | | |
| HNO3 | 250ml | Lead | | | |
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Water Sampling Field Data Record Sheet

Technician(s): Jim Owrey  Location No.: MW-13

Job No.: A89128  Blank No.:

Time:  Date(s): 12-1-97

Additional notes (especially weather) on back . yes / no

WELL DATA:

Type Water Pipe: PVC  Diameter Water Pipe: 2"

Condition of Guard Pipe, Lock, Water Pipe, Etc.:

Measured from:

Depth of Well: 25  Top of Guard Pipe:

Depth of Water: 21.05  Top of Water Pipe: ✓

Height of Water: 4.95  Top of Ground:

Volume of Water in Well: .792 (V = 3.14 r2h)

2" = .16 gal/ft, 4" = .65 gal/ft

EVACUATION DATA:

✓ Bailer  Pump  Airlift  Other

Volume Removed or Time Pumped:

~3 gallons

Equipment Cleaned: ✓ Field  Lab

✓ Distilled Water  Sample Water  AKONOX  Other

SAMPLING DATA:  Date Sampled: 12-1-97  Time:

Color:  Odor:

| | | | | | |
|---|---|---|---|---|---|
| pH | | | | | |
| Dissolved O2 | | | | | |
| Temperature | | | | | |
| Conductivity uMHOS/cm | | | | | |

Samples Collected:

| Preservative | Volume | Parameters | Filtered | Iced | Lab No. |
|---|---|---|---|---|---|
| HCl | 40ml | BTEX NAPMTBE | | | |
| HCl | 40ml | EDB | | | |
| HNO3 | 250ml | Lead | | | |
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# Water Sampling Field Data Record Sheet

Technician(s): Jim Owrey  Location No.: MW-14

Job No.: A89128  Blank No.:

Time:  Date(s): 12-1-97

Additional notes (especially weather) on back . yes / no

WELL DATA:

Type Water Pipe: PVC  Diameter Water Pipe: 2"

Condition of Guard Pipe, Lock, Water Pipe, Etc.:

Measured from:

Depth of Well: 25  Top of Guard Pipe:

Depth of Water: 7.27  Top of Water Pipe: ✓

Height of Water: 17.73  Top of Ground:

Volume of Water in Well: 2.8 (V = 3.14 r2h)

2" = .16 gal/ft, 4" = .65 gal/ft

EVACUATION DATA:

✓ Bailer  Pump  Airlift  Other

Volume Removed or Time Pumped:

2 6 gallons

Equipment Cleaned: ✓ Field  Lab

✓ Distilled Water  Sample Water  AKONOX  Other

SAMPLING DATA:  Date Sampled: 12-1-97  Time:

Color:  Odor:

| | | | | | |
|---|---|---|---|---|---|
| pH | | | | | |
| Dissolved O2 | | | | | |
| Temperature | | | | | |
| Conductivity uMHOS/cm | | | | | |

Samples Collected:

| Preservative | Volume | Parameters | Filtered | Iced | Lab No. |
|---|---|---|---|---|---|
| HCl | 40ml | BTEX NAP MTBE | | | |
| HCl | 40ml | EDB | | | |
| HNO3 | 250ml | Lead | | | |
| | | | | | |
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*Appendix V*
*Laboratory Analytical Results*
*Chain-of-Custody*

# HYDROLOGIC, INC.

December 11, 1997

**REPORTING:**

MARSHAL MILLER & ASSOC.
P.O. BOX 848
BLUEFIELD, VA 24605

**INVOICING:**

MARSHAL MILLER & ASSOC.
P.O. BOX 848
BLUEFIELD, VA 24605

**PROJECT NUMBER:** K9722962C

**DATE COMPLETED:** December 11, 1997
**DATE RECEIVED:** December 5, 1997

**PROJECT DESCRIPTION:**

A89128--19 water samples were received and analyzed for BTEX + NAPHTHALENE + MTBE and EDB.

Enclosed is the laboratory report for the project described above. If you have any questions or if we can be of further assistance, please feel free to contact Jack Hale, Jr. at 1-800-728-2251. We appreciate your business and look forward to serving you again soon.

Respectfully,

Walter Hogg
Laboratory Director

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722963
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: OMW-1
DATE SAMPLED: 12/02/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 12/11/97

**METHOD 8020**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| **Benzene** | **71-43-2** | **1.0** | **14.9** |
| Chlorobenzene | 108-90-7 | 1.0 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 1.0 | BDL |
| 1,3-Dichlorobenzene | 541-73-1 | 1.0 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 1.0 | BDL |
| **Ethylbenzene** | **100-41-4** | **1.0** | **5.24** |
| **Toluene** | **108-88-3** | **1.0** | **85.5** |
| **Xylenes (Total)** | **1330-20-7** | **1.0** | **24.8** |
| **MTBE** | | **5.0** | **96.0** |
| Naphthalene | 91-20-3 | 5.0 | BDL |
| Surrogate Recovery: | | | |
| BFB | | | 87% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722963
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: CMW-1
DATE SAMPLED: 12/02/97
DATE EXTRACTED: 12/09/97
DATE/TIME ANALYZED: 12/09/97

**METHOD 504**

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS:

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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722964
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-2
DATE SAMPLED: 12/02/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 12/11/97

**METHOD 8020**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| **Benzene** | **71-43-2** | **500** | **9900** |
| Chlorobenzene | 108-90-7 | 5.0 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 5.0 | BDL |
| 1,3-Dichlorobenzene | 541-73-1 | 5.0 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 5.0 | BDL |
| **Ethylbenzene** | **100-41-4** | **500** | **2040** |
| **Toluene** | **108-88-3** | **500** | **42300** |
| **Xylenes (Total)** | **1330-20-7** | **500** | **12100** |
| **MTBE** | | **500** | **242000** |
| **Naphthalene** | **91-20-3** | **5.0** | **71.2** |
| Surrogate Recovery: BFB | | | 72% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: COMPOUNDS WITH ELEVATED SDL ARE DUE TO A SAMPLE DILUTION.

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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722964
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-2
DATE SAMPLED: 12/02/97
DATE EXTRACTED: 12/09/97
DATE/TIME ANALYZED: 12/09/97

**METHOD 504**

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722965
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-3
DATE SAMPLED: 12/02/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 12/11/97

**METHOD 8020**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| **Benzene** | **71-43-2** | **500** | **9820** |
| Chlorobenzene | 108-90-7 | 5.0 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 5.0 | BDL |
| 1,3-Dichlorobenzene | 541-73-1 | 5.0 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 5.0 | BDL |
| **Ethylbenzene** | **100-41-4** | **500** | **2160** |
| **Toluene** | **108-88-3** | **500** | **54500** |
| **Xylenes (Total)** | **1330-20-7** | **500** | **11900** |
| **MTBE** | | **500** | **81200** |
| **Naphthalene** | **91-20-3** | **5.0** | **445** |
| Surrogate Recovery: | | | |
| BFB | | | 71% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: COMPOUNDS WITH ELEVATED SDL ARE DUE TO A SAMPLE DILUTION.

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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722965
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-3
DATE SAMPLED: 12/02/97
DATE EXTRACTED: 12/09/97
DATE/TIME ANALYZED: 12/09/97

**METHOD 504**

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS:

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722966
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-4
DATE SAMPLED: 12/02/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 12/11/97

**METHOD 8020**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| **Benzene** | **71-43-2** | **500** | **8140** |
| Chlorobenzene | 108-90-7 | 5.0 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 5.0 | BDL |
| 1,3-Dichlorobenzene | 541-73-1 | 5.0 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 5.0 | BDL |
| **Ethylbenzene** | **100-41-4** | **500** | **1510** |
| **Toluene** | **108-88-3** | **500** | **21000** |
| **Xylenes (Total)** | **1330-20-7** | **500** | **11500** |
| **MTBE** | | **500** | **215000** |
| **Naphthalene** | **91-20-3** | **5.0** | **813** |
| Surrogate Recovery: | | | |
| BFB | | | 85% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: COMPOUNDS WITH ELEVATED SDL ARE DUE TO A SAMPLE DILUTION.

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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722966
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-4
DATE SAMPLED: 12/02/97
DATE EXTRACTED: 12/09/97
DATE/TIME ANALYZED: 12/09/97

**METHOD 504**

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722967
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-5
DATE SAMPLED: 12/02/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 12/11/97

**METHOD 8020**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| **Benzene** | **71-43-2** | **500** | **5930** |
| Chlorobenzene | 108-90-7 | 5.0 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 5.0 | BDL |
| 1,3-Dichlorobenzene | 541-73-1 | 5.0 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 5.0 | BDL |
| **Ethylbenzene** | **100-41-4** | **500** | **2100** |
| **Toluene** | **108-88-3** | **500** | **47600** |
| **Xylenes (Total)** | **1330-20-7** | **500** | **12600** |
| MTBE | | 5.0 | BDL |
| **Naphthalene** | **91-20-3** | **5.0** | **125** |
| Surrogate Recovery: | | | |
| BFB | | | 82% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: COMPOUNDS WITH ELEVATED SDL ARE DUE TO A SAMPLE DILUTION.

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: AB9128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722967
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-5
DATE SAMPLED: 12/02/97
DATE EXTRACTED: 12/09/97
DATE/TIME ANALYZED: 12/09/97

**METHOD 504**

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722968
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-6
DATE SAMPLED: 12/02/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 12/09/97

METHOD 8020

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| **Benzene** | **71-43-2** | **1.0** | **5.49** |
| Chlorobenzene | 108-90-7 | 1.0 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 1.0 | BDL |
| 1,3-Dichlorobenzene | 541-73-1 | 1.0 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 1.0 | BDL |
| **Ethylbenzene** | **100-41-4** | **1.0** | **6.00** |
| **Toluene** | **108-88-3** | **1.0** | **137** |
| **Xylenes (Total)** | **1330-20-7** | **1.0** | **149** |
| MTBE | | 5.0 | BDL |
| Naphthalene | 91-20-3 | 5.0 | BDL |
| Surrogate Recovery: | | | |
| BFB | | | 105% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722968
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-6
DATE SAMPLED: 12/02/97
DATE EXTRACTED: 12/09/97
DATE/TIME ANALYZED: 12/09/97

**METHOD 504**

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722969
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-7
DATE SAMPLED: 12/02/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 12/09/97

**METHOD 8020**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| **Benzene** | **71-43-2** | **1.0** | **1.09** |
| Chlorobenzene | 108-90-7 | 1.0 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 1.0 | BDL |
| 1,3-Dichlorobenzene | 541-73-1 | 1.0 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 1.0 | BDL |
| Ethylbenzene | 100-41-4 | 1.0 | BDL |
| **Toluene** | **108-88-3** | **1.0** | **1.68** |
| **Xylenes (Total)** | **1330-20-7** | **1.0** | **1.10** |
| MTBE | | 5.0 | BDL |
| Naphthalene | 91-20-3 | 5.0 | BDL |
| Surrogate Recovery: | | | |
| BFB | | | 108% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722969
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-7
DATE SAMPLED: 12/02/97
DATE EXTRACTED: 12/09/97
DATE/TIME ANALYZED: 12/09/97

**METHOD 504**

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722970
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-8
DATE SAMPLED: 12/02/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 12/09/97

METHOD 8020

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| Benzene | 71-43-2 | 1.0 | BDL |
| Chlorobenzene | 108-90-7 | 1.0 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 1.0 | BDL |
| 1,3-Dichlorobenzene | 541-73-1 | 1.0 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 1.0 | BDL |
| **Ethylbenzene** | **100-41-4** | **1.0** | **1.21** |
| **Toluene** | **108-88-3** | **1.0** | **2.35** |
| **Xylenes (Total)** | **1330-20-7** | **1.0** | **5.40** |
| MTBE | | 5.0 | BDL |
| Naphthalene | 91-20-3 | 5.0 | BDL |
| Surrogate Recovery: BFB | | | 108% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722970
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-8
DATE SAMPLED: 12/02/97
DATE EXTRACTED: 12/09/97
DATE/TIME ANALYZED: 12/09/97

**METHOD 504**

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

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502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722971
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-9
DATE SAMPLED: 12/02/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 12/11/97

**METHOD 8020**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| **Benzene** | **71-43-2** | **5.0** | **76.5** |
| Chlorobenzene | 108-90-7 | 5.0 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 5.0 | BDL |
| 1,3-Dichlorobenzene | 541-73-1 | 5.0 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 5.0 | BDL |
| **Ethylbenzene** | **100-41-4** | **50** | **2390** |
| **Toluene** | **108-88-3** | **50** | **14000** |
| **Xylenes (Total)** | **1330-20-7** | **50** | **20700** |
| **MTBE** | | **5.0** | **114** |
| **Naphthalene** | **91-20-3** | **5.0** | **384** |
| Surrogate Recovery: BFB | | | 103% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: COMPOUNDS WITH ELEVATED SDL ARE DUE TO A SAMPLE DILUTION.

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502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722971
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-9
DATE SAMPLED: 12/02/97
DATE EXTRACTED: 12/09/97
DATE/TIME ANALYZED: 12/09/97

**METHOD 504**

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722972
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-10
DATE SAMPLED: 12/02/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 12/11/97

**METHOD 8020**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| **Benzene** | **71-43-2** | **50** | **6220** |
| Chlorobenzene | 108-90-7 | 50 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 50 | BDL |
| 1,3-Dichlorobenzene | 541-73-1 | 50 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 50 | BDL |
| **Ethylbenzene** | **100-41-4** | **50** | **2320** |
| **Toluene** | **108-88-3** | **50** | **46300** |
| **Xylenes (Total)** | **1330-20-7** | **50** | **14800** |
| **MTBE** | | **5.0** | **938** |
| **Naphthalene** | **91-20-3** | **5. 0** | **542** |
| Surrogate Recovery: | | | |
| BFB | | | 95% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: COMPOUNDS WITH ELEVATED SDL ARE DUE TO A SAMPLE DILUTION.

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502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722972
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-10
DATE SAMPLED: 12/02/97
DATE EXTRACTED: 12/09/97
DATE/TIME ANALYZED: 12/09/97

**METHOD 504**

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722973
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-11
DATE SAMPLED: 12/02/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 12/09/97

**METHOD 8020**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| **Benzene** | **71-43-2** | **1.0** | **1.35** |
| Chlorobenzene | 108-90-7 | 1.0 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 1.0 | BDL |
| 1,3-Dichlorobenzene | 541-73-1 | 1.0 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 1.0 | BDL |
| Ethylbenzene | 100-41-4 | 1.0 | BDL |
| **Toluene** | **108-88-3** | **1.0** | **3.43** |
| **Xylenes (Total)** | **1330-20-7** | **1.0** | **4.67** |
| MTBE | | 5.0 | BDL |
| Naphthalene | 91-20-3 | 5.0 | BDL |
| Surrogate Recovery: | | | |
| BFB | | | 100% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722973
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-11
DATE SAMPLED: 12/02/97
DATE EXTRACTED: 12/09/97
DATE/TIME ANALYZED: 12/09/97

**METHOD 504**

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722974
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-12
DATE SAMPLED: 12/02/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 12/10/97

METHOD 8020

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| **Benzene** | **71-43-2** | **50** | **7970** |
| Chlorobenzene | 108-90-7 | 50 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 50 | BDL |
| 1,3-Dichlorobenzene | 541-73-1 | 50 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 50 | BDL |
| **Ethylbenzene** | **100-41-4** | **50** | **266** |
| **Toluene** | **108-88-3** | **50** | **382** |
| **Xylenes (Total)** | **1330-20-7** | **50** | **1540** |
| **MTBE** | | **50** | **99900** |
| **Naphthalene** | **91-20-3** | **50** | **119** |
| Surrogate Recovery: | | | |
| BFB | | | 105% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: COMPOUNDS WITH ELEVATED SDL ARE DUE TO A SAMPLE DILUTION.

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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722974
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-12
DATE SAMPLED: 12/02/97
DATE EXTRACTED: 12/09/97
DATE/TIME ANALYZED: 12/09/97

**METHOD 504**

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722975
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-13
DATE SAMPLED: 12/02/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 12/09/97

**METHOD 8020**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| Benzene | 71-43-2 | 1.0 | BDL |
| Chlorobenzene | 108-90-7 | 1.0 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 1.0 | BDL |
| 1,3-Dichlorobenzene | 541-73-1 | 1.0 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 1.0 | BDL |
| Ethylbenzene | 100-41-4 | 1.0 | BDL |
| **Toluene** | **108-88-3** | **1.0** | **1.41** |
| **Xylenes (Total)** | **1330-20-7** | **1.0** | **1.63** |
| **MTBE** | | **5.0** | **82.3** |
| Naphthalene | 91-20-3 | 5.0 | BDL |
| Surrogate Recovery: | | | |
| BFB | | | 104% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722975
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-13
DATE SAMPLED: 12/02/97
DATE EXTRACTED: 12/09/97
DATE/TIME ANALYZED: 12/09/97

**METHOD 504**

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722976
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-14
DATE SAMPLED: 12/02/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 12/09/97

**METHOD 8020**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| **Benzene** | **71-43-2** | **1.0** | **1.14** |
| Chlorobenzene | 108-90-7 | 1.0 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 1.0 | BDL |
| 1,3-Dichlorobenzene | 541-73-1 | 1.0 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 1.0 | BDL |
| Ethylbenzene | 100-41-4 | 1.0 | BDL |
| **Toluene** | **108-88-3** | **1.0** | **1.36** |
| **Xylenes (Total)** | **1330-20-7** | **1.0** | **2.74** |
| **MTBE** | | **5.0** | **76.5** |
| Naphthalene | 91-20-3 | 5.0 | BDL |
| Surrogate Recovery: | | | |
| BFB | | | 104% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722976
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-14
DATE SAMPLED: 12/02/97
DATE EXTRACTED: 12/09/97
DATE/TIME ANALYZED: 12/09/97

**METHOD 504**

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722977
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-15
DATE SAMPLED: 12/02/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 12/09/97

**METHOD 8020**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| **Benzene** | **71-43-2** | **1.0** | **1.01** |
| Chlorobenzene | 108-90-7 | 1.0 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 1.0 | BDL |
| 1,3-Dichlorobenzene | 541-73-1 | 1.0 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 1.0 | BDL |
| Ethylbenzene | 100-41-4 | 1.0 | BDL |
| **Toluene** | **108-88-3** | **1.0** | **1.57** |
| **Xylenes (Total)** | **1330-20-7** | **1.0** | **2.45** |
| MTBE | | 5.0 | BDL |
| Naphthalene | 91-20-3 | 5.0 | BDL |
| Surrogate Recovery: BFB | | | 104% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722977
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-15
DATE SAMPLED: 12/02/97
DATE EXTRACTED: 12/09/97
DATE/TIME ANALYZED: 12/09/97

**METHOD 504**

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722978
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-16
DATE SAMPLED: 12/02/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 12/09/97

**METHOD 8020**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| Benzene | 71-43-2 | 1.0 | BDL |
| Chlorobenzene | 108-90-7 | 1.0 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 1.0 | BDL |
| 1,3-Dichlorobenzene | 541-73-1 | 1.0 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 1.0 | BDL |
| Ethylbenzene | 100-41-4 | 1.0 | BDL |
| **Toluene** | **108-88-3** | **1.0** | **1.20** |
| **Xylenes (Total)** | **1330-20-7** | **1.0** | **1.32** |
| MTBE | | 5.0 | BDL |
| Naphthalene | 91-20-3 | 5.0 | BDL |
| Surrogate Recovery: | | | |
| BFB | | | 102% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

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502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722978
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: MW-16
DATE SAMPLED: 12/02/97
DATE EXTRACTED: 12/09/97
DATE/TIME ANALYZED: 12/09/97

**METHOD 504**

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722979
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: DMW-17
DATE SAMPLED: 12/02/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 12/09/97

**METHOD 8020**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| **Benzene** | **71-43-2** | **1.0** | **1.57** |
| Chlorobenzene | 108-90-7 | 1.0 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 1.0 | BDL |
| 1,3-Dichlorobenzene | 541-73-1 | 1.0 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 1.0 | BDL |
| **Ethylbenzene** | **100-41-4** | **1.0** | **2.29** |
| **Toluene** | **108-88-3** | **1.0** | **3.76** |
| **Xylenes (Total)** | **1330-20-7** | **1.0** | **12.7** |
| MTBE | | 5.0 | BDL |
| Naphthalene | 91-20-3 | 5.0 | BDL |
| Surrogate Recovery: | | | |
| BFB | | | 100% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722979
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: DMW-17
DATE SAMPLED: 12/02/97
DATE EXTRACTED: 12/09/97
DATE/TIME ANALYZED: 12/09/97

**METHOD 504**

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

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# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722980
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: CLS-WW
DATE SAMPLED: 12/02/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 12/09/97

**METHOD 8020**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| Benzene | 71-43-2 | 1.0 | BDL |
| Chlorobenzene | 108-90-7 | 1.0 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 1.0 | BDL |
| 1,3-Dichlorobenzene | 541-73-1 | 1.0 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 1.0 | BDL |
| Ethylbenzene | 100-41-4 | 1.0 | BDL |
| **Toluene** | **108-88-3** | **1.0** | **1.19** |
| Xylenes (Total) | 1330-20-7 | 1.0 | BDL |
| MTBE | | 5.0 | BDL |
| Naphthalene | 91-20-3 | 5.0 | BDL |
| Surrogate Recovery: | | | |
| BFB | | | 98% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

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502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722980
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: CLS-WW
DATE SAMPLED: 12/02/97
DATE EXTRACTED: 12/09/97
DATE/TIME ANALYZED: 12/09/97

**METHOD 504**

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722981
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: CP-WW
DATE SAMPLED: 12/02/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 12/09/97

**METHOD 8020**

| ANALYSIS | CAS NO. | SDL ( ug/l) | RESULT ( ug/l) |
|---|---|---|---|
| **Benzene** | **71-43-2** | **1.0** | **81.3** |
| Chlorobenzene | 108-90-7 | 1.0 | BDL |
| 1,2-Dichlorobenzene | 95-50-1 | 1.0 | BDL |
| 1,3-Dichlorobenzene | 541-73-1 | 1.0 | BDL |
| 1,4-Dichlorobenzene | 106-46-7 | 1.0 | BDL |
| Ethylbenzene | 100-41-4 | 1.0 | BDL |
| **Toluene** | **108-88-3** | **1.0** | **1.09** |
| **Xylenes (Total)** | **1330-20-7** | **1.0** | **9.59** |
| **MTBE** | | **5.0** | **34.5** |
| Naphthalene | 91-20-3 | 5.0 | BDL |
| Surrogate Recovery: BFB | | | 100% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

COMPANY NAME: MARSHAL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722962C
HYDROLOGIC SAMPLE NUMBER: 9722981
LAB CERTIFICATION NUMBER: N/A
SAMPLE IDENTIFICATION: CP-WW
DATE SAMPLED: 12/02/97
DATE EXTRACTED: 12/09/97
DATE/TIME ANALYZED: 12/09/97

METHOD 504

| ANALYSIS | CAS NO. | SDL ( ug/L) | RESULT ( ug/L) |
|---|---|---|---|
| EDB | 106-93-4 | 0.05 | BDL |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

*Chain of Custody Record*

# HYDROLOGIC, INC.



☐ Asheville, NC (704) 254-5169 ☐ Norcross, GA (770) 368-0636 ☐ Frankfort KY (502) 223-0251 ☐ Lumberton, NC (910) 738-6190 ☑ Charlotte, NC (704) 392-1164 ☐ Morrisville, NC (919) 380-9699
☐ Brighton, CO (303) 659-0497 ☐ Orlando, FL (407) 851-2560 ☐ Lexington, SC (803) 796-8989 ☐ Richmond, VA (804) 358-3145 ☐ Burlington, NC (910) 570-4661 ☐ Macon, GA (912) 757-0811

Client: Marshall Miller
Project No.: A89128
Report Address: P.O. Box 848 Bluefield VA. 24605
Invoice Address: Same
Attn: Jim Avery
Attn: Jim Avery
Phone No.: (540) 322-5467
Sampled By: Jim Avery
Fax No.: (540) 322-1510
P.O. No:
State Samples Collected: S.C.

TURNAROUND TIME
☐ 24 Hours ☐ 48 Hours
☐ 5 Days ☐ 10 Days
Date Needed: 72 Hours

**REQUESTED PARAMETERS**: 602 + Naph + MTBE; EDB by 504; Pb *

K9722962(C)

**LAB CODE I.D.**
A = Asheville, NC
B = Burlington, NC
C = Charlotte, NC
D = Denver, CO
E = Lexington, SC
G = Macon, GA
K = Frankfort, KY
L = Lumberton, NC
M = Morrisville, NC
N = Norcross, GA
O = Orlando, FL
R = Richmond, VA
S = Subcontracted

| Sample ID | Date | Time | Comp/Grab | Matrix | Containers | | | | | | | | | | | ← Preserv. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 12-2-97 | 8:00 | G | H2O | 4 | | | | | | | | | | | | |
| MW-2 | ↓ | 8:30 | ↓ | ↓ | ↓ | | | | | | | | | | | | |
| 3 | | 9:00 | | | | | | | | | | | | | | | |
| 4 | | 9:31 | | | | | | | | | | | | | | | |
| 5 | | 10:00 | | | | | | | | | | | | | | | |
| 6 | | 10:30 | | | | | | | | | | | | | | | |
| 7 | | 11:00 | | | | | | | | | | | | | | | |
| 8 | | 11:30 | | | | | | | | | | | | | | | |
| 9 | | 12:00 | | | | | | | | | | | | | | | |
| MW-10 | ↓ | 12:30 | ↓ | ↓ | ↓ | | | | | | | | | | | | |

Lab Use Only: Custody Seals: ☐ Yes ☐ No ☐ N/A — Init Lab Temp: — Rec'd Lab Temp: rec'd on ice

COMMENTS: Crawford Country Store — * Regu... to MDL 331 3080 504

| Relinquished By | Date / Time | Received By | Date / Time |
|---|---|---|---|
| Relinquished By: J. A. | 12-4-97, 2:41 | Received By: T. Kennedy | 12/4, 3:47 |
| Relinquished By: T. Kennedy | 12/4, 3:50 | Received By: [illegible] | 12/5/97, 10:00 |
| Relinquish: | Date / Time | Received By: | Date / Time |

Lab Use Only:

DEC-11-97 18:40 DEC-11-1997 18:46 HYDROLOGIC-KY. P.40 R-772 Job-072 P.040/041

# HYDROLOGIC, INC.

*Chain of Custody Record* — *Page 2 of 2*

☐ Asheville, NC (704) 254-5169 ☐ Norcross, GA (770) 368-0636 ☐ Frankfort KY (502) 223-0251 ☐ Lumberton, NC (910) 738-6190 ☒ Charlotte, NC (704) 392-1164 ☐ Morrisville, NC (919) 380-9699
☐ Brighton, CO (303) 659-0497 ☐ Orlando, FL (407) 851-2560 ☐ Lexington, SC (803) 796-8989 ☐ Richmond, VA (804) 358-3145 ☐ Burlington, NC (910) 570-4661 ☐ Macon, GA (912) 757-0811

| | |
|---|---|
| Client: Marshall-Miller | Project No.: A89128 |
| Report Address: P.O. Box 848 | Invoice Address: |
| Bluefield VA 24605 | SAME |
| Attn: Jim Owney | Attn: Jim Owney |
| Phone No.: 540-322-5467 | Sampled By: Jim Owney |
| Fax No.: 540-322-1510 | P.O. No: |
| TURNAROUND TIME | State Samples Collected S.C. |
| ☐ 24 Hours ☐ 48 Hours | |
| ☐ 5 Days ☐ 10 Days | Date Needed: 72 Hours |

**REQUESTED PARAMETERS**

602 + Naph + MTBE
EDB by SIM
Pb *

K9722962C

**LAB CODE I.D.**
A = Asheville, NC
B = Burlington, NC
C = Charlotte, NC
D = Denver, CO
E = Lexington, SC
G = Macon, GA
K = Frankfort, KY
L = Lumberton, NC
M = Morrisville, NC
N = Norcross, GA
O = Orlando, FL
R = Richmond, VA
S = Subcontracted

| Sample ID | Date | Time | Comp/ Grab | Matrix | Containers | ← Preserv. | REMARKS |
|---|---|---|---|---|---|---|---|
| MW-11 | 12-2-97 | 1:00 | G | H2O | 4 | | |
| 12 | | 1:30 | | | | | |
| 13 | | 2:00 | | | | | |
| 14 | | 2:30 | | | | | |
| 15 | | 3:00 | | | | | |
| MW-16 | | 3:30 | | | | | |
| DMW-17 | | 4:00 | | | | | |
| QCS-WW | | 4:30 | | | | | |
| CP-WW | ↓ | 5:00 | ↓ | ↓ | | | |

Lab Use Only — Custody Seal: ☐ Yes ☐ No ☐ N/A — Init Lab Temp. — Rec'd Temp. — received

COMMENTS: Crawford Country Store * Require 5 ppb MDL

| | | | | | | |
|---|---|---|---|---|---|---|
| Relinquished By: | Date 12-4-97 | Time 3:43 | Received By: T. Kennedy | Date 12/4 | Time 343 | Lab Use Only: |
| Relinquished By: T. Kennedy | Date 12/4 | Time 350 | Received By: | Date 12-5-97 | Time 1000 | |
| Relinquis | Date | Time | Received By: | Date | Time | |

P.041/041 Job-072 R-772 P.41 HYDROLOGIC-KY. DEC-11-1997 18:46

TOTAL P.041

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | MARSHALL MILLER & ASSOC. |
| COMPANY PROJECT NUMBER: | A89128 |
| HYDROLOGIC PROJECT NUMBER: | K9722080C |
| HYDROLOGIC SAMPLE NUMBER: | 9722080 |
| LAB CERTIFICATION NUMBER: | 399 |
| SAMPLE IDENTIFICATION: | SB-1 |
| DATE SAMPLED: | 11/10/97 |
| DATE EXTRACTED: | N/A |
| DATE/TIME ANALYZED: | 11/20/97 |

**METHOD SW 846 8020**

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzene | 71-43-2 | 5.0 | 26.3 |
| Toluene | 108-88-3 | 5.0 | 19.4 |
| Ethylbenzene | 100-41-4 | 5.0 | BDL |
| Xylenes (Total) | 1330-20-7 | 5.0 | 18.0 |
| Naphthalene | 91-20-3 | 5.0 | 6.56 |
| Surrogate Recovery: | | | |
| BFB | | | 109% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

# HYDROLOGIC, INC.

COMPANY NAME: MARSHALL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722080C
HYDROLOGIC SAMPLE NUMBER: 9722081
LAB CERTIFICATION NUMBER: 399
SAMPLE IDENTIFICATION: SB-2
DATE SAMPLED: 11/10/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 11/20/97

**METHOD SW 846 8020**

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzene | 71-43-2 | 5.0 | BDL |
| **Toluene** | **108-88-3** | **5.0** | **9.41** |
| Ethylbenzene | 100-41-4 | 5.0 | BDL |
| **Xylenes (Total)** | **1330-20-7** | **5.0** | **8.43** |
| Naphthalene | 91-20-3 | 5.0 | BDL |
| Surrogate Recovery: | | | |
| BFB | | | 112% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | MARSHALL MILLER & ASSOC. |
| COMPANY PROJECT NUMBER: | A89128 |
| HYDROLOGIC PROJECT NUMBER: | K9722080C |
| HYDROLOGIC SAMPLE NUMBER: | 9722082 |
| LAB CERTIFICATION NUMBER: | 399 |
| SAMPLE IDENTIFICATION: | SB-3 |
| DATE SAMPLED: | 11/10/97 |
| DATE EXTRACTED: | N/A |
| DATE/TIME ANALYZED: | 11/21/97 |

**METHOD SW 846 8020**

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzene | 71-43-2 | 5.0 | BDL |
| Toluene | 108-88-3 | 5.0 | BDL |
| Ethylbenzene | 100-41-4 | 5.0 | BDL |
| Xylenes (Total) | 1330-20-7 | 5.0 | BDL |
| Naphthalene | 91-20-3 | 5.0 | 7.32 |
| Surrogate Recovery: | | | |
| BFB | | | 103% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | MARSHALL MILLER & ASSOC. |
| COMPANY PROJECT NUMBER: | A89128 |
| HYDROLOGIC PROJECT NUMBER: | K9722080C |
| HYDROLOGIC SAMPLE NUMBER: | 9722083 |
| LAB CERTIFICATION NUMBER: | 399 |
| SAMPLE IDENTIFICATION: | SB-4 |
| DATE SAMPLED: | 11/10/97 |
| DATE EXTRACTED: | N/A |
| DATE/TIME ANALYZED: | 11/21/97 |

METHOD SW 846 8020

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzene | 71-43-2 | 100 | 4170 |
| Toluene | 108-88-3 | 1000 | 119000 |
| Ethylbenzene | 100-41-4 | 1000 | 43700 |
| Xylenes (Total) | 1330-20-7 | 1000 | 262000 |
| Naphthalene | 91-20-3 | 100 | 7500 |
| Surrogate Recovery: | | | |
| BFB | | | 101% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: COMPOUNDS WITH ELEVATED SDL ARE DUE TO A SAMPLE DILUTION.

# HYDROLOGIC, INC.

COMPANY NAME: MARSHALL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722080C
HYDROLOGIC SAMPLE NUMBER: 9722084
LAB CERTIFICATION NUMBER: 399
SAMPLE IDENTIFICATION: SB-5
DATE SAMPLED: 11/10/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 11/20/97

**METHOD SW 846 8020**

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzene | 71-43-2 | 50 | 401 |
| Toluene | 108-88-3 | 50 | 1940 |
| Ethylbenzene | 100-41-4 | 50 | 372 |
| Xylenes (Total) | 1330-20-7 | 50 | 2120 |
| Naphthalene | 91-20-3 | 50 | 551 |
| Surrogate Recovery: | | | |
| BFB | | | 106% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: COMPOUNDS WITH ELEVATED SDL ARE DUE TO A SAMPLE DILUTION.

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | MARSHALL MILLER & ASSOC. |
| COMPANY PROJECT NUMBER: | A89128 |
| HYDROLOGIC PROJECT NUMBER: | K9722080C |
| HYDROLOGIC SAMPLE NUMBER: | 9722084 |
| LAB CERTIFICATION NUMBER: | 399 |
| SAMPLE IDENTIFICATION: | SB-5 |
| DATE SAMPLED: | 11/10/97 |
| DATE EXTRACTED: | 11/19/97 |
| DATE/TIME ANALYZED: | 11/23/97 |

METHOD TPH 3550

| ANALYSIS | CAS NO. | SDL (mg/kg) | RESULT (mg/kg) |
|---|---|---|---|
| Diesel | | 10.0 | BDL |
| Surrogate Recoveries: | | | |
| Nonane | | | 51% |
| Pentacosane | | | 93% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | MARSHALL MILLER & ASSOC. |
| COMPANY PROJECT NUMBER: | A89128 |
| HYDROLOGIC PROJECT NUMBER: | K9722080C |
| HYDROLOGIC SAMPLE NUMBER: | 9722085 |
| LAB CERTIFICATION NUMBER: | 399 |
| SAMPLE IDENTIFICATION: | SB-7 |
| DATE SAMPLED: | 11/10/97 |
| DATE EXTRACTED: | N/A |
| DATE/TIME ANALYZED: | 11/21/97 |

METHOD SW 846 8020

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzene | 71-43-2 | 10.0 | 172 |
| Toluene | 108-88-3 | 10.0 | 145 |
| Ethylbenzene | 100-41-4 | 10.0 | 62.2 |
| Xylenes (Total) | 1330-20-7 | 10.0 | 374 |
| Naphthalene | 91-20-3 | 10.0 | 204 |
| Surrogate Recovery: | | | |
| BFB | | | 108% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: COMPOUNDS WITH ELEVATED SDL ARE DUE TO A SAMPLE DILUTION.

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | MARSHALL MILLER & ASSOC. |
| COMPANY PROJECT NUMBER: | AB9128 |
| HYDROLOGIC PROJECT NUMBER: | K9722080C |
| HYDROLOGIC SAMPLE NUMBER: | 9722086 |
| LAB CERTIFICATION NUMBER: | 399 |
| SAMPLE IDENTIFICATION: | SB-9 |
| DATE SAMPLED: | 11/10/97 |
| DATE EXTRACTED: | N/A |
| DATE/TIME ANALYZED: | 11/20/97 |

**METHOD SW 846 8020**

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzene | 71-43-2 | 5.0 | BDL |
| Toluene | 108-88-3 | 5.0 | 30.4 |
| Ethylbenzene | 100-41-4 | 5.0 | BDL |
| Xylenes (Total) | 1330-20-7 | 5.0 | 5.24 |
| Naphthalene | 91-20-3 | 5.0 | BDL |
| Surrogate Recovery: | | | |
| BFB | | | 109% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | MARSHALL MILLER & ASSOC. |
| COMPANY PROJECT NUMBER: | A89128 |
| HYDROLOGIC PROJECT NUMBER: | K9722080C |
| HYDROLOGIC SAMPLE NUMBER: | 9722087 |
| LAB CERTIFICATION NUMBER: | 399 |
| SAMPLE IDENTIFICATION: | SB-10 |
| DATE SAMPLED: | 11/11/97 |
| DATE EXTRACTED: | N/A |
| DATE/TIME ANALYZED: | 11/20/97 11/24/97 |

**METHOD SW 846 8020 (GC-MS CONFIRMED)**

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzene | 71-43-2 | 5.0 | BDL |
| Toluene | 108-88-3 | 5.0 | BDL |
| Ethylbenzene | 100-41-4 | 5.0 | BDL |
| Xylenes (Total) | 1330-20-7 | 5.0 | BDL |
| Naphthalene | 91-20-3 | 5.0 | BDL |
| Surrogate Recovery: | | | |
| BFB | | | 111% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | MARSHALL MILLER & ASSOC. |
| COMPANY PROJECT NUMBER: | A89128 |
| HYDROLOGIC PROJECT NUMBER: | K9722080C |
| HYDROLOGIC SAMPLE NUMBER: | 9722088 |
| LAB CERTIFICATION NUMBER: | 399 |
| SAMPLE IDENTIFICATION: | SB-11 |
| DATE SAMPLED: | 11/11/97 |
| DATE EXTRACTED: | N/A |
| DATE/TIME ANALYZED: | 11/20/97 |

**METHOD SW 846 8020**

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzene | 71-43-2 | 5.0 | BDL |
| Toluene | 108-88-3 | 5.0 | 23.5 |
| Ethylbenzene | 100-41-4 | 5.0 | BDL |
| Xylenes (Total) | 1330-20-7 | 5.0 | 19.1 |
| Naphthalene | 91-20-3 | 5.0 | BDL |
| Surrogate Recovery: BFB | | | 104% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS:

# HYDROLOGIC, INC.

COMPANY NAME: MARSHALL MILLER & ASSOC.
COMPANY PROJECT NUMBER: A89128

HYDROLOGIC PROJECT NUMBER: K9722080C
HYDROLOGIC SAMPLE NUMBER: 9722089
LAB CERTIFICATION NUMBER: 399
SAMPLE IDENTIFICATION: SB-12
DATE SAMPLED: 11/11/97
DATE EXTRACTED: N/A
DATE/TIME ANALYZED: 11/20/97

**METHOD SW 846 8020**

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzene | 71-43-2 | 5.0 | BDL |
| **Toluene** | **108-88-3** | **5.0** | **14.3** |
| Ethylbenzene | 100-41-4 | 5.0 | BDL |
| **Xylenes** (Total) | **1330-20-7** | **5.0** | **8.43** |
| Naphthalene | 91-20-3 | 5.0 | BDL |
| Surrogate Recovery: | | | |
| BFB | | | 105% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

# HYDROLOGIC, INC.

November 25, 1997

**REPORTING:**

MARSHALL MILLER & ASSOC.
P.O. BOX 848
BLUEFIELD, VA 24605

**INVOICING:**

MARSHALL MILLER & ASSOC.
P.O. BOX 848
BLUEFIELD, VA 24605

**PROJECT NUMBER:** K9722080C

**DATE COMPLETED:** November 25, 1997
**DATE RECEIVED:** November 15, 1997

**PROJECT DESCRIPTION:**

A89128--10 soil samples were received and analyzed as follows: 10 8020-BTEX + NAPHTHALENE, 10 8270-PAH, and 1 3550-TPH.

Enclosed is the laboratory report for the project described above. If you have any questions or if we can be of further assistance, please feel free to contact Jack Hale, Jr. at 1-800-728-2251. We appreciate your business and look forward to serving you again soon.

Respectfully,

Walter Hogg
Laboratory Director

| Post-it® Fax Note 7671 | Date 11/26 | # of pages ▶ 26 |
|---|---|---|
| To Chuck Close | From Charles | |
| Co./Dept. | Co. | |
| Phone # | Phone # | |
| Fax # 540/322-1510 | Fax # | |

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | MARSHALL MILLER & ASSOC. |
| COMPANY PROJECT NUMBER: | A89128 |
| HYDROLOGIC PROJECT NUMBER: | K9722080C |
| HYDROLOGIC SAMPLE NUMBER: | 9722080 |
| LAB CERTIFICATION NUMBER: | 399 |
| SAMPLE IDENTIFICATION: | SB-1 |
| DATE SAMPLED: | 11/10/97 |
| DATE EXTRACTED: | 11/19/97 |
| DATE/TIME ANALYZED: | 11/23/97 |

**METHOD PAH 8270 BN**

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzo(a)anthracene | 56-55-3 | 660 | BDL |
| Benzo(b)fluoranthene | 205-99-2 | 660 | BDL |
| Benzo(k)fluoranthene | 207-08-9 | 660 | BDL |
| Chrysene | 218-01-9 | 660 | BDL |
| Dibenzo(a,h)anthracene | 53-70-3 | 660 | BDL |
| Surrogate Recoveries: | | | |
| p-Terphenyl | | | 69% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | MARSHALL MILLER & ASSOC. |
| COMPANY PROJECT NUMBER: | A89128 |
| HYDROLOGIC PROJECT NUMBER: | K9722080C |
| HYDROLOGIC SAMPLE NUMBER: | 9722081 |
| LAB CERTIFICATION NUMBER: | 399 |
| SAMPLE IDENTIFICATION: | SB-2 |
| DATE SAMPLED: | 11/10/97 |
| DATE EXTRACTED: | 11/19/97 |
| DATE/TIME ANALYZED: | 11/23/97 |

**METHOD PAH 8270 BN**

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzo(a)anthracene | 56-55-3 | 660 | BDL |
| Benzo(b)fluoranthene | 205-99-2 | 660 | BDL |
| Benzo(k)fluoranthene | 207-08-9 | 660 | BDL |
| Chrysene | 218-01-9 | 660 | BDL |
| Dibenzo(a,h)anthracene | 53-70-3 | 660 | BDL |
| Surrogate Recoveries: | | | |
| p-Terphenyl | | | 94% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | MARSHALL MILLER & ASSOC. |
| COMPANY PROJECT NUMBER: | A89128 |
| HYDROLOGIC PROJECT NUMBER: | K9722080C |
| HYDROLOGIC SAMPLE NUMBER: | 9722082 |
| LAB CERTIFICATION NUMBER: | 399 |
| SAMPLE IDENTIFICATION: | SB-3 |
| DATE SAMPLED: | 11/10/97 |
| DATE EXTRACTED: | 11/19/97 |
| DATE/TIME ANALYZED: | 11/23/97 |

**METHOD PAH 8270 BN**

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzo(a)anthracene | 56-55-3 | 660 | BDL |
| Benzo(b)fluoranthene | 205-99-2 | 660 | BDL |
| Benzo(k)fluoranthene | 207-08-9 | 660 | BDL |
| Chrysene | 218-01-9 | 660 | BDL |
| Dibenzo(a,h)anthracene | 53-70-3 | 660 | BDL |
| Surrogate Recoveries: | | | |
| p-Terphenyl | | | 118% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | MARSHALL MILLER & ASSOC. |
| COMPANY PROJECT NUMBER: | A89128 |
| HYDROLOGIC PROJECT NUMBER: | K9722080C |
| HYDROLOGIC SAMPLE NUMBER: | 9722083 |
| LAB CERTIFICATION NUMBER: | 399 |
| SAMPLE IDENTIFICATION: | SB-4 |
| DATE SAMPLED: | 11/10/97 |
| DATE EXTRACTED: | 11/19/97 |
| DATE/TIME ANALYZED: | 11/24/97 |

**METHOD PAH 8270 BN**

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzo(a)anthracene | 56-55-3 | 660 | BDL |
| Benzo(b)fluoranthene | 205-99-2 | 660 | BDL |
| Benzo(k)fluoranthene | 207-08-9 | 660 | BDL |
| Chrysene | 218-01-9 | 660 | BDL |
| Dibenzo(a,h)anthracene | 53-70-3 | 660 | BDL |
| Surrogate Recoveries: | | | |
| p-Terphenyl | | | 110% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

1491 TWILIGHT TRAIL FRANKFORT, KY 40601
502-223-0251 FAX: 502-875-8016 / TOLL FREE 800-728-2251

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | MARSHALL MILLER & ASSOC. |
| COMPANY PROJECT NUMBER: | A89128 |
| HYDROLOGIC PROJECT NUMBER: | K9722080C |
| HYDROLOGIC SAMPLE NUMBER: | 9722084 |
| LAB CERTIFICATION NUMBER: | 399 |
| SAMPLE IDENTIFICATION: | SB-5 |
| DATE SAMPLED: | 11/10/97 |
| DATE EXTRACTED: | 11/19/97 |
| DATE/TIME ANALYZED: | 11/24/97 |

**METHOD PAH 8270 BN**

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzo(a)anthracene | 56-55-3 | 660 | BDL |
| Benzo(b)fluoranthene | 205-99-2 | 660 | BDL |
| Benzo(k)fluoranthene | 207-08-9 | 660 | BDL |
| Chrysene | 218-01-9 | 660 | BDL |
| Dibenzo(a,h)anthracene | 53-70-3 | 660 | BDL |
| Surrogate Recoveries: | | | |
| p-Terphenyl | | | 85% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | MARSHALL MILLER & ASSOC. |
| COMPANY PROJECT NUMBER: | A89128 |
| HYDROLOGIC PROJECT NUMBER: | K9722080C |
| HYDROLOGIC SAMPLE NUMBER: | 9722085 |
| LAB CERTIFICATION NUMBER: | 399 |
| SAMPLE IDENTIFICATION: | SB-7 |
| DATE SAMPLED: | 11/10/97 |
| DATE EXTRACTED: | 11/19/97 |
| DATE/TIME ANALYZED: | 11/24/97 |

**METHOD PAH 8270 BN**

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzo(a)anthracene | 56-55-3 | 660 | BDL |
| Benzo(b)fluoranthene | 205-99-2 | 660 | BDL |
| Benzo(k)fluoranthene | 207-08-9 | 660 | BDL |
| Chrysene | 218-01-9 | 660 | BDL |
| Dibenzo(a,h)anthracene | 53-70-3 | 660 | BDL |
| Surrogate Recoveries: | | | |
| p-Terphenyl | | | 79% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | MARSHALL MILLER & ASSOC. |
| COMPANY PROJECT NUMBER: | A89128 |
| HYDROLOGIC PROJECT NUMBER: | K9722080C |
| HYDROLOGIC SAMPLE NUMBER: | 9722086 |
| LAB CERTIFICATION NUMBER: | 399 |
| SAMPLE IDENTIFICATION: | SB-9 |
| DATE SAMPLED: | 11/10/97 |
| DATE EXTRACTED: | 11/19/97 |
| DATE/TIME ANALYZED: | 11/24/97 |

**METHOD PAH 8270 BN**

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzo(a)anthracene | 56-55-3 | 660 | BDL |
| Benzo(b)fluoranthene | 205-99-2 | 660 | BDL |
| Benzo(k)fluoranthene | 207-08-9 | 660 | BDL |
| Chrysene | 218-01-9 | 660 | BDL |
| Dibenzo(a,h)anthracene | 53-70-3 | 660 | BDL |
| Surrogate Recoveries: | | | |
| p-Terphenyl | | | 95% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | MARSHALL MILLER & ASSOC. |
| COMPANY PROJECT NUMBER: | A89128 |
| HYDROLOGIC PROJECT NUMBER: | K9722080C |
| HYDROLOGIC SAMPLE NUMBER: | 9722087 |
| LAB CERTIFICATION NUMBER: | 399 |
| SAMPLE IDENTIFICATION: | SB-10 |
| DATE SAMPLED: | 11/11/97 |
| DATE EXTRACTED: | 11/19/97 |
| DATE/TIME ANALYZED: | 11/24/97 |

**METHOD PAH 8270 BN**

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzo(a)anthracene | 56-55-3 | 660 | BDL |
| Benzo(b)fluoranthene | 205-99-2 | 660 | BDL |
| Benzo(k)fluoranthene | 207-08-9 | 660 | BDL |
| Chrysene | 218-01-9 | 660 | BDL |
| Dibenzo(a,h)anthracene | 53-70-3 | 660 | BDL |
| Surrogate Recoveries: | | | |
| p-Terphenyl | | | 120% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | MARSHALL MILLER & ASSOC. |
| COMPANY PROJECT NUMBER: | A89128 |
| HYDROLOGIC PROJECT NUMBER: | K9722080C |
| HYDROLOGIC SAMPLE NUMBER: | 9722088 |
| LAB CERTIFICATION NUMBER: | 399 |
| SAMPLE IDENTIFICATION: | SB-11 |
| DATE SAMPLED: | 11/11/97 |
| DATE EXTRACTED: | 11/19/97 |
| DATE/TIME ANALYZED: | 11/24/97 |

**METHOD PAH 8270 BN**

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzo(a)anthracene | 56-55-3 | 660 | BDL |
| Benzo(b)fluoranthene | 205-99-2 | 660 | BDL |
| Benzo(k)fluoranthene | 207-08-9 | 660 | BDL |
| Chrysene | 218-01-9 | 660 | BDL |
| Dibenzo(a,h)anthracene | 53-70-3 | 660 | BDL |
| Surrogate Recoveries: | | | |
| p-Terphenyl | | | 109% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

# HYDROLOGIC, INC.

| | |
|---|---|
| COMPANY NAME: | MARSHALL MILLER & ASSOC. |
| COMPANY PROJECT NUMBER: | AB9128 |
| HYDROLOGIC PROJECT NUMBER: | K9722080C |
| HYDROLOGIC SAMPLE NUMBER: | 9722089 |
| LAB CERTIFICATION NUMBER: | 399 |
| SAMPLE IDENTIFICATION: | SB-12 |
| DATE SAMPLED: | 11/11/97 |
| DATE EXTRACTED: | 11/19/97 |
| DATE/TIME ANALYZED: | 11/24/97 |

**METHOD PAH 8270 BN**

| ANALYSIS | CAS NO. | SDL (ug/kg) | RESULT (ug/kg) |
|---|---|---|---|
| Benzo(a)anthracene | 56-55-3 | 660 | BDL |
| Benzo(b)fluoranthene | 205-99-2 | 660 | BDL |
| Benzo(k)fluoranthene | 207-08-9 | 660 | BDL |
| Chrysene | 218-01-9 | 660 | BDL |
| Dibenzo(a,h)anthracene | 53-70-3 | 660 | BDL |
| Surrogate Recoveries: | | | |
| p-Terphenyl | | | 97% |

BDL = Below Sample Detection Limit
SDL = Sample Detection Limit

COMMENTS: _____

HYDROLOGIC LABORATORIES, INC

# Sample Cross Reference Table

**Company Name:** HydroLogic-Charlotte

**HydroLogic Login Number:** L6042

| HydroLogic Sample Number | Client Sample Identification | Sample Date/Time |
|---|---|---|
| L6042-1 | FLS-4 | 11 Nov 97 15:30 |

Form I - Data Summary Report
Prepared By: Hydrologic Laboratories, Inc.

| | |
|---|---|
| Client ID: | FLS-4 |
| Project Number: | AB9128 |
| Sample ID: | L6042-1 |
| Site / Project ID: | Not Reported |
| Run ID: | R8637 |
| Collection Date: | 11-NOV-97 |
| Received Date: | 14-NOV-97 |
| Report Date: | 22-NOV-97 |

| Analyte | CAS No. | Dil | Sample Conc. | Units | RL |
|---|---|---|---|---|---|
| SW-846, 9060M | | | | | |
| Analysis Date: 22-NOV-97 09:00 | | | | | |
| Workgroup Number: WG13226 | | | | | |
| Total Organic Carbon | N/A | 1 | ND | mg/Kg | 100 |

eview By: Rose Murphy

Report Approved By: Karen Kuoppala

"Dil" - Sample Dilution Factor
"D" - Sample Concentration Not Detected above RL
"L" - Method Report Limit

NOV-26-97 08:08 704 392 9073 HYDROLOGIC CHARLOTTE P.25
NOV-26-1997 08:19 704 392 9073 R-584 Job-725 P.25

# Chain Custody Record

# HYDROLOGIC, INC.



☐ Asheville, NC (704) 254-5169
☐ Norcross, GA (770) 368-0636
☐ Frankfort KY (502) 223-0251
☐ Lumberton, NC (910) 738-6190
☐ Charlotte, NC (704) 392-1164
☐ Morrisville, NC (919) 380-9699
☐ Brighton, CO (303) 659-0497
☐ Orlando, FL (407) 851-2560
☐ Lexington, SC (803) 796-8989
☐ Richmond, VA (804) 358-3145
☐ Burlington, NC (910) 570-4661
☐ Macon, GA (912) 757-0811

| | |
|---|---|
| Client: MARSHALL MILLER | Project No.: A89128 |
| Report Address: P.O. BOX 848 | Invoice Address: SAME |
| BLUEFIELD VA. 24605 | |
| Attn: CHUCK CLINE | Attn: CHUCK CLINE |
| Phone No.: 540-322-5467 | Sampled By: J. CURRY |
| Fax No.: 540-322-1510 | P.O. No: |
| TURNAROUND TIME: ☐ 24 Hours ☐ 48 Hours ☐ 5 Days ☐ 10 Days Date Needed: | State Samples Collected: S.C. |

REQUESTED PARAMETERS

LAB CODE
A = Asheville, NC
B = Burlington, N
C = Charlotte, NC
D = Denver, CO
E = Lexington, SC
G = Macon, GA
K = Frankfort, KY
L = Lumberton, NI
M = Morrisville, NI
N = Norcross, GA
O = Orlando, FL
R = Richmond, VA
S = Subcontracted

| Sample ID | Date | Time | Comp/ Grab | Matrix | Containers | BTEX + MADH | PAH | TPH (3550) | T.O.C. | ← Preserv. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| SB-1 8' | 11-10-97 | 8:30 | G | SOIL | 2-4oz | X | X | | | | |
| SB-2 12' | " | 9:15 | " | " | " | X | X | | | | |
| SB-3 12' | " | 10:00 | " | " | " | X | X | | | | |
| SB-4 12' | " | 10:50 | " | " | " | X | X | | | | |
| SB-5 8' | " | 11:45 | " | " | 3-4oz | X | X | X | | | |
| SB-7 8' | " | 1:30 | " | " | 2-4oz | X | X | | | | |
| SB-9 12' | " | 2:45 | " | " | " | X | X | | | | |
| SB-10 8' | 11-11-97 | 9:20 | " | " | " | X | X | | | | |
| SB-11 12' | " | 11:00 | " | " | " | X | X | | | | |
| SB-12 12' | " | 12:50 | " | " | " | X | X | | | | |
| FS-4 11' 12' | " | 3:30 | " | " | " | X | X | | | | |
| Lab Use Only | Custody Seal: ☐ Yes ☐ No ☐ N/A | | | | | | | X | | | |

Init Lab Temp. | Rec. Lab Temp

COMMENTS: CRAWFORDS COUNTRY STORE

| | | | | | |
|---|---|---|---|---|---|
| Relinquished By: | Date 11-13-97 | Time 3:10 | Received By: | Date 11/17 | Time 15:18 |
| Relinquished By: T. Norris Tinsley | Date 11/13 | Time 1615 | Received By: | Date | Time |
| Relinquished By: | Date | Time | Received By: | Date | Time |
| Relinquished By: | Date | Time | Received By: | Date | Time |

Lab Use Only:

DEC-16-1997 16:24 HYDROLOGIC CHARLOTTE 704 392 9873 P.02
DEC-16-97 10:18 R-811 Job-144 704 392 9873 P.02

# HYDROLOGIC, INC.

*Chain of Custody Record*

Page 1 of 1

☐ Asheville, NC (704) 254-5169 ☐ Norcross, GA (770) 368-0636 ☐ Frankfort KY (502) 223-0251 ☐ Lumberton, NC (910) 738-6190 ☐ Charlotte, NC (704) 392-1164 ☐ Morrisville, NC (919) 380-9699
☐ Brighton, CO (303) 659-0497 ☐ Orlando, FL (407) 851-2560 ☐ Lexington, SC (803) 796-8989 ☐ Richmond, VA (804) 358-3145 ☐ Burlington, NC (910) 570-4661 ☐ Macon, GA (912) 757-0811

Client: MARSHALL MILLER
Report Address: P.O. BOX 848
BLUEFIELD VA. 24605
Attn: CHUCK CLINE
Phone No.: 540-322-5467
Fax No.: 540-322-1510

Project No.: A89128
Invoice Address: SAME
Attn: CHUCK CLINE
Sampled By: J. OWNEY
P.O. No:
State Samples Collected S.C.

TURNAROUND TIME
☐ 24 Hours ☐ 48 Hours
☐ 5 Days ☐ 10 Days Date Needed:

**REQUESTED PARAMETERS**

LAB CODE I.D.
A = Asheville, NC
B = Burlington, NC
C = Charlotte, NC
D = Denver, CO
E = Lexington, SC
G = Macon, GA
K = Frankfort, KY
L = Lumberton, NC
M = Morrisville, NC
N = Norcross, GA
O = Orlando, FL
R = Richmond, VA
S = Subcontracted

| Sample ID | Date | Time | Comp/ Grab | Matrix | Containers | BTEX + NAPTH | PAH | TPH (3550) | T.O.C. | CO | | | | | | | ← Preserv. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SB-1 8' | 11-10-97 | 8:30 | G | SOIL | 2-4oz | X | X | | | | | | | | | | | |
| SB-2 12' | " | 9:15 | " | " | " | X | X | | | | | | | | | | | |
| SB-3 12' | " | 10:00 | " | " | " | X | X | | | | | | | | | | | |
| SB-4 12' | " | 10:50 | " | " | " | X | X | | | | | | | | | | | |
| SB-5 8' | " | 11:45 | " | " | 3-4oz | X | X | X | | | | | | | | | | |
| SB-7 8' | " | 1:30 | " | " | 2-4oz | X | X | | | | | | | | | | | |
| SB-9 12' | " | 2:45 | " | " | " | X | X | | | | | | | | | | | |
| SB-10 8' | 11-11-97 | 9:20 | " | " | " | X | X | | | | | | | | | | | |
| SB-11 12' | " | 11:00 | " | " | " | X | X | | | | | | | | | | | |
| SB-12 12' | " | 12:50 | " | " | " | X | X | | | | | | | | | | | |
| FB-4 | 11-12 | " | 3:30 | " | " | | | | X | | | | | | | | | |

Lab Use Only Custody Seal: ☐ Yes ☐ No ☐ N/A Lab Lab Temp Rec Lab Temp

COMMENTS:
CRAWFORDS COURTESY SAMPLE

| | | | | | |
|---|---|---|---|---|---|
| Relinquished By: | Date 11-13-97 | Time 3:16 | Received By: | Date 11/13 | Time 15:16 |
| Relinquished By: | Date | Time | Received By: | Date | Time |
| Relinquished By: | Date | Time | Received By: | Date | Time |
| Relinquished By: | Date | Time | Received By: | Date | Time |

DEC-12-1997 15:49 HYDROLOGIC CHARLOTTE 704 392 9073 P.20 R-783 Job-083 704 392 9073 P.20

# Chain of Custody Record

# HYDROLOGIC, INC.




☐ Asheville, NC (704) 254-5169 ☐ Norcross, GA (770) 368-0636 ☐ Frankfort KY (502) 223-0251 ☐ Lumberton, NC (910) 738-6190 ☑ Charlotte, NC (704) 392-1164 ☐ Morrisville, NC (919) 380-9699
☐ Brighton, CO (303) 659-0497 ☐ Orlando, FL (407) 851-2560 ☐ Lexington, SC (803) 796-8989 ☐ Richmond, VA (804) 358-3145 ☐ Burlington, NC (910) 570-4661 ☐ Macon, GA (912) 757-0811


Client: Marshall Miller
Report Address: P.O. Box 848
Bluefield VA. 24605
Attn: Jim Autry
Phone No.: (540) 322-5462
Fax No.: (540) 322-1510

Project No.: 489128
Invoice Address: Same
Attn: Jim Autry
Sampled By: Jim Autry
P.O. No:
State Samples Collected: S.C.

TURNAROUND TIME
☐ 24 Hours ☐ 48 Hours
☐ 5 Days ☐ 10 Days
Date Needed: 72 Hours

REQUESTED PARAMETERS

602 + Naph + MTBE
EDB by 504
*Pb if Total

LAB CODE
A = Asheville, N
B = Burlington,
C = Charlotte, N
D = Denver, CO
E = Lexington, S
G = Macon, GA
K = Frankfort, K
L = Lumberton,
M = Morrisville,
N = Norcross, G
O = Orlando, FL
R = Richmond, V
S = Subcontracte

| Sample ID | Date | Time | Comp/ Grab | Matrix | Containers | ← Preserv. | REMARKS |
|---|---|---|---|---|---|---|---|
| OMW-1 | 12-2-97 | 8:00 | G | H2O | 4 | | |
| MW-2 | | 8:30 | | | | | |
| 3 | | 9:00 | | | | | |
| 4 | | 9:30 | | | | | |
| 5 | | 10:10 | | | | | |
| 6 | | 10:30 | | | | | |
| 7 | | 11:00 | | | | | |
| 8 | | 11:30 | | | | | |
| 9 | | 12:00 | | | | | |
| MW-10 | | 12:30 | | | | | |

Lab Use Only — Custody Seal: ☐ Yes ☐ No ☐ N/A — Init Lab Temp. — Rec. Lab Temp.

COMMENTS: Crawford Country Store

*Require 5 ppb MDL

| Relinquished By: | Date | Time | Received By: | Date | Time | Lab Use Only |
|---|---|---|---|---|---|---|
| [signature] | 12-4-97 | 2:41 | T. Kennedy | 12/4 | 3:41 | |
| T. Kennedy | 12/4 | 3:50 | | | | |
| Relinquished By: | Date | Time | Received By: | Date | Time | |
| Relinquished By: | Date | Time | Received By: | Date | Time | |

# Chain of Custody Record

# HYDROLOGIC, INC.

Page 2

| | | | | | | |
|---|---|---|---|---|---|---|
| ☐ Asheville, NC (704) 254-5169 | ☐ Norcross, GA (770) 368-0636 | ☐ Frankfort KY (502) 223-0251 | ☐ Lumberton, NC (910) 738-6190 | ☑ Charlotte, NC (704) 392-1164 | ☐ Morrisville, NC (919) 380-9699 | |
| ☐ Brighton, CO (303) 659-0497 | ☐ Orlando, FL (407) 851-2560 | ☐ Lexington, SC (803) 796-8989 | ☐ Richmond, VA (804) 358-3145 | ☐ Burlington, NC (910) 570-4661 | ☐ Macon, GA (912) 757-0811 | |

| | | |
|---|---|---|
| Client: Marshall - Miller | Project No.: AP9128 | |
| Report Address: P.O. Box 848 | Invoice Address: | |
| Bluefield VA 24605 | State | |
| Attn: Jim Amory | Attn: Jim Amory | |
| Phone No.: 540-322-5467 | Sampled By: Jim Amory | |
| Fax No.: 540-322-1510 | P.O. No: | |
| TURNAROUND TIME | State Samples Collected S.C. | |
| ☐ 24 Hours ☐ 48 Hours | | |
| ☐ 5 Days ☐ 10 Days | Date Needed: 72 Hours | |

**REQUESTED PARAMETERS**

602 + Naph + MTBE
EDB by SIM
Pb *

LAB CODE
A = Asheville, N
B = Burlington,
C = Charlotte, N
D = Denver, CO
E = Lexington, S
G = Macon, GA
K = Frankfort, K
L = Lumberton,
M = Morrisville,
N = Norcross, G
O = Orlando, FL
R = Richmond, V
S = Subcontracte

| Sample ID | Date | Time | Comp/ Grab | Matrix | Containers | ← Preserv. | REMARKS |
|---|---|---|---|---|---|---|---|
| MW-11 | 12-2-97 | 1:00 | G | H2O | 4 | | |
| 12 | | 1:30 | | | | | |
| 13 | | 2:00 | | | | | |
| 14 | | 2:30 | | | | | |
| 15 | | 3:00 | | | | | |
| MW-16 | | 3:30 | | | | | |
| DMW-17 | | 4:00 | | | | | |
| ACS-MW | | 4:30 | | | | | |
| CP-MW | ↓ | 5:00 | ↓ | ↓ | | | |

LAB Only — Custody Seals: ☐ Yes ☐ No ☐ N/A — Init Lab Temp. — Rec. Lab Tem

COMMENTS: Crawford Country Store

* Require 5 ppb MDL

| | | | | | |
|---|---|---|---|---|---|
| Relinquished By: | Date 12-4-97 Time 3:43 | Received By: T. Kennedy | Date 12/4 Time 345 | Lab Use Only: | |
| Relinquished By: T. Kennedy | Date 12/4 Time 350 | Received By: | Date Time | | |
| Relinquished By: | Date Time | Received By: | Date Time | | |
| Relinquished By: | Date Time | Received By: | Date Time | | |

DEC-12-1997 15:49 HYDROLOGIC CHARLOTTE 704 392 9073 P.21
R-783 Job-083 704 392 9073 P.21

# HYDROLOGIC, INC.

## FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
1-85 S BLDG 2848 SUITE E
CHARLOTTE, NC 28208-
Attn: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 12/12/97

SAMPLE NUMBER- 113211 SAMPLE ID- A89128 OMW-1
DATE SAMPLED- 12/02/97
DATE RECEIVED- 12/05/97 SAMPLER- JIM ONREY
TIME RECEIVED- 1015 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 0800
RECEIVED BY- DHT

Page 1 of 1

| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| LEAD, TOTAL | 239.2 | 12/07/97 | LJP | 12/11/97 | LJP | 0.023 | mg/l | 0.003 |

LABORATORY DIRECTOR Lewis H. Patton

| Post-it® Fax Note 7671 | Date 12/2 | # of pages ▶ 2 1 |
|---|---|---|
| To Jim Onrey | From Charles | |
| Co./Dept. | Co. | |
| Phone # | Phone # | |
| Fax # | Fax # | |

# HYDROLOGIC, INC.

## FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
1-85 S BLDG 2848 SUITE E
CHARLOTTE, NC 28208-
Attn: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 12/12/97

SAMPLE NUMBER- 113212 SAMPLE ID- A89128 MW-2
DATE SAMPLED- 12/02/97
DATE RECEIVED- 12/05/97 SAMPLER- JIM OWREY
TIME RECEIVED- 1015 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 0830
RECEIVED BY- DHT

Page 1 of 1

| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| LEAD, TOTAL | 239.2 | 12/07/97 | LJP | 12/11/97 | LJP | 0.015 | mg/l | 0.003 |

LABORATORY DIRECTOR Lon H Patton

# HYDROLOGIC, INC.

## FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
1-85 S BLDG 2848 SUITE E
CHARLOTTE, NC 28208-
Attn: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 12/12/97

SAMPLE NUMBER- 113213 SAMPLE ID- A89128 MW-3
DATE SAMPLED- 12/02/97
DATE RECEIVED- 12/05/97 SAMPLER- JIM OWREY
TIME RECEIVED- 1015 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 0900
RECEIVED BY- DHT



| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| D, TOTAL | 239.2 | 12/07/97 | LJP | 12/11/97 | LJP | 0.015 | mg/l | 0.003 |

LABORATORY DIRECTOR

# HYDROLOGIC, INC.

## FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
1-85 S BLDG 2848 SUITE B
CHARLOTTE, NC 28208-
Attn: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 12/12/97

SAMPLE NUMBER- 113214 SAMPLE ID- A89128 MW-4
DATE SAMPLED- 12/02/97
DATE RECEIVED- 12/05/97 SAMPLER- JIM OWREY
TIME RECEIVED- 1015 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 0930
RECEIVED BY- DHT

Page 1 of 1

| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| LEAD, TOTAL | 239.2 | 12/07/97 | LJP | 12/11/97 | LJP | 0.007 | mg/l | 0.003 |

LABORATORY DIRECTOR

# HYDROLOGIC, INC.

## FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
1-85 S BLDG 2848 SUITE E
CHARLOTTE, NC 28208-
Attn: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 12/12/97

SAMPLE NUMBER- 113215 SAMPLE ID- A89120 MW-5
DATE SAMPLED- 12/02/97
DATE RECEIVED- 12/05/97 SAMPLER- JIM OWREY
TIME RECEIVED- 1015 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 1000
RECEIVED BY- DHT

Page 1 of 1

| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| D, TOTAL | 239.2 | 12/07/97 | LJP | 12/11/97 | LJP | 0.012 | mg/l | 0.003 |

LABORATORY DIRECTOR

# HYDROLOGIC, INC.

## FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
1-85 S BLDG 2848 SUITE E
CHARLOTTE, NC 28208-
Attn: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 12/12/97

SAMPLE NUMBER- 113216 SAMPLE ID- A89128 MW-6
DATE SAMPLED- 12/02/97
DATE RECEIVED- 12/05/97 SAMPLER- JIM OWREY
TIME RECEIVED- 1015 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 1030
RECEIVED BY- DHT

Page 1 of 1

| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| D, TOTAL | 239.2 | 12/07/97 | LJP | 12/11/97 | LJP | 0.011 | mg/l | 0.003 |

LABORATORY DIRECTOR Lon W Patton

# HYDROLOGIC, INC.

## FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
I-85 S BLDG 2848 SUITE E
CHARLOTTE, NC 28208-
Attn: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 12/12/97

SAMPLE NUMBER- 113217 SAMPLE ID- A89128 MW-7
DATE SAMPLED- 12/02/97
DATE RECEIVED- 12/05/97 SAMPLER- JIM OWREY
TIME RECEIVED- 1015 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 1100
RECEIVED BY- DHT

Page 1 of 1

| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| D, TOTAL | 239.2 | 12/07/97 | LJP | 12/11/97 | LJP | 0.005 | mg/l | 0.003 |

LABORATORY DIRECTOR Lou J. Patton

# HYDROLOGIC, INC.

## FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
1-85 S BLDG 2848 SUITE E
CHARLOTTE, NC 28208-
Attn: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 12/12/97

SAMPLE NUMBER- 113218 SAMPLE ID- A89128 MW-8
DATE SAMPLED- 12/02/97
DATE RECEIVED- 12/05/97 SAMPLER- JIM OWREY
TIME RECEIVED- 1015 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 1130
RECEIVED BY- DHT



| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| D. TOTAL | 239.2 | 12/07/97 | LJP | 12/11/97 | LJP | 0.006 | mg/l | 0.003 |

LABORATORY DIRECTOR Lon J Patton

# HYDROLOGIC, INC.

## FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
1-85 S BLDG 2848 SUITE E
CHARLOTTE, NC 28208-
ATTN: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 12/12/97

SAMPLE NUMBER- 113219 SAMPLE ID- A89128 MW-9
DATE SAMPLED- 12/02/97
DATE RECEIVED- 12/05/97 SAMPLER- JIM OWREY
TIME RECEIVED- 1015 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 1200
RECEIVED BY- DHT

Page 1 of 1

| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| AD, TOTAL | 239.2 | 12/07/97 | LJP | 12/11/97 | LJP | 0.004 | mg/l | 0.003 |

LABORATORY DIRECTOR

# HYDROLOGIC, INC.

## FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
I-85 S BLDG 2848 SUITE E
CHARLOTTE, NC 28208-
Attn: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 12/12/97

SAMPLE NUMBER- 113220 SAMPLE ID- A89128 MW-10
DATE SAMPLED- 12/02/97
DATE RECEIVED- 12/05/97 SAMPLER- JIM OWREY
TIME RECEIVED- 1015 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 1230
RECEIVED BY- DHT

Page 1 of 1

| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| D, TOTAL | 239.2 | 12/07/97 | LJP | 12/11/97 | LJP | 0.009 | mg/l | 0.003 |

LABORATORY DIRECTOR Lori J Patton

# HYDROLOGIC, INC.

## FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
I-85 S BLDG 2848 SUITE E
CHARLOTTE, NC 28208-
Attn: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 12/12/97

SAMPLE NUMBER- 113221 SAMPLE ID- A89120 MW-11
DATE SAMPLED- 12/02/97
DATE RECEIVED- 12/05/97 SAMPLER- JIM OWREY
TIME RECEIVED- 1015 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 1300
RECEIVED BY- DHT

Page 1 of 1

| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| D, TOTAL | 239.2 | 12/07/97 | LJP | 12/11/97 | LJP | 0.004 | mg/l | 0.003 |

LABORATORY DIRECTOR Lou J Patton

# HYDROLOGIC, INC.

## FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
I-85 S BLDG 2848 SUITE E
CHARLOTTE, NC 28208-
Attn: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 12/12/97

SAMPLE NUMBER- 113222 SAMPLE ID- A89128 MW-12
DATE SAMPLED- 12/02/97
DATE RECEIVED- 12/05/97 SAMPLER- JIM OWREY
TIME RECEIVED- 1015 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 1330
RECEIVED BY- DHT

Page 1 of 1

| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| D, TOTAL | 239.2 | 12/07/97 | LJP | 12/11/97 | LJP | 0.008 | mg/l | 0.003 |

LABORATORY DIRECTOR Lou J. Patton

# HYDROLOGIC, INC.

FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
1-85 S BLDG 2848 SUITE E
CHARLOTTE, NC 28208-
Attn: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 12/12/97

SAMPLE NUMBER- 113223 SAMPLE ID- A89128 MW-13
DATE SAMPLED- 12/02/97
DATE RECEIVED- 12/05/97 SAMPLER- JIM OWREY
TIME RECEIVED- 1015 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 1400
RECEIVED BY- DHT

Page 1 of 1

| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| AD, TOTAL | 239.2 | 12/07/97 | LJP | 12/11/97 | LJP | 0.006 | mg/l | 0.003 |

LABORATORY DIRECTOR Lewis J. Patton

# HYDROLOGIC, INC.

## FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
I-85 S BLDG 2848 SUITE E
CHARLOTTE, NC 28208-
Attn: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 12/12/97

SAMPLE NUMBER- 113224 SAMPLE ID- A89128 MW-14
DATE SAMPLED- 12/02/97
DATE RECEIVED- 12/05/97 SAMPLER- JIM OWREY
TIME RECEIVED- 1015 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 1430
RECEIVED BY- DHT

Page 1 of 1

| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| AD, TOTAL | 239.2 | 12/07/97 | LJP | 12/11/97 | LJP | 0.006 | mg/l | 0.003 |

LABORATORY DIRECTOR Lou J Patton

# HYDROLOGIC, INC.

## FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
I-85 S BLDG 2848 SUITE E
CHARLOTTE, NC 28208-
Attn: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 12/12/97

SAMPLE NUMBER- 113225 SAMPLE ID- A89128 MW-15
DATE SAMPLED- 12/02/97
DATE RECEIVED- 12/05/97 SAMPLER- JIM OWREY
TIME RECEIVED- 1015 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 1500
RECEIVED BY- DHT

Page 1 of 1

| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| AD, TOTAL | 239.2 | 12/07/97 | LJP | 12/11/97 | LJP | 0.017 | mg/l | 0.003 |

LABORATORY DIRECTOR Lou Patton

# HYDROLOGIC, INC.

## FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
1-85 S BLDG 2848 SUITE B
CHARLOTTE, NC 28208-
Attn: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 12/12/97

SAMPLE NUMBER- 113226 SAMPLE ID- A89128 MW-16
DATE SAMPLED- 12/02/97
DATE RECEIVED- 12/05/97 SAMPLER- JIM OWREY
TIME RECEIVED- 1015 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 1530
RECEIVED BY- DHT

Page 1 of 1

| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| AD, TOTAL | 239.2 | 12/07/97 | LJP | 12/11/97 | LJP | 0.007 | mg/l | 0.003 |

LABORATORY DIRECTOR

# HYDROLOGIC, INC.

## FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
I-85 S BLDG 2848 SUITE E
CHARLOTTE, NC 28208-
Attn: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 12/12/97

SAMPLE NUMBER- 113227 SAMPLE ID- A89128 DMW-17
DATE SAMPLED- 12/02/97
DATE RECEIVED- 12/05/97 SAMPLER- JIM OWREY
TIME RECEIVED- 1015 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 1600
RECEIVED BY- DHT

Page 1 of 1

| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| LD, TOTAL | 239.2 | 12/07/97 | LJP | 12/11/97 | LJP | 0.008 | mg/l | 0.003 |

LABORATORY DIRECTOR

# HYDROLOGIC, INC.

## FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
1-85 S BLDG 2848 SUITE E
CHARLOTTE, NC 28208-
Attn: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 12/12/97

SAMPLE NUMBER- 113228 SAMPLE ID- A89128 CCS-WW
DATE SAMPLED- 12/02/97
DATE RECEIVED- 12/05/97 SAMPLER- JIM OWREY
TIME RECEIVED- 1015 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 1630
RECEIVED BY- DHT

Page 1 of 1

| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| AD, TOTAL | 239.2 | 12/07/97 | LJP | 12/11/97 | LJP | 0.011 | mg/l | 0.003 |

LABORATORY DIRECTOR Larry J. Patton

# HYDROLOGIC, INC.

FINAL REPORT OF ANALYSES

HYDROLOGIC-CHARLOTTE
CAROLINA BUSINESS CENTER
I-85 S BLDG 2848 SUITE E
CHARLOTTE, NC 28208-
Attn: CHARLES CABANISS

PROJECT NAME: MARSHALL MILLER
REPORT DATE: 12/12/97

SAMPLE NUMBER- 113229 SAMPLE ID- A89128 CP-WW
DATE SAMPLED- 12/02/97
DATE RECEIVED- 12/05/97 SAMPLER- JIM OWREY
TIME RECEIVED- 1015 DELIVERED BY- COURIER

SAMPLE MATRIX- WW
TIME SAMPLED- 1700
RECEIVED BY- DHT

Page 1 of 1

| ANALYSIS | METHOD | SAMPLE PREP DATE | BY | ANALYSIS DATE | BY | RESULT | UNITS | DET. LIMIT |
|---|---|---|---|---|---|---|---|---|
| D, TOTAL | 239.2 | 12/07/97 | LJP | 12/11/97 | LJP | 0.015 | mg/l | 0.003 |

LABORATORY DIRECTOR

Form 1 - Data Summary Report
Prepared By: HydroLogic Laboratories, Inc.

Client ID: Method Blank
Project Number: Not Reported
Sample ID: WG13226-1
Site / Project ID: Not Reported
Run ID: R8637
Collection Date: Not Reported
Received Date: 22-NOV-97
Report Date: 22-NOV-97

| Analyte | CAS No. | Dil | Sample Conc. | Units | RL |
|---|---|---|---|---|---|
| SW-846, 9060M | | | | | |
| Analysis Date: 22-NOV-97 09:00 | | | | | |
| Workgroup Number: WG13226 | | | | | |
| Total Organic Carbon | N/A | 1 | ND | mg/Kg | 100 |

Post-it® Fax Note 7671 | Date 12/16 | # of pages ▶
To Chuck | From Charles
Co./Dept. | Co.
Phone # | Phone #
Fax # | Fax #

Review By: Rose Murphy
Report Approved By: Karen Kuoppala

"Dil" - Sample Dilution Factor
"ND" - Sample Concentration Not Detected above RL
"RL" - Method Report Limit

# *Appendix VI*
# *Tier II Site-Specific Volatilization Target Levels*

Domenico's Model to Determine SSTLs for Monitoring Well 2 (MW-2)
Crawford's Country Store DHEC Site# 12335

| | | |
|---|---|---|
| Y | 35.06 | Width of source area perpendicular to GW flow (m) |
| Z | 12.1 | Vertical thickness of source (m) |
| x | 83.84 | Distance from source to receptor (x-coordinate) (m) |
| yb | 0 | y coordinate of the receptor relative to the source (m) |
| zb | 0 | z coordinate of the receptor relative to the source (m) |
| ax | 8.384 | Longitudal dispersivity (m) (x/10) |
| ay | 2.794667 | Transverse dispersivity (m) (ax/3) |
| az | 0.4192 | Vertical dispersivity (m) (ax/20) |
| v | 5.56E-07 | Contaminant velocity (m/s) |

| | | |
|---|---|---|
| L | 0 | First order decay rate (1/sec) |
| t | 3.15E+08 | Time during which contaminant transport takes place (sec) |
| Koc | 0 | Chemical specific soil/water partitioning coefficient derived from liturature (mg/l) |
| foc | 0 | Naturally occuring organic carbon in soil measured in the saturated zone (mg/k |
| Bd | 1.64 | Bulk Density (gm/cc) |
| o | 0.42 | Porosity (decimal %) |
| Crbsl (ben) | 0.005 | RBSL concentration for selected CoC |
| Crbsl (tol) | 1 | RBSL concentration for selected CoC |
| Crbsl (eth) | 0.7 | RBSL concentration for selected CoC |
| Crbsl (xyl) | 10 | RBSL concentration for selected CoC |
| Crbsl (nap) | 0.025 | RBSL concentration for selected CoC |
| Crbsl (mtbe) | 0.04 | RBSL concentration for selected CoC |

Equation 1

| COC | SSTL |
|---|---|
| Csstl benzene= | 0.084261 |
| Csstl tolune | 16.85229 |
| Csstl ethylbenzene | 11.7966 |
| Csstl xylenes | 168.5229 |
| Csstl naphthalene | 0.421307 |
| Csstl MTBE | 0.674092 |

MARSHALL MILLER & ASSOCIATES

## Chemical Specific Values

| Parameters | Definitions (Units) | Residential | | Commercial/Industrial | | User Specified | |
|---|---|---|---|---|---|---|---|
| $RfD_i$ | Inhalation chronic reference dose (mg/kg - day) | | Chemical - specific | | Chemical - specific | 0.29 | Chemical - specific |
| $RfD_o$ | Oral chronic reference dose (mg/kg - day) | | Chemical - specific | | Chemical - specific | 0.1 | Chemical - specific |
| $SF_i$ | Inhalation cancer slope factor ((mg/kg - day)$^{-1}$) | 0.029 | Chemical - specific | 0.029 | Chemical - specific | | Chemical - specific |
| $SF_o$ | Oral cancer slope factor ((mg/kg - day)$^{-1}$ | 0.029 | Chemical - specific | 0.029 | Chemical - specific | | Chemical - specific |
| TR | Target excess individual lifetime cancer risk (unitless) | 1.00E-06 | for example, 10-6 or 10-4 | 1.00E-06 | for example, 10-6 or 10-4 | 1.00E-06 | for example, 10-6 or 10-4 |
| $D^{air}$ | Diffusion coefficient in air (cm²/s) | 0.093 | Chemical - specific | 0.093 | Chemical - specific | 0.076 | Chemical - specific |
| $D^{wat}$ | Diffusion coefficient in water (cm²/s) | 0.000011 | Chemical - specific | 0.000011 | Chemical - specific | 0.0000085 | Chemical - specific |
| H | Henry's law constant (cm³ - H2O)/(cm³ - air) | 0.22 | Chemical - specific | 0.22 | Chemical - specific | 0.32 | Chemical - specific |
| $k_{oc}$ | Carbon - water sorption coefficient (g - H2O/g - C) | 38 | Chemical - specific | 38 | Chemical - specific | 95.5 | Chemical - specific |
| S | Pure component solubility in water (mg/L - H2O) | | Chemical - specific | | Chemical - specific | | Chemical - specific |

(a) See Ref (8)
(b) See Ref (15)

## Exposure Parameters Appearing

| Parameters | | Definitions (Units) | Residential | | Commercial/Industrial | | User Specified | |
|---|---|---|---|---|---|---|---|---|
| $AT_c$ | | Averaging time for carcinogens (years) | 70 | years | 70 | years (a) | 70 | years |
| $AT_n$ | | Averaging time for non-carcinogens (years) | 30 | years | 30 | years (a) | 30 | years |
| BW | | Adult body weight (kg) | 70 | kg | 70 | kg (a) | 70 | kg |
| ED | | Exposure duration (years) | 30 | years | 25 | years (a) | 30 | years |
| EF | | Exposure frequency (days/years) | 350 | days/year (a) | 250 | days/year (a) | 350 | days |
| $IR_{soil}$ | | Soil ingestion rate (mg/day) | 100 | mg/day | 50 | mg/day (a) | 100 | mg/day |
| $IR_{air}$ | indoor | Daily indoor inhalation rate (m³/day) | 15 | m³/day | 20 | m³/day (a) | 15 | m³/day |
| $IR_{air}$ | outdoor | Daily outdoor inhalation rate (m³/day) | 20 | m³/day | 20 | m³/day (a) | 20 | m³/day |
| $IR_w$ | | Daily water ingestion rate (L/day) | 2 | L/day | 1 | L/day (a) | 2 | L/day |
| M | | Soil to skin adherence factor (mg/cm²) | 0.5 | | 0.5 | (a) | 0.5 | |
| $RAF_d$ | | Dermal relative absorption factor (volatiles/PAHs) | 0.05 | 0.5 or 0.05 (b) | 0.05 | 0.5 or 0.05 (b) | 0.05 | 0.5 or 0.05 (b) |
| $RAF_o$ | | Oral relative absorption factor | 1.0 | | 1.0 | | 1.0 | |
| SA | | Skin surface area (cm²/day) | 3160 | | 3160 | (a) | 3160 | |
| THQ | | Target hazard quotient for individual constituents (unitless) | 1 | | 1 | | 1 | |

(a) See Ref (8)
(b) See Ref (15)



MARSHALL MILLER & ASSOCIATES

## Soil, Building, Surface, and Subsurface Parameters

NOTE: See X2.10 for justification of parameter selection.

| Parameters | Definitions (Units) | Residential | Commercial/Industrial | User Specified |
|---|---|---|---|---|
| d | Lower depth of surficial soil zone (cm) | 100 cm | 100 cm | 100 cm |
| ER | Enclosed - space air exchange rate (L/s) | 0.00014 $s^{-1}$ | 0.00023 $s^{-1}$ | 0.00014 $s^{-1}$ |
| $f_{oc}$ | Fraction of organic carbon in soil (g - C/g - soil) | 0.01 | 0 | 0.01 |
| $h_{cap}$ | Thickness of capillary fringe (cm) | 5 cm | 5 cm | 5 cm |
| $h_v$ | Thickness of vadose zone (cm) | 295 cm | 452.2 cm | 295 95 |
| I | Infiltration rate of water through soil (cm/year) | 30 cm | 30 cm/year | 30 cm |
| $L_B$ | Enclosed space volume/infiltration area ratio (cm) | 200 cm | 300 cm | 200 cm |
| $L_{crack}$ | Enclosed - space foundation or wall thickness (cm) | 15 cm | 15 cm | 15 cm |
| $L_{GW}$ | Depth to ground water = hcap + hv (cm) | 300 cm | 457.2 cm | 300 cm |
| $L_s$ | Depth to subsurface soil sources (cm) | 100 cm | 100 cm | 100 cm |
| $P_e$ | Particulate emission rate ($g/m^2$ - s) | 6.90E-14 | 6.90E-14 | 6.90E-14 |
| $U_{air}$ | Wind speed aove ground surface in ambient ixing zone (cm/s) | 225 cm/s | 225 cm/s | 225 cm/s |
| $U_{gw}$ | Ground water Darcy velocity (cm/s) | 2500 cm/year | 1755 cm/year | 2500 cm/year |
| W | Width of source area parallel to wind, or ground water flow direction (cm) | 1500 cm | 1500 cm | 150 cm |
| $\delta_{air}$ | Ambient air mixing zone height (cm) | 200 cm | 200 cm | 200 cm |
| $\delta_{gw}$ | Ground water mixing zone thickness (cm) | 200 cm | 200 cm | 200 cm |
| $\eta$ | Areal fraction of cracks in foundations/walls ($cm^2$ - $cracks/cm^2$ - total area) | 0.01 $cm^2$ - $cracks/cm^2$ - total area | 0.01 $cm^2$ - $cracks/cm^2$ - total area | 0.01 $cm^2$ - $cracks/cm^2$ - total area |
| $\theta_{acap}$ | Volumetric air content in capillary fringe soil ($cm^3$ - $air/cm^3$ - soil) | 0.038 $cm^3$ - $air/cm^3$ - soil | 0.038 $cm^3$ - $air/cm^3$ - soil | 0.038 $cm^3$ - $air/cm^3$ - soil |
| $\theta_{acrack}$ | Volumetric air content in foundation/wall cracks ($cm^3$ - $air/cm^3$ total volume) | 0.26 $cm^3$ - $air/cm^3$ total volume | 0.26 $cm^3$ - $air/cm^3$ total volume | 0.26 $cm^3$ - $air/cm^3$ total volume |
| $\theta_{as}$ | Volumetric air content in vadose zone soils ($cm^3$ - $air/cm^3$ - soil) | 0.26 $cm^3$ - $air/cm^3$ - soil | 0.26 $cm^3$ - $air/cm^3$ - soil | 0.26 $cm^3$ - $air/cm^3$ - soil |
| $\theta_T$ | Total soil porosity ($cm^3/cm^3$ - soil) | 0.38 $cm^3/cm^3$ - soil | 0.42 $cm^3/cm^3$ - soil | 0.38 $cm^3/cm^3$ - soil |
| $\theta_{wcap}$ | Volumetric water content in capillary fringe soils ($cm^3$ - H2O/$cm^3$ - soil) | 0.342 $cm^3$ - H2O/$cm^3$ - soil | 0.342 $cm^3$ - H2O/$cm^3$ - soil | 0.342 $cm^3$ - H2O/$cm^3$ - soil |
| $\theta_{wcrack}$ | Volumetric water content in foundation/wall cracks ($cm^3$ - H2O/$cm^2$ total volu | 0.12 $cm^3$ - H2O/$cm^3$ - total volume | 0.12 $cm^3$ - H2O/$cm^3$ - total volume | 0.12 $cm^3$ - H2O/$cm^3$ - total volume |
| $\theta_{ws}$ | Volumetric water content in vadose zone soils ($cm^3$ - H2O/$cm^3$ - soil) | 0.12 $cm^3$ - H2O/$cm^3$ - soil | 0.09 $cm^3$ - H2O/$cm^3$ - soil | 0.12 $cm^3$ - H2O/$cm^3$ - soil |
| $\rho_s$ | Soil bulk density (g - soil/$cm^3$ - soil) | 1.7 $g/cm^3$ | 1.64 $g/cm^3$ | 1.7 $g/cm^3$ |
| $\tau$ | Averaging time for vapor flux (s) | 7.88E+08 s | 7.88E+08 s | 9.46E+08 s |



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## Volatilization Factors, Leaching Factor, and Effective Diffusion Coefficients

| Parameters | Definitions (Units) | Residential | Commercial/Industrial | User Specified |
|---|---|---|---|---|
| $k_s$ | Soil - water sorption coefficient (g - H2O/g - soil) | 0.38 foc * Koc | 0 foc * Koc | 0.955 foc * Koc |
| $VF_{wesp}$ | Ground water - enclosed - space vapors | 0.016457068 | 0.005229743 | 0.017956303 |
| $VF_{wamb}$ | Ground water - ambient (outfoor) vapors | 2.70885E-05 | 2.05316E-05 | 2.78128E-06 |
| $VF_{as}$ | Surficial soils - ambient air (vapors) | 7.1912E-06 | 6.93739E-06 | 5.99013E-07 |
| $VF_{p}$ | Surficial soils - ambient air(particulates) | 2.3E-12 | 2.3E-12 | 2.3E-13 |
| $VF_{samb}$ | Subsurface soils - ambient air | 0.001099104 | 0.00485388 | 5.88748E-05 |
| $VF_{sesp}$ | Subsurface soil - enclosed - space vapors | 0.07358896 | 0.1318952 | 0.039419887 |
| $LF_{sw}$ | Subsurface soils - ground water | 0.170513815 | 1.266057312 | 0.00830105 |
| $D_{eff\ s}$ | Effective diffusion coefficient in soil based on vapor-phase concentration | 0.007257629 | 0.005940903 | 0.005930881 |
| $D_{eff\ crack}$ | Effective diffusion coefficient through foundation cracks | 0.007257629 | 0.005941053 | 0.005930881 |
| $D_{eff\ cap}$ | Effective diffusion coefficient through capillary fringe | 2.17324E-05 | 1.779E-05 | 1.49801E-05 |
| $D_{eff\ ws}$ | Effective diffusion coefficient between ground water and soil surface | 0.001108164 | 0.001280053 | 0.000782235 |
| $C_{sat\ s}$ | Soil concentration at which dissolved pore-water and vapor phases become saturated | 0 | 0 | 0 |

## Risk-Based Screening Level (RBSLs) Carcinogenic Effects

| Parameters | Definitions (Units) | Residential | Commercial/Industrial | User Specified |
|---|---|---|---|---|
| $RBSL_{air\ (indoors)}$ | Air inhalation (a) | 3.92E-01 | 4.93E-01 | #DIV/0! |
| $RBSL_{air\ (outdoors)}$ | Air inhalation (a) | 2.94E-01 | 4.93E-01 | #DIV/0! |
| $RBSL_{w}$ | Ground water ingestion (potable ground water supply only) (b) | 2.94E-03 | 9.87E-03 | #DIV/0! |
| $RBSL_{w}$ | Ground water (c) enclosed space (indoor) vapor inhalation (d) | 2.38E-02 | 9.43E-02 | #DIV/0! |
| $RBSL_{w}$ | Ground water (c) ambient (outdoor) vapor inhalation (d) | 1.45E+01 | 2.40E+01 | #DIV/0! |
| $RBSL_{s}$ | Surficial soil ingestion of soil, inhalation of vapors and particulates, and dermal contact (b) | 1.82E+01 | 3.69E+01 | #DIV/0! |
| $RBSL_{s}$ | Subsurface soil (c) ambient (outdoor) vapor inhalation (d) | 2.67E-01 | 1.02E-01 | #DIV/0! |
| $RBSL_{s}$ | Subsurface soil (c) enclosed space (indoor) vapor inhalation (d) | 3.72E+01 | 2.62E+01 | #DIV/0! |
| $RBSL_{s}$ | Subsurface soil (c) leaching to ground water (d) | 1.72E-02 | 7.79E-03 | #DIV/0! |

(a) Note that all RBSL values should be compared with thermodynamic partioning limits, such as solubility levels, maximmum vapor concentrations, etc. If a RBSL exceds the relevant partioning limit, this is an indication that the selected risk or hazard level will never be reached or exceeded for that chemical and the selected exposure scenario.

(b) Screening levels for these media based on other considerations (for example, aesthetic, background levels, environmental resource protection, etc.) can be derived with these equations by substituting the selected target level for RBSL(air) or RBSL(w) appearing in these equations.

(c) These equations are based on Ref(1).

(d) These equations simply define the "cross-media partioning factors," VF(μ) and LF(aw)



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## Risk-Based Screening Level (RBSLs) Noncarcinogenic Effects (a)

| Parameters | | Definitions (Units) | Residential | Commercial/Industrial | User Specified |
|---|---|---|---|---|---|
| $RBSL_{air}$ | indoor | Air inhalation (a) | 0.00E+00 | 0.00E+00 | 1.41E+03 |
| $RBSL_{air}$ | outdoor | Air inhalation (a) | 0.00E+00 | 0.00E+00 | 1.06E+03 |
| $RBSL_{w}$ | | Ground water ingestion (potable ground water supply only) (b) | 0.00E+00 | 0.00E+00 | 3.65E+00 |
| $RBSL_{w}$ | | Ground water (c) enclosed space (indoor) vapor inhalation (d) | 0.00E+00 | 0.00E+00 | 7.86E+01 |
| $RBSL_{w}$ | | Ground water (c) ambient (outdoor) vapor inhalation (d) | 0.00E+00 | 0.00E+00 | 5.07E+05 |
| $RBSL_{s}$ | | Surficial soil ingestion of soil, inhalation of vapors and particulates, and dermal contact (b) | #DIV/0! | #DIV/0! | 4.08E+04 |
| $RBSL_{s}$ | | Subsurface soil (c) ambient (outdoor) vapor inhalation (d) | 0.00E+00 | 0.00E+00 | 1.68E+08 |
| $RBSL_{s}$ | | Subsurface soil (c) enclosed space (indoor) vapor inhalation (d) | 0.00E+00 | 0.00E+00 | 3.58E+01 |
| $RBSL_{s}$ | | Subsurface soil (c) leaching to ground water (d) | 0.00E+00 | 0.00E+00 | 4.40E+02 |

(a) Note that all RBSL values should be compared with thermodynamic partioning limits, such as solubility levels, maximmum vapor concentrations, etc. If a RBSL exceds the relevant partioning limit, this is an indication that the selected risk or hazard level will never be reached or exceeded for that chemical and the selected exposure scenario.

(b) Screening levels for these media based on other considerations (for example, aesthetic, background levels, environmental resource protection, etc.) can be derived with these equations by substituting the selected target level for RBSL(air) or RBSL(w) appearing in these equations.

(c) These equations are based on Ref(1).

(d) These equations simply define the "cross-media partioning factors," VF($\mu$) and LF(aw)



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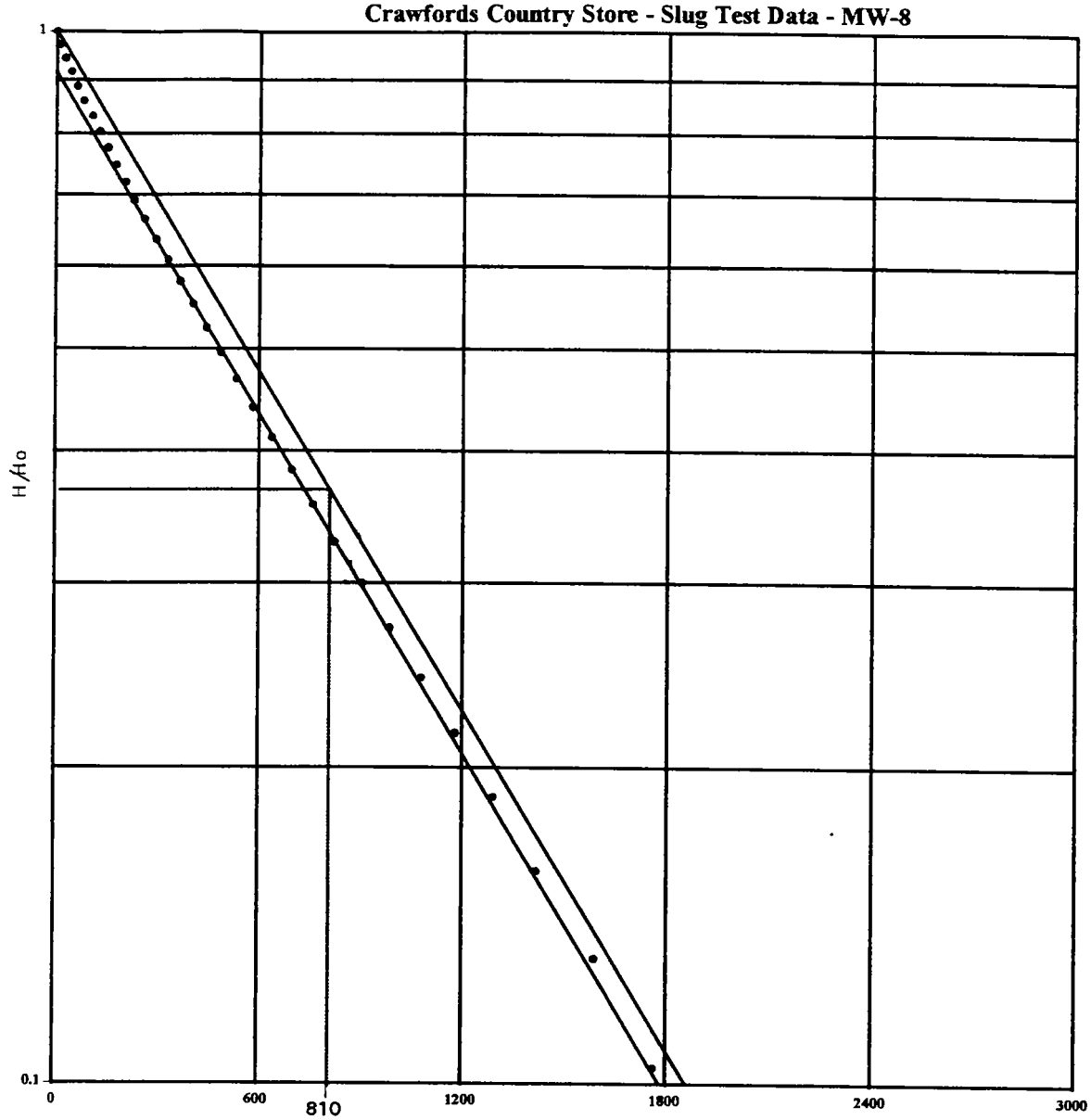
*Appendix VII*
*Slug Test Data Reduction*

## Crawfords Country Store - Slug Test Data - MW-8




### HVORSLEV METHOD

K = hydraulic conductivity
r = effective radius of screened interval*
R = radius of filter pack interval
L = length of saturated screened interval
To = basic time lag

r = 0.271 Ft.
To = 810 sec.
L = 12.47 Ft.
R = .333 Ft.

* effective radius is based on average filter pack porosity of 40%

$$K = \frac{r2 \ln (L/R)}{2 L To}$$

$$K = \frac{(.22)^2 \ln (12.47/.333)}{(2)(12.47)(810)}$$

$$K = \frac{(.073)\ (3.622)}{20{,}201.40}$$

$K = 1.317 \times 10^{-5}$ ft./sec

K = 1.137 ft./day

1.14 MW-8
1.50 MW-17

AVG K = 1.32 ft/d

$v = \frac{(1.32)(.022)}{(.3)}$

$v = .097$ ft/d

= 35 ft/y

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***CRAWFORDS COUNTRY STORE- SLUG TEST DATA -MW-8***

| Elapsed Time (Sec) | Depth to Water (Ft) | Change in Water Levels (H,Ft) | Ratio H/Ho |
|---|---|---|---|
| Static Level = | 12.53 | | |
| 0 | 16.1 | 3.57 | 1.00 |
| 7 | 16 | 3.47 | 0.97 |
| 24 | 15.9 | 3.37 | 0.94 |
| 42 | 15.8 | 3.27 | 0.92 |
| 60 | 15.7 | 3.17 | 0.89 |
| 80 | 15.6 | 3.07 | 0.86 |
| 106 | 15.5 | 2.97 | 0.83 |
| 128 | 15.4 | 2.87 | 0.80 |
| 152 | 15.3 | 2.77 | 0.78 |
| 176 | 15.2 | 2.67 | 0.75 |
| 204 | 15.1 | 2.57 | 0.72 |
| 230 | 15 | 2.47 | 0.69 |
| 260 | 14.9 | 2.37 | 0.66 |
| 295 | 14.8 | 2.27 | 0.64 |
| 330 | 14.7 | 2.17 | 0.61 |
| 366 | 14.6 | 2.07 | 0.58 |
| 405 | 14.5 | 1.97 | 0.55 |
| 445 | 14.4 | 1.87 | 0.52 |
| 487 | 14.3 | 1.77 | 0.50 |
| 534 | 14.2 | 1.67 | 0.47 |
| 583 | 14.1 | 1.57 | 0.44 |
| 639 | 14 | 1.47 | 0.41 |
| 697 | 13.9 | 1.37 | 0.38 |
| 761 | 13.8 | 1.27 | 0.36 |
| 824 | 13.7 | 1.17 | 0.33 |
| 904 | 13.6 | 1.07 | 0.30 |
| 986 | 13.5 | 0.97 | 0.27 |
| 1079 | 13.4 | 0.87 | 0.24 |
| 1179 | 13.3 | 0.77 | 0.22 |
| 1291 | 13.2 | 0.67 | 0.19 |
| 1418 | 13.1 | 0.57 | 0.16 |
| 1589 | 13 | 0.47 | 0.13 |
| 1763 | 12.9 | 0.37 | 0.10 |
| 2006 | 12.8 | 0.27 | 0.08 |
| 2322 | 12.7 | 0.17 | 0.05 |
| 2797 | 12.6 | 0.07 | 0.02 |

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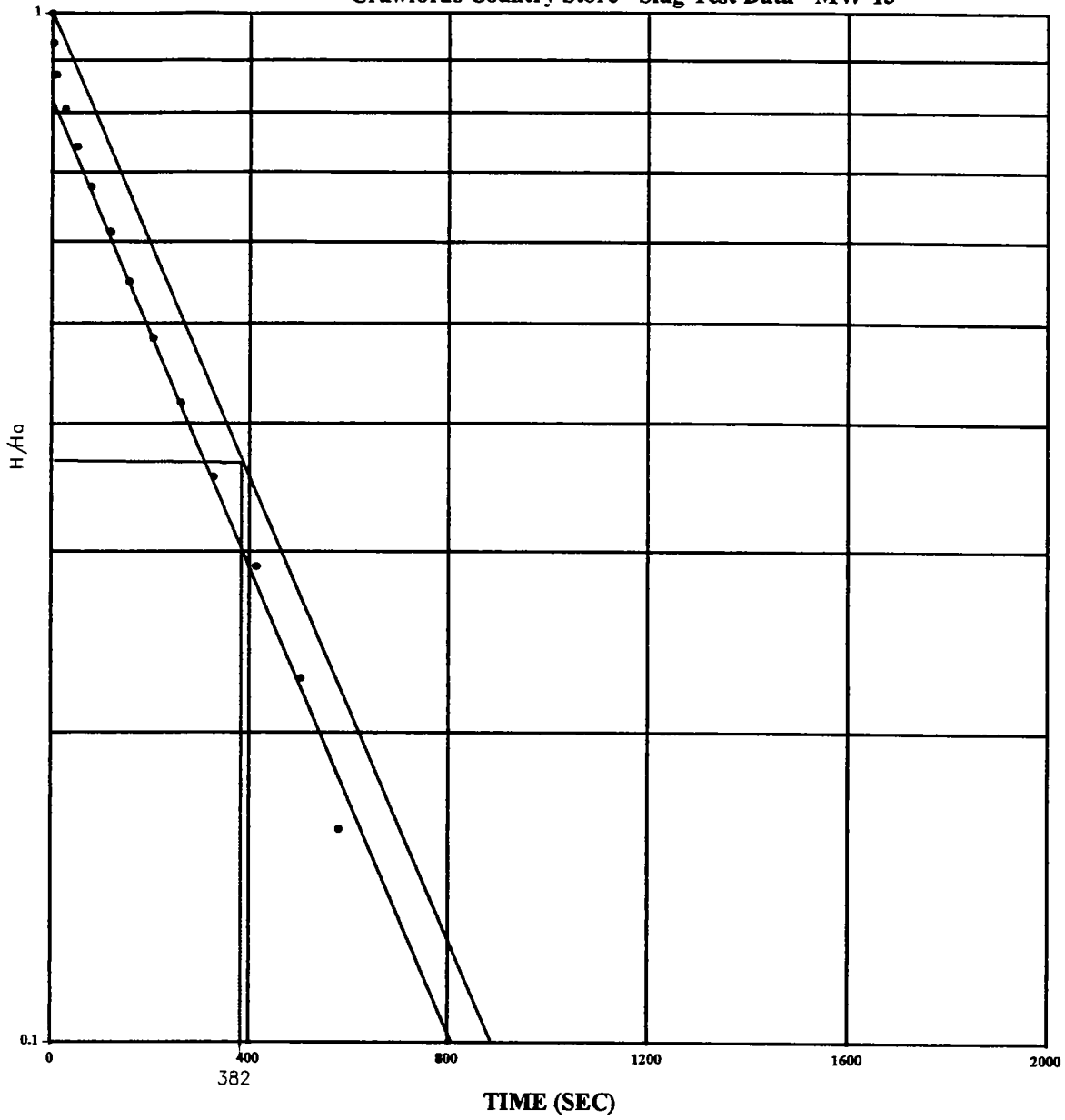
## Crawfords Country Store - Slug Test Data - MW-13




### HVORSLEV METHOD

K = hydraulic conductivity
r = effective radius of screened interval*
R = radius of filter pack interval
L = length of saturated screened interval
To = basic time lag

r = 0.271 Ft.
To = 382 sec.
L = 3.95 Ft.
R = .333 Ft.

* effective radius is based on average filter pack porosity of 40%

$$K = \frac{r2 \ln (L/R)}{2 L To}$$

$$K = \frac{(.22)^2 \ln (3.95/.333)}{(2)(3.95)(382)}$$

$$K = \frac{(.073)\ (2.473)}{3{,}017.80}$$

$$K = 6.019 \times 10^{-5} \text{ ft./sec}$$

$$K = 5.200 \text{ ft./day}$$

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***CRAWFORDS COUNTRY STORE- SLUG TEST DATA -MW-13***

| Elapsed Time (Sec) | Depth to Water (Ft) | Change in Water Levels (H,Ft) | Ratio H/Ho |
|---|---|---|---|
| Static Level = | 21.05 | | |
| 0 | 22.6 | 1.55 | 1.00 |
| 2 | 22.5 | 1.45 | 0.94 |
| 8 | 22.4 | 1.35 | 0.87 |
| 26 | 22.3 | 1.25 | 0.81 |
| 50 | 22.2 | 1.15 | 0.74 |
| 79 | 22.1 | 1.05 | 0.68 |
| 119 | 22 | 0.95 | 0.61 |
| 157 | 21.9 | 0.85 | 0.55 |
| 205 | 21.8 | 0.75 | 0.48 |
| 261 | 21.7 | 0.65 | 0.42 |
| 328 | 21.6 | 0.55 | 0.35 |
| 415 | 21.5 | 0.45 | 0.29 |
| 504 | 21.4 | 0.35 | 0.23 |
| 581 | 21.3 | 0.25 | 0.16 |
| 692 | 21.2 | 0.15 | 0.10 |
| 1042 | 21.1 | 0.05 | 0.03 |

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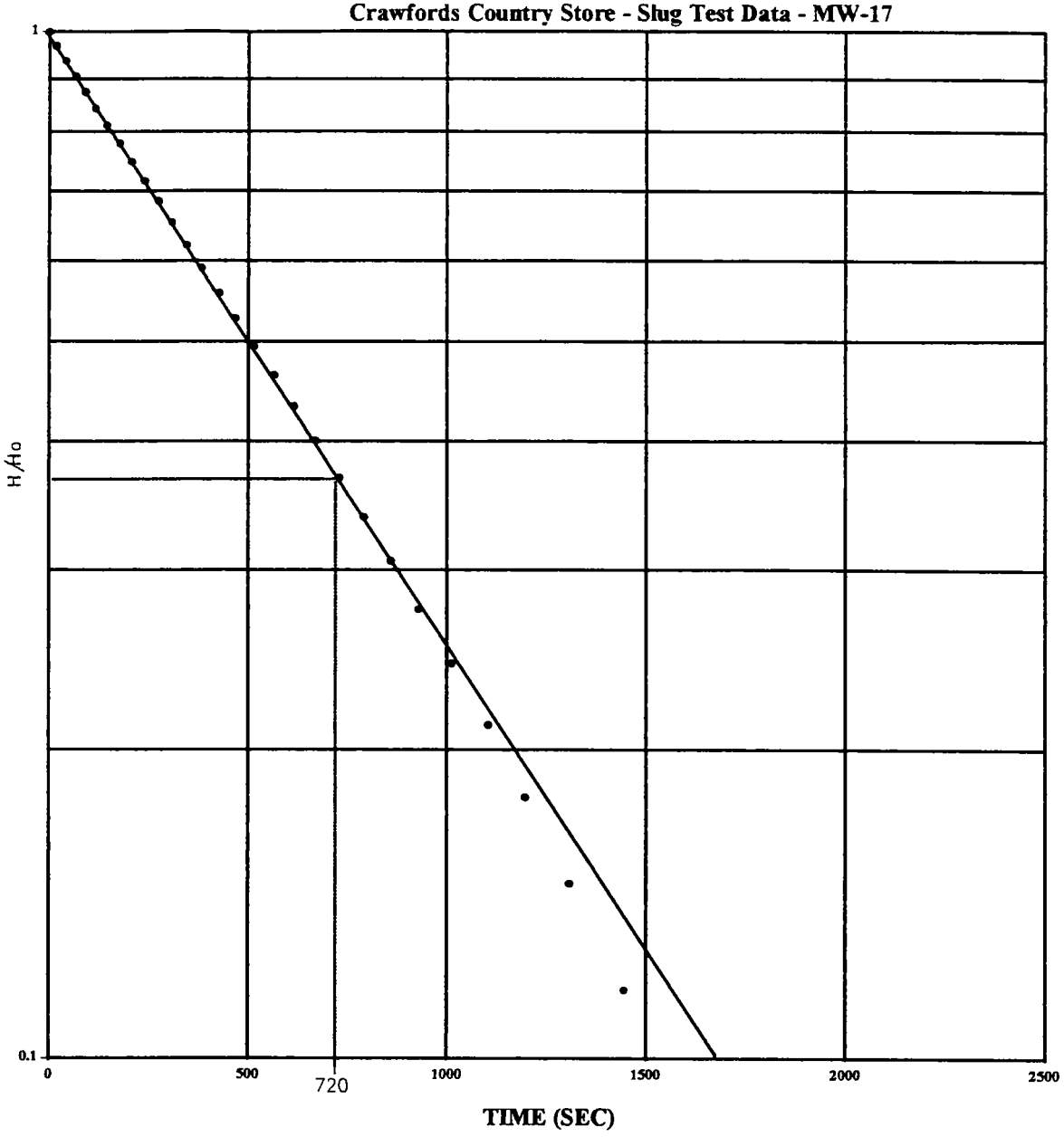
Crawfords Country Store - Slug Test Data - MW-17




## HVORSLEV METHOD

K = hydraulic conductivity
r = effective radius of screened interval*
R = radius of filter pack interval
L = length of saturated screened interval
To = basic time lag

r = 0.271 Ft.
To = 720 sec.
L = 10.0 Ft.
R = .333 Ft.

* effective radius is based on average filter pack porosity of 40%

$$K = \frac{r2 \ln (L/R)}{2 L To}$$

$$K = \frac{(.22)^2 \ln (10.0/.333)}{(2)(10.0)(720)}$$

$$K = \frac{(.073)\ (3.402)}{14{,}400}$$

$K = 1.735 \times 10^{-5}$ ft./sec

K = 1.499 ft./day

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***CRAWFORDS COUNTRY STORE- SLUG TEST DATA -MW-17***

| Elapsed Time (Sec) | Depth to Water (Ft) | Change in Water Levels (H,Ft) | Ratio H/Ho |
|---|---|---|---|
| Static Level = | 15.53 | | |
| 0 | 18.7 | 3.17 | 1.00 |
| 17 | 18.6 | 3.07 | 0.97 |
| 41 | 18.5 | 2.97 | 0.94 |
| 65 | 18.4 | 2.87 | 0.91 |
| 90 | 18.3 | 2.77 | 0.87 |
| 115 | 18.2 | 2.67 | 0.84 |
| 144 | 18.1 | 2.57 | 0.81 |
| 176 | 18 | 2.47 | 0.78 |
| 206 | 17.9 | 2.37 | 0.75 |
| 238 | 17.8 | 2.27 | 0.72 |
| 273 | 17.7 | 2.17 | 0.68 |
| 307 | 17.6 | 2.07 | 0.65 |
| 344 | 17.5 | 1.97 | 0.62 |
| 382 | 17.4 | 1.87 | 0.59 |
| 427 | 17.3 | 1.77 | 0.56 |
| 468 | 17.2 | 1.67 | 0.53 |
| 515 | 17.1 | 1.57 | 0.50 |
| 565 | 17 | 1.47 | 0.46 |
| 614 | 16.9 | 1.37 | 0.43 |
| 669 | 16.8 | 1.27 | 0.40 |
| 728 | 16.7 | 1.17 | 0.37 |
| 791 | 16.6 | 1.07 | 0.34 |
| 859 | 16.5 | 0.97 | 0.31 |
| 929 | 16.4 | 0.87 | 0.27 |
| 1012 | 16.3 | 0.77 | 0.24 |
| 1104 | 16.2 | 0.67 | 0.21 |
| 1198 | 16.1 | 0.57 | 0.18 |
| 1308 | 16 | 0.47 | 0.15 |
| 1445 | 15.9 | 0.37 | 0.12 |
| 1596 | 15.8 | 0.27 | 0.09 |
| 1780 | 15.7 | 0.17 | 0.05 |
| 2017 | 15.6 | 0.07 | 0.02 |

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# *Appendix VIII*
# *SOLUTE Input and Output Models*

The following are the input parameters and output for the SOLUTE Model for Benzene

```
*******************************************************
*                                                     *
*              S O L U T E   version 4.04             *
*                                                     *
*       ANALYTICAL MODELS FOR SOLUTE TRANSPORT        *
*                                                     *
*******************************************************

Model:  ONEd-1

Project..... = A89128BEN
User name..... = WILSON
Date..... = 12-31-1997
Data file..... = BEN128.DAT


                    INPUT DATA:


Groundwater (seepage) velocity... =  57.58 [ft/y]
Longitudinal dispersivity..... =  10 [ft]
Retardation factor..... =  1
Initial aquifer concentration.... =  0.00000D+00[mg/l]
Constant source concentration.... =  9.90000D+00[mg/l]
Duration of solute pulse..... =  50 [y]
Half-life in aquifer (no decay=0) =  2 [y]
Decay coefficient for aquifer.... =  0.3466D+00 [1/y]
Distance increment..... =  30 [ft]
Number of distance increments.... =  50
Number of time periods..... =  5

   1  Time..... =  2 [y]
   2  Time..... =  10 [y]
   3  Time..... =  25 [y]
   4  Time..... =  50 [y]
   5  Time..... =  60 [y]


                Concentration [mg/l]

Distance      Time          Time          Time          Time          Time
   [ft]      2.00[y]       10.00[y]      25.00[y]      50.00[y]      60.00[y]

    0.00   9.9000E+00    9.9000E+00    9.9000E+00    9.9000E+00    0.0000E+00
   30.00   8.2908E+00    8.3453E+00    8.3453E+00    8.3453E+00    4.3266E-09
   60.00   6.7359E+00    7.0347E+00    7.0347E+00    7.0347E+00    3.4683E-08
   90.00   5.0317E+00    5.9299E+00    5.9299E+00    5.9299E+00    1.9358E-07
  120.00   3.2085E+00    4.9987E+00    4.9987E+00    4.9987E+00    8.9161E-07
  150.00   1.6256E+00    4.2137E+00    4.2137E+00    4.2137E+00    3.5748E-06
  180.00   6.1991E-01    3.5519E+00    3.5519E+00    3.5519E+00    1.2778E-05
  210.00   1.7162E-01    2.9941E+00    2.9941E+00    2.9941E+00    4.1290E-05
  240.00   3.3720E-02    2.5238E+00    2.5239E+00    2.5239E+00    1.2126E-04
  270.00   4.6350E-03    2.1272E+00    2.1275E+00    2.1275E+00    3.2587E-04
  300.00   4.4167E-04    1.7926E+00    1.7934E+00    1.7934E+00    8.0431E-04
  330.00   2.9000E-05    1.5099E+00    1.5118E+00    1.5118E+00    1.8284E-03
  360.00   1.3055E-06    1.2705E+00    1.2744E+00    1.2744E+00    3.8373E-03
  390.00   4.0225E-08    1.0668E+00    1.0742E+00    1.0742E+00    7.4498E-03
  420.00   8.4606E-10    8.9212E-01    9.0553E-01    9.0553E-01    1.3404E-02
```

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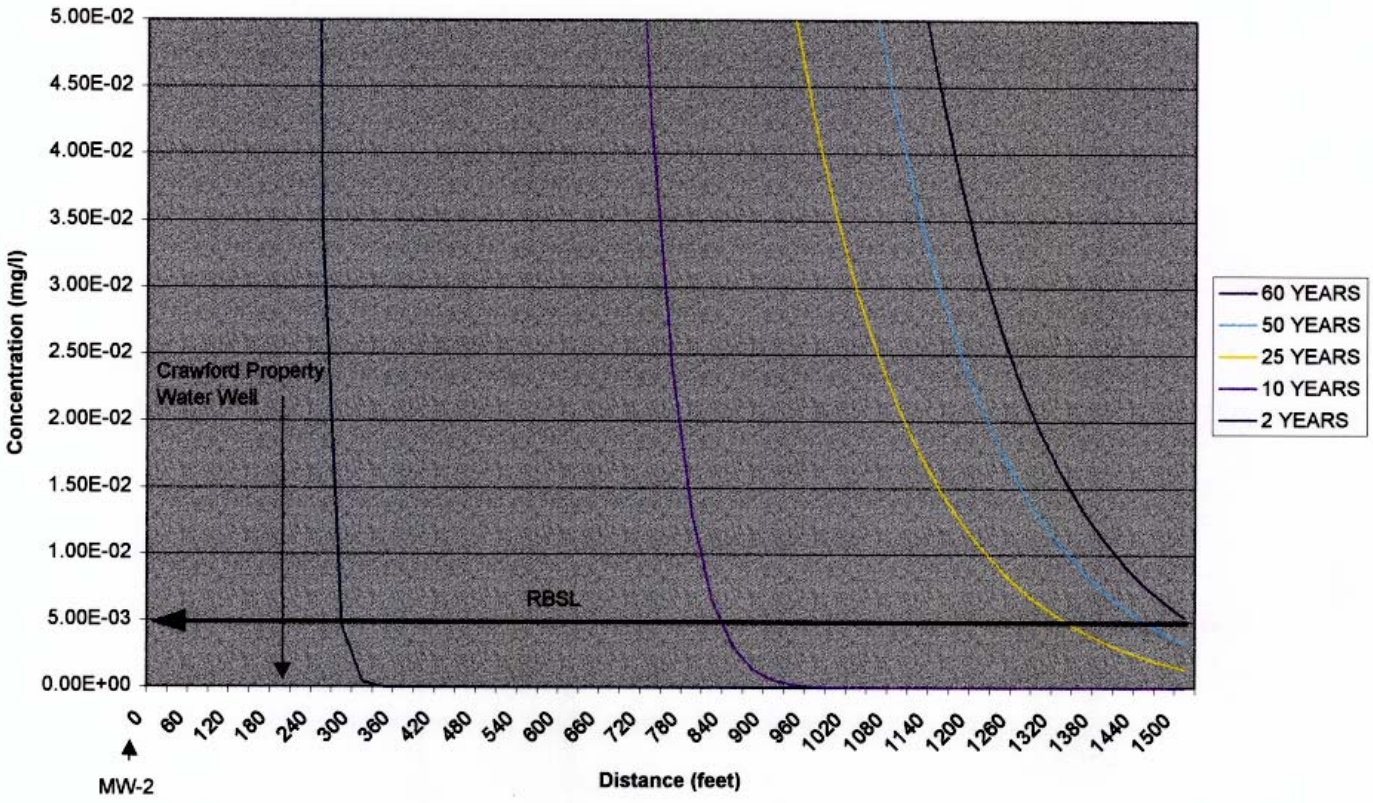
| | | | | | |
|---|---|---|---|---|---|
| 450.00 | 1.2129E-11 | 7.4092E-01 | 7.6332E-01 | 7.6332E-01 | 2.2395E-02 |
| 480.00 | 1.1837E-13 | 6.0863E-01 | 6.4344E-01 | 6.4344E-01 | 3.4810E-02 |
| 510.00 | 7.8570E-16 | 4.9195E-01 | 5.4240E-01 | 5.4240E-01 | 5.0442E-02 |
| 540.00 | 3.5444E-18 | 3.8891E-01 | 4.5722E-01 | 4.5722E-01 | 6.8306E-02 |
| 570.00 | 1.0860E-20 | 2.9875E-01 | 3.8541E-01 | 3.8541E-01 | 8.6665E-02 |
| 600.00 | 2.2591E-23 | 2.2153E-01 | 3.2489E-01 | 3.2489E-01 | 1.0335E-01 |
| 630.00 | 3.1892E-26 | 1.5760E-01 | 2.7386E-01 | 2.7386E-01 | 1.1626E-01 |
| 660.00 | 3.0542E-29 | 1.0696E-01 | 2.3086E-01 | 2.3086E-01 | 1.2390E-01 |
| 690.00 | 1.9838E-32 | 6.8905E-02 | 1.9460E-01 | 1.9460E-01 | 1.2570E-01 |
| 720.00 | 8.7364E-36 | 4.1960E-02 | 1.6404E-01 | 1.6404E-01 | 1.2208E-01 |
| 750.00 | 2.6083E-39 | 2.4068E-02 | 1.3828E-01 | 1.3828E-01 | 1.1421E-01 |
| 780.00 | 5.2829E-43 | 1.2965E-02 | 1.1656E-01 | 1.1656E-01 | 1.0360E-01 |
| 810.00 | 0.0000E+00 | 6.5433E-03 | 9.8257E-02 | 9.8257E-02 | 9.1714E-02 |
| 840.00 | 0.0000E+00 | 3.0878E-03 | 8.2826E-02 | 8.2826E-02 | 7.9738E-02 |
| 870.00 | 0.0000E+00 | 1.3603E-03 | 6.9818E-02 | 6.9819E-02 | 6.8459E-02 |
| 900.00 | 0.0000E+00 | 5.5864E-04 | 5.8853E-02 | 5.8854E-02 | 5.8296E-02 |
| 930.00 | 0.0000E+00 | 2.1365E-04 | 4.9610E-02 | 4.9611E-02 | 4.9398E-02 |
| 960.00 | 0.0000E+00 | 7.6020E-05 | 4.1818E-02 | 4.1820E-02 | 4.1744E-02 |
| 990.00 | 0.0000E+00 | 2.5147E-05 | 3.5249E-02 | 3.5253E-02 | 3.5227E-02 |
| 1020.00 | 0.0000E+00 | 7.7288E-06 | 2.9710E-02 | 2.9716E-02 | 2.9709E-02 |
| 1050.00 | 0.0000E+00 | 2.2057E-06 | 2.5039E-02 | 2.5050E-02 | 2.5047E-02 |
| 1080.00 | 0.0000E+00 | 5.8429E-07 | 2.1099E-02 | 2.1116E-02 | 2.1115E-02 |
| 1110.00 | 0.0000E+00 | 1.4351E-07 | 1.7774E-02 | 1.7800E-02 | 1.7799E-02 |
| 1140.00 | 0.0000E+00 | 3.2707E-08 | 1.4966E-02 | 1.5004E-02 | 1.5004E-02 |
| 1170.00 | 0.0000E+00 | 6.9112E-09 | 1.2592E-02 | 1.2648E-02 | 1.2648E-02 |
| 1200.00 | 0.0000E+00 | 1.3537E-09 | 1.0584E-02 | 1.0662E-02 | 1.0662E-02 |
| 1230.00 | 0.0000E+00 | 2.4574E-10 | 8.8816E-03 | 8.9873E-03 | 8.9873E-03 |
| 1260.00 | 0.0000E+00 | 4.1335E-11 | 7.4362E-03 | 7.5759E-03 | 7.5759E-03 |
| 1290.00 | 0.0000E+00 | 6.4412E-12 | 6.2066E-03 | 6.3861E-03 | 6.3861E-03 |
| 1320.00 | 0.0000E+00 | 9.2976E-13 | 5.1588E-03 | 5.3832E-03 | 5.3832E-03 |
| 1350.00 | 0.0000E+00 | 1.2430E-13 | 4.2649E-03 | 4.5378E-03 | 4.5378E-03 |
| 1380.00 | 0.0000E+00 | 1.5389E-14 | 3.5022E-03 | 3.8252E-03 | 3.8252E-03 |
| 1410.00 | 0.0000E+00 | 1.7642E-15 | 2.8523E-03 | 3.2245E-03 | 3.2245E-03 |
| 1440.00 | 0.0000E+00 | 1.8727E-16 | 2.3002E-03 | 2.7181E-03 | 2.7181E-03 |
| 1470.00 | 0.0000E+00 | 1.8403E-17 | 1.8337E-03 | 2.2912E-03 | 2.2912E-03 |
| 1500.00 | 0.0000E+00 | 1.6742E-18 | 1.4428E-03 | 1.9314E-03 | 1.9314E-03 |

MARSHALL MILLER & ASSOCIATES

**Crawford's Country Store**
**Benzene Concentrations in Ground Water**




MARSHALL MILLER & ASSOCIATES

The following are the input parameters output for the SOLUTE Model for Toluene

```
*********************************************************
*                                                       *
*              S O L U T E   version 4.04               *
*                                                       *
*       ANALYTICAL MODELS FOR SOLUTE TRANSPORT          *
*                                                       *
*********************************************************
```

Model: ONEd-1

Project..... = A89128TOL
User name..... = WILSON
Date..... = 12-31-1997
Data file..... = TOL128.DAT

INPUT DATA:

Groundwater (seepage) velocity... = 57.58 [ft/y]
Longitudinal dispersivity..... = 10 [ft]
Retardation factor..... = 1
Initial aquifer concentration.... = 0.00000D+00[mg/l]
Constant source concentration.... = 5.45000D+01[mg/l]
Duration of solute pulse..... = 50 [y]
Half-life in aquifer (no decay=0) = .58 [y]
Decay coefficient for aquifer.... = 0.1195D+01 [1/y]
Distance increment..... = 20 [ft]
Number of distance increments.... = 20
Number of time periods..... = 5

1 Time..... = 2 [y]
2 Time..... = 10 [y]
3 Time..... = 20 [y]
4 Time..... = 30 [y]
5 Time..... = 40 [y]

Concentration [mg/l]

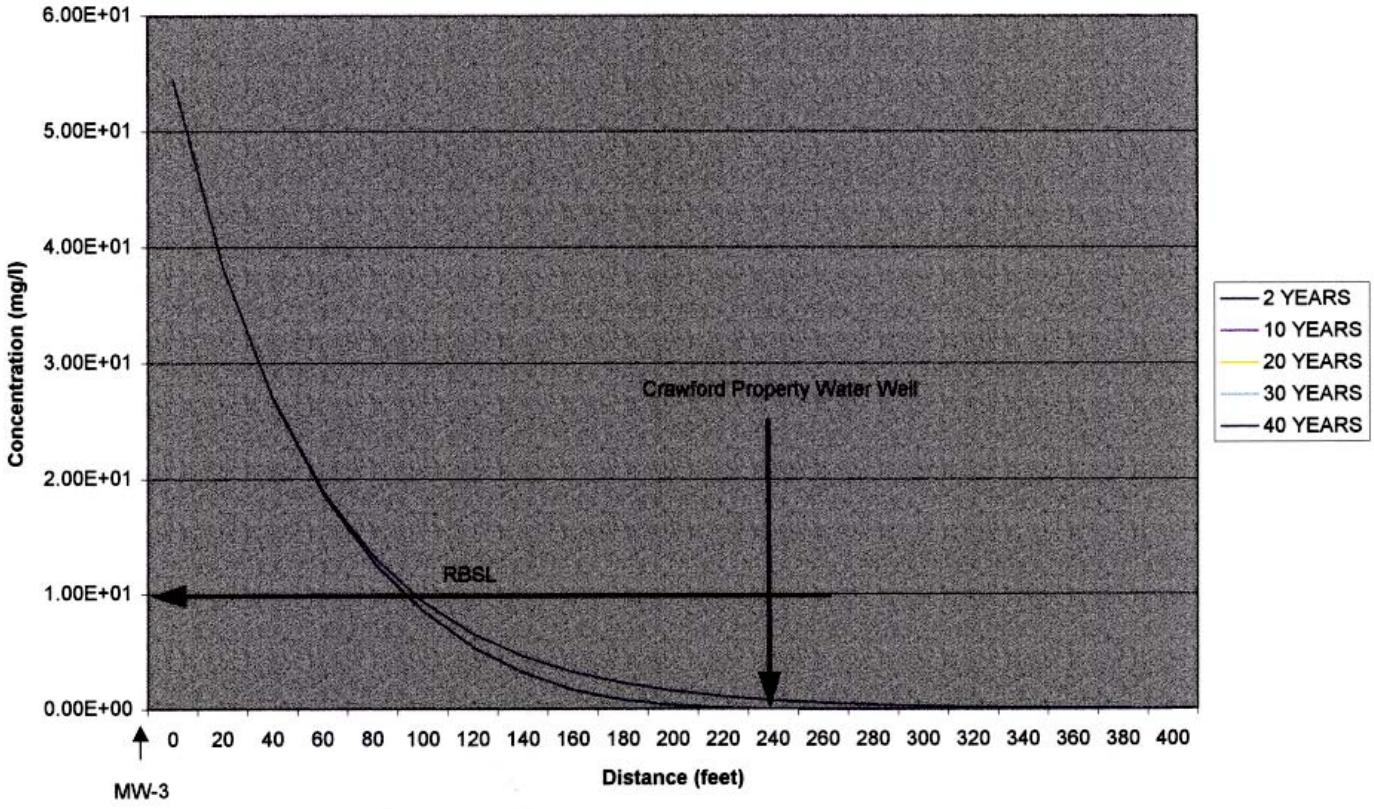
| Distance [ft] | Time 2.00[y] | Time 10.00[y] | Time 20.00[y] | Time 30.00[y] | Time 40.00[y] |
|---|---|---|---|---|---|
| 0.00 | 5.4500E+01 | 5.4500E+01 | 5.4500E+01 | 5.4500E+01 | 5.4500E+01 |
| 20.00 | 3.8278E+01 | 3.8296E+01 | 3.8296E+01 | 3.8296E+01 | 3.8296E+01 |
| 40.00 | 2.6833E+01 | 2.6910E+01 | 2.6910E+01 | 2.6910E+01 | 2.6910E+01 |
| 60.00 | 1.8694E+01 | 1.8909E+01 | 1.8909E+01 | 1.8909E+01 | 1.8909E+01 |
| 80.00 | 1.2827E+01 | 1.3287E+01 | 1.3287E+01 | 1.3287E+01 | 1.3287E+01 |
| 100.00 | 8.5371E+00 | 9.3366E+00 | 9.3366E+00 | 9.3366E+00 | 9.3366E+00 |
| 120.00 | 5.4009E+00 | 6.5607E+00 | 6.5607E+00 | 6.5607E+00 | 6.5607E+00 |
| 140.00 | 3.1753E+00 | 4.6101E+00 | 4.6101E+00 | 4.6101E+00 | 4.6101E+00 |
| 160.00 | 1.6980E+00 | 3.2394E+00 | 3.2394E+00 | 3.2394E+00 | 3.2394E+00 |
| 180.00 | 8.1090E-01 | 2.2763E+00 | 2.2763E+00 | 2.2763E+00 | 2.2763E+00 |
| 200.00 | 3.4085E-01 | 1.5995E+00 | 1.5995E+00 | 1.5995E+00 | 1.5995E+00 |
| 220.00 | 1.2472E-01 | 1.1239E+00 | 1.1239E+00 | 1.1239E+00 | 1.1239E+00 |
| 240.00 | 3.9407E-02 | 7.8977E-01 | 7.8977E-01 | 7.8977E-01 | 7.8977E-01 |
| 260.00 | 1.0687E-02 | 5.5496E-01 | 5.5496E-01 | 5.5496E-01 | 5.5496E-01 |
| 280.00 | 2.4765E-03 | 3.8996E-01 | 3.8996E-01 | 3.8996E-01 | 3.8996E-01 |
| 300.00 | 4.8880E-04 | 2.7402E-01 | 2.7402E-01 | 2.7402E-01 | 2.7402E-01 |

| | | | | | |
|---|---|---|---|---|---|
| 320.00 | 8.1972E-05 | 1.9255E-01 | 1.9255E-01 | 1.9255E-01 | 1.9255E-01 |
| 340.00 | 1.1658E-05 | 1.3530E-01 | 1.3530E-01 | 1.3530E-01 | 1.3530E-01 |
| 360.00 | 1.4033E-06 | 9.5070E-02 | 9.5072E-02 | 9.5072E-02 | 9.5072E-02 |
| 380.00 | 1.4292E-07 | 6.6801E-02 | 6.6806E-02 | 6.6806E-02 | 6.6806E-02 |
| 400.00 | 1.2299E-08 | 4.6937E-02 | 4.6943E-02 | 4.6943E-02 | 4.6943E-02 |

---

MARSHALL MILLER & ASSOCIATES

**Crawford's Country Store**
**Toluene Concentrations in Ground Water**




MARSHALL MILLER & ASSOCIATES

The following are the input parameters and output for the SOLUTE Model for Ethylbenzene

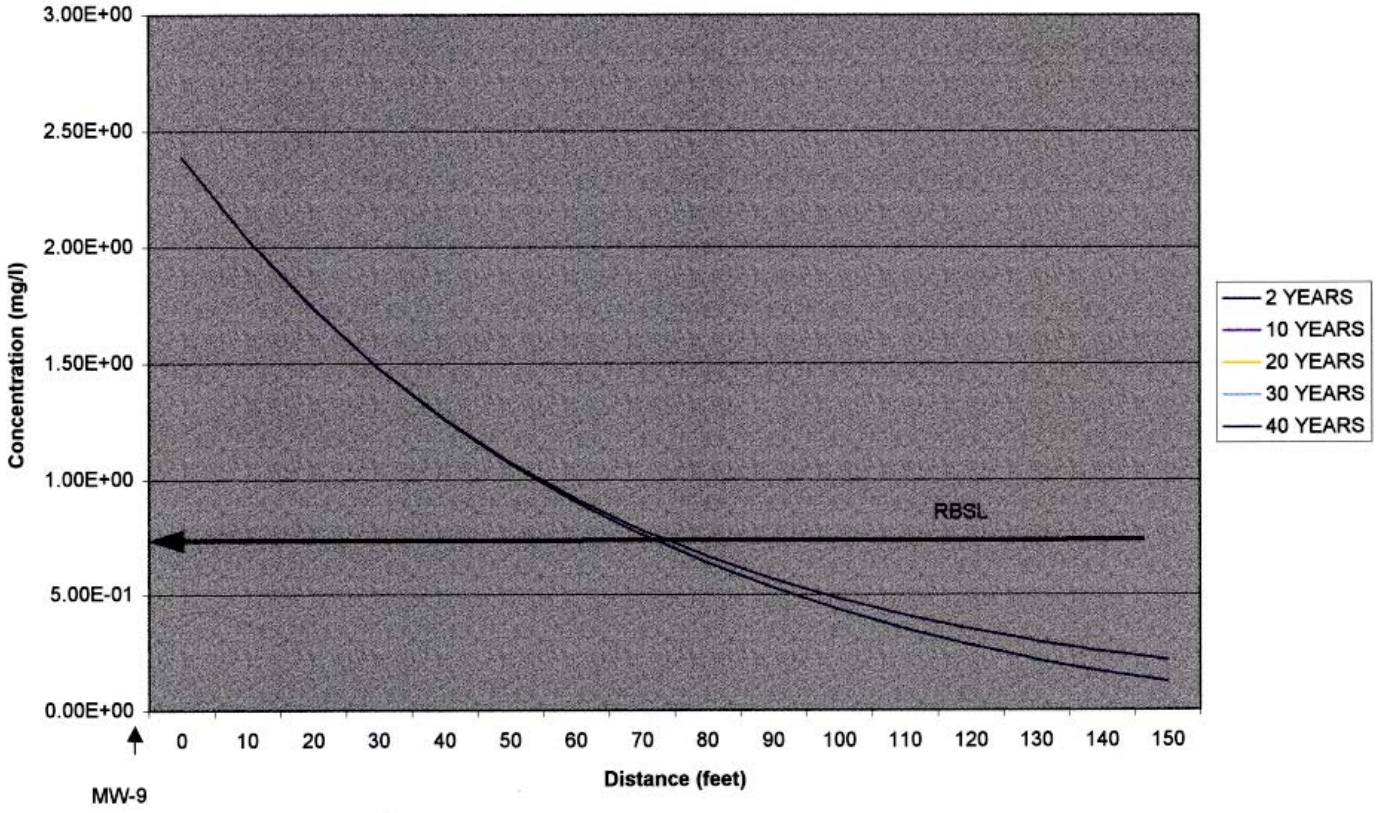
```
*********************************************************
*                                                       *
*              S O L U T E   version 4.04               *
*                                                       *
*       ANALYTICAL MODELS FOR SOLUTE TRANSPORT          *
*                                                       *
*********************************************************

Model:  ONEd-1

Project..... = A89128ETH
User name..... = WILSON
Date..... = 12-31-1997
Data file..... = ETH128.DAT


                    INPUT DATA:


Groundwater (seepage) velocity... =  57.58 [ft/y]
Longitudinal dispersivity..... =  10 [ft]
Retardation factor..... =  1
Initial aquifer concentration.... =  0.00000D+00[mg/l]
Constant source concentration.... =  2.39000D+00[mg/l]
Duration of solute pulse..... =  50 [y]
Half-life in aquifer (no decay=0) =  .65 [y]
Decay coefficient for aquifer.... =  0.1066D+01 [1/y]
Distance increment..... =  10 [ft]
Number of distance increments.... =  15
Number of time periods..... =  5

   1  Time..... =  2 [y]
   2  Time..... =  10 [y]
   3  Time..... =  20 [y]
   4  Time..... =  30 [y]
   5  Time..... =  40 [y]
```

Concentration [mg/l]

| Distance [ft] | Time 2.00[y] | Time 10.00[y] | Time 20.00[y] | Time 30.00[y] | Time 40.00[y] |
|---|---|---|---|---|---|
| 0.00 | 2.3900E+00 | 2.3900E+00 | 2.3900E+00 | 2.3900E+00 | 2.3900E+00 |
| 10.00 | 2.0369E+00 | 2.0372E+00 | 2.0372E+00 | 2.0372E+00 | 2.0372E+00 |
| 20.00 | 1.7355E+00 | 1.7365E+00 | 1.7365E+00 | 1.7365E+00 | 1.7365E+00 |
| 30.00 | 1.4779E+00 | 1.4802E+00 | 1.4802E+00 | 1.4802E+00 | 1.4802E+00 |
| 40.00 | 1.2572E+00 | 1.2618E+00 | 1.2618E+00 | 1.2618E+00 | 1.2618E+00 |
| 50.00 | 1.0676E+00 | 1.0755E+00 | 1.0755E+00 | 1.0755E+00 | 1.0755E+00 |
| 60.00 | 9.0401E-01 | 9.1678E-01 | 9.1678E-01 | 9.1678E-01 | 9.1678E-01 |
| 70.00 | 7.6222E-01 | 7.8147E-01 | 7.8147E-01 | 7.8147E-01 | 7.8147E-01 |
| 80.00 | 6.3873E-01 | 6.6612E-01 | 6.6612E-01 | 6.6612E-01 | 6.6612E-01 |
| 90.00 | 5.3077E-01 | 5.6781E-01 | 5.6781E-01 | 5.6781E-01 | 5.6781E-01 |
| 100.00 | 4.3625E-01 | 4.8400E-01 | 4.8400E-01 | 4.8400E-01 | 4.8400E-01 |
| 110.00 | 3.5368E-01 | 4.1256E-01 | 4.1256E-01 | 4.1256E-01 | 4.1256E-01 |
| 120.00 | 2.8202E-01 | 3.5167E-01 | 3.5167E-01 | 3.5167E-01 | 3.5167E-01 |
| 130.00 | 2.2055E-01 | 2.9976E-01 | 2.9976E-01 | 2.9976E-01 | 2.9976E-01 |
| 140.00 | 1.6870E-01 | 2.5552E-01 | 2.5552E-01 | 2.5552E-01 | 2.5552E-01 |
| 150.00 | 1.2589E-01 | 2.1780E-01 | 2.1780E-01 | 2.1780E-01 | 2.1780E-01 |

MARSHALL MILLER & ASSOCIATES

**Crawford's Country Store**
**Ethylbenzene Concentrations in Ground Water**

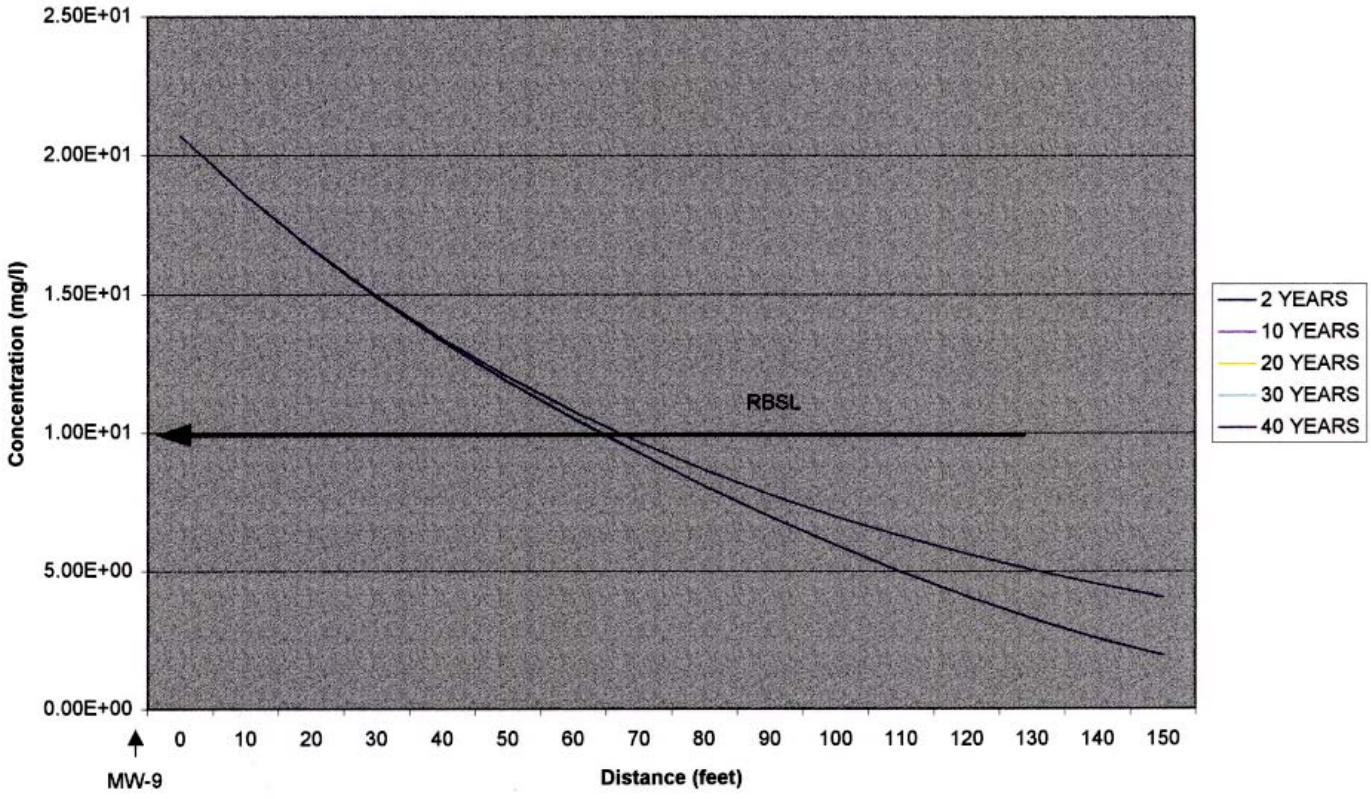



MARSHALL MILLER & ASSOCIATES

The following are the input parameters and output for the SOLUTE Model for Xylene

```
*******************************************************
*                                                     *
*              S O L U T E   version 4.04             *
*                                                     *
*       ANALYTICAL MODELS FOR SOLUTE TRANSPORT        *
*                                                     *
*******************************************************

Model:  ONEd-1

Project..... = A89128XYL
User name..... = WILSON
Date..... = 12-31-1997
Data file..... = XYL128.DAT


                    INPUT DATA:


Groundwater (seepage) velocity... =  57.58 [ft/y]
Longitudinal dispersivity..... =  10 [ft]
Retardation factor..... =  1
Initial aquifer concentration.... =  0.00000D+00[mg/l]
Constant source concentration.... =  2.07000D+01[mg/l]
Duration of solute pulse..... =  50 [y]
Half-life in aquifer (no decay=0) =  1 [y]
Decay coefficient for aquifer.... =  0.6931D+00 [1/y]
Distance increment..... =  10 [ft]
Number of distance increments.... =  15
Number of time periods..... =  5

   1  Time..... =  2 [y]
   2  Time..... =  10 [y]
   3  Time..... =  20 [y]
   4  Time..... =  30 [y]
   5  Time..... =  40 [y]

             Concentration [mg/l]

Distance      Time          Time          Time          Time          Time
   [ft]       2.00[y]       10.00[y]      20.00[y]      30.00[y]      40.00[y]

    0.00   2.0700E+01    2.0700E+01    2.0700E+01    2.0700E+01    2.0700E+01
   10.00   1.8563E+01    1.8570E+01    1.8570E+01    1.8570E+01    1.8570E+01
   20.00   1.6637E+01    1.6659E+01    1.6659E+01    1.6659E+01    1.6659E+01
   30.00   1.4895E+01    1.4945E+01    1.4945E+01    1.4945E+01    1.4945E+01
   40.00   1.3312E+01    1.3407E+01    1.3407E+01    1.3407E+01    1.3407E+01
   50.00   1.1861E+01    1.2027E+01    1.2027E+01    1.2027E+01    1.2027E+01
   60.00   1.0521E+01    1.0790E+01    1.0790E+01    1.0790E+01    1.0790E+01
   70.00   9.2730E+00    9.6795E+00    9.6795E+00    9.6795E+00    9.6795E+00
   80.00   8.1017E+00    8.6835E+00    8.6835E+00    8.6835E+00    8.6835E+00
   90.00   6.9983E+00    7.7900E+00    7.7900E+00    7.7900E+00    7.7900E+00
  100.00   5.9601E+00    6.9884E+00    6.9884E+00    6.9884E+00    6.9884E+00
  110.00   4.9899E+00    6.2693E+00    6.2693E+00    6.2693E+00    6.2693E+00
  120.00   4.0952E+00    5.6242E+00    5.6242E+00    5.6242E+00    5.6242E+00
  130.00   3.2856E+00    5.0454E+00    5.0454E+00    5.0454E+00    5.0454E+00
  140.00   2.5705E+00    4.5263E+00    4.5263E+00    4.5263E+00    4.5263E+00
  150.00   1.9565E+00    4.0605E+00    4.0605E+00    4.0605E+00    4.0605E+00
```

**Crawford's Country Store**
**Total Xylenes Concentrations in Ground Water**




MARSHALL MILLER & ASSOCIATES

The following are the input parameters and output for the SOLUTE Model for MTBE

```
*********************************************************
*                                                       *
*              S O L U T E   version 4.04               *
*                                                       *
*       ANALYTICAL MODELS FOR SOLUTE TRANSPORT          *
*                                                       *
*********************************************************
```

Model: ONEd-1

Project..... = A89128MTBE
User name..... = WILSON
Date..... = 12-31-1997
Data file..... = MTBE128.DAT

INPUT DATA:

Groundwater (seepage) velocity... = 57.58 [ft/y]
Longitudinal dispersivity..... = 10 [ft]
Retardation factor..... = 1
Initial aquifer concentration.... = 0.00000D+00[mg/l]
Constant source concentration.... = 2.42000D+02[mg/l]
Duration of solute pulse..... = 50 [y]
Half-life in aquifer (no decay=0) = 1 [y]
Decay coefficient for aquifer.... = 0.6931D+00 [1/y]
Distance increment..... = 20 [ft]
Number of distance increments.... = 50
Number of time periods..... = 5

1 Time..... = 1.5 [y]
2 Time..... = 10 [y]
3 Time..... = 20 [y]
4 Time..... = 30 [y]
5 Time..... = 40 [y]

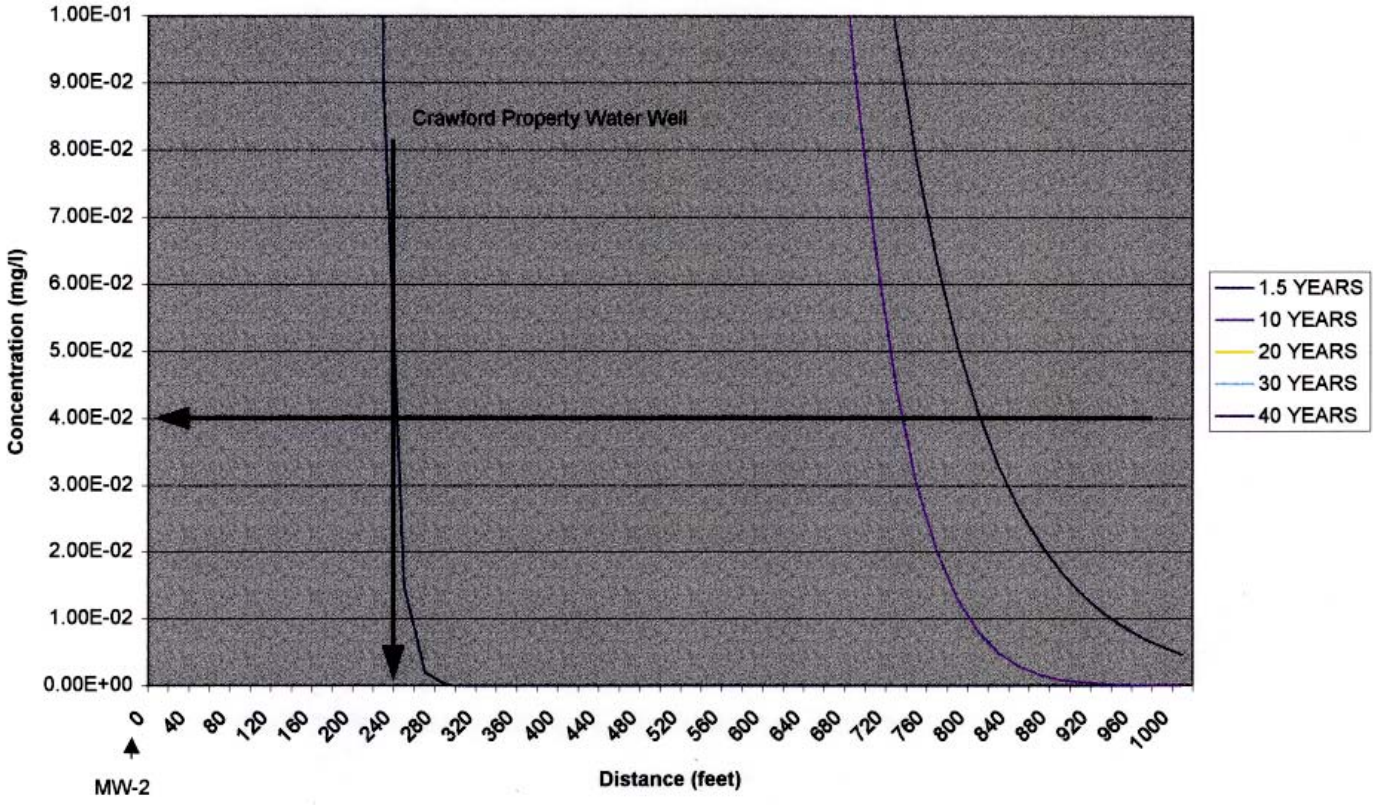
Concentration [mg/l]

| Distance [ft] | Time 1.50[y] | Time 10.00[y] | Time 20.00[y] | Time 30.00[y] | Time 40.00[y] |
|---|---|---|---|---|---|
| 0.00 | 2.4200E+02 | 2.4200E+02 | 2.4200E+02 | 2.4200E+02 | 2.4200E+02 |
| 20.00 | 1.9371E+02 | 1.9476E+02 | 1.9476E+02 | 1.9476E+02 | 1.9476E+02 |
| 40.00 | 1.5246E+02 | 1.5674E+02 | 1.5674E+02 | 1.5674E+02 | 1.5674E+02 |
| 60.00 | 1.1528E+02 | 1.2614E+02 | 1.2614E+02 | 1.2614E+02 | 1.2614E+02 |
| 80.00 | 8.1069E+01 | 1.0152E+02 | 1.0152E+02 | 1.0152E+02 | 1.0152E+02 |
| 100.00 | 5.1174E+01 | 8.1700E+01 | 8.1700E+01 | 8.1700E+01 | 8.1700E+01 |
| 120.00 | 2.8087E+01 | 6.5751E+01 | 6.5751E+01 | 6.5751E+01 | 6.5751E+01 |
| 140.00 | 1.3072E+01 | 5.2916E+01 | 5.2916E+01 | 5.2916E+01 | 5.2916E+01 |
| 160.00 | 5.0650E+00 | 4.2586E+01 | 4.2586E+01 | 4.2586E+01 | 4.2586E+01 |
| 180.00 | 1.6130E+00 | 3.4273E+01 | 3.4273E+01 | 3.4273E+01 | 3.4273E+01 |
| 200.00 | 4.1839E-01 | 2.7582E+01 | 2.7582E+01 | 2.7582E+01 | 2.7582E+01 |
| 220.00 | 8.7844E-02 | 2.2198E+01 | 2.2198E+01 | 2.2198E+01 | 2.2198E+01 |
| 240.00 | 1.4862E-02 | 1.7864E+01 | 1.7865E+01 | 1.7865E+01 | 1.7865E+01 |
| 260.00 | 2.0199E-03 | 1.4377E+01 | 1.4377E+01 | 1.4377E+01 | 1.4377E+01 |
| 280.00 | 2.1998E-04 | 1.1570E+01 | 1.1571E+01 | 1.1571E+01 | 1.1571E+01 |

| | | | | | |
|---|---|---|---|---|---|
| 300.00 | 1.9151E-05 | 9.3113E+00 | 9.3118E+00 | 9.3118E+00 | 9.3118E+00 |
| 320.00 | 1.3323E-06 | 7.4932E+00 | 7.4940E+00 | 7.4940E+00 | 7.4940E+00 |
| 340.00 | 7.3957E-08 | 6.0296E+00 | 6.0311E+00 | 6.0311E+00 | 6.0311E+00 |
| 360.00 | 3.2731E-09 | 4.8514E+00 | 4.8538E+00 | 4.8538E+00 | 4.8538E+00 |
| 380.00 | 1.1541E-10 | 3.9026E+00 | 3.9063E+00 | 3.9063E+00 | 3.9063E+00 |
| 400.00 | 3.2404E-12 | 3.1381E+00 | 3.1437E+00 | 3.1437E+00 | 3.1437E+00 |
| 420.00 | 7.2417E-14 | 2.5219E+00 | 2.5300E+00 | 2.5300E+00 | 2.5300E+00 |
| 440.00 | 1.2876E-15 | 2.0247E+00 | 2.0361E+00 | 2.0361E+00 | 2.0361E+00 |
| 460.00 | 1.8210E-17 | 1.6231E+00 | 1.6386E+00 | 1.6386E+00 | 1.6386E+00 |
| 480.00 | 2.0479E-19 | 1.2984E+00 | 1.3188E+00 | 1.3188E+00 | 1.3188E+00 |
| 500.00 | 1.8309E-21 | 1.0353E+00 | 1.0613E+00 | 1.0613E+00 | 1.0613E+00 |
| 520.00 | 1.3011E-23 | 8.2206E-01 | 8.5414E-01 | 8.5414E-01 | 8.5414E-01 |
| 540.00 | 7.3474E-26 | 6.4904E-01 | 6.8740E-01 | 6.8740E-01 | 6.8740E-01 |
| 560.00 | 3.2970E-28 | 5.0872E-01 | 5.5321E-01 | 5.5321E-01 | 5.5321E-01 |
| 580.00 | 1.1754E-30 | 3.9516E-01 | 4.4522E-01 | 4.4522E-01 | 4.4522E-01 |
| 600.00 | 3.3287E-33 | 3.0361E-01 | 3.5831E-01 | 3.5831E-01 | 3.5831E-01 |
| 620.00 | 7.4879E-36 | 2.3030E-01 | 2.8836E-01 | 2.8836E-01 | 2.8836E-01 |
| 640.00 | 1.3378E-38 | 1.7212E-01 | 2.3207E-01 | 2.3207E-01 | 2.3207E-01 |
| 660.00 | 1.8982E-41 | 1.2651E-01 | 1.8677E-01 | 1.8677E-01 | 1.8677E-01 |
| 680.00 | 2.1019E-44 | 9.1277E-02 | 1.5031E-01 | 1.5031E-01 | 1.5031E-01 |
| 700.00 | 0.0000E+00 | 6.4541E-02 | 1.2097E-01 | 1.2097E-01 | 1.2097E-01 |
| 720.00 | 0.0000E+00 | 4.4653E-02 | 9.7351E-02 | 9.7351E-02 | 9.7351E-02 |
| 740.00 | 0.0000E+00 | 3.0185E-02 | 7.8347E-02 | 7.8347E-02 | 7.8347E-02 |
| 760.00 | 0.0000E+00 | 1.9912E-02 | 6.3052E-02 | 6.3053E-02 | 6.3053E-02 |
| 780.00 | 0.0000E+00 | 1.2803E-02 | 5.0743E-02 | 5.0744E-02 | 5.0744E-02 |
| 800.00 | 0.0000E+00 | 8.0158E-03 | 4.0837E-02 | 4.0838E-02 | 4.0838E-02 |
| 820.00 | 0.0000E+00 | 4.8825E-03 | 3.2865E-02 | 3.2866E-02 | 3.2866E-02 |
| 840.00 | 0.0000E+00 | 2.8910E-03 | 2.6448E-02 | 2.6450E-02 | 2.6450E-02 |
| 860.00 | 0.0000E+00 | 1.6630E-03 | 2.1284E-02 | 2.1287E-02 | 2.1287E-02 |
| 880.00 | 0.0000E+00 | 9.2867E-04 | 1.7128E-02 | 1.7131E-02 | 1.7131E-02 |
| 900.00 | 0.0000E+00 | 5.0323E-04 | 1.3782E-02 | 1.3787E-02 | 1.3787E-02 |
| 920.00 | 0.0000E+00 | 2.6448E-04 | 1.1089E-02 | 1.1096E-02 | 1.1096E-02 |
| 940.00 | 0.0000E+00 | 1.3476E-04 | 8.9215E-03 | 8.9297E-03 | 8.9297E-03 |
| 960.00 | 0.0000E+00 | 6.6547E-05 | 7.1762E-03 | 7.1865E-03 | 7.1865E-03 |
| 980.00 | 0.0000E+00 | 3.1838E-05 | 5.7709E-03 | 5.7836E-03 | 5.7836E-03 |
| 1000.00 | 0.0000E+00 | 1.4753E-05 | 4.6392E-03 | 4.6546E-03 | 4.6546E-03 |

MARSHALL MILLER & ASSOCIATES

**Crawford's Country Store**
**MTBE Concentrations in Ground Water**




MARSHALL MILLER & ASSOCIATES

The following are the input parameters and output for the SOLUTE Model for Naphthalene

```
**********************************************************
*                                                        *
*              S O L U T E   version 4.04                *
*                                                        *
*       ANALYTICAL MODELS FOR SOLUTE TRANSPORT           *
*                                                        *
**********************************************************

Model:  ONEd-1

Project..... = A89128NAP
User name..... = WILSON
Date..... = 12-31-1997
Data file..... = NAP128.DAT


                    INPUT DATA:


Groundwater (seepage) velocity... =  57.58 [ft/y]
Longitudinal dispersivity..... =  10 [ft]
Retardation factor..... =  1
Initial aquifer concentration.... =  0.00000D+00[mg/l]
Constant source concentration.... =  8.13000D-01[mg/l]
Duration of solute pulse..... =  50 [y]
Half-life in aquifer (no decay=0) =  .71 [y]
Decay coefficient for aquifer.... =  0.9763D+00 [1/y]
Distance increment..... =  20 [ft]
Number of distance increments.... =  20
Number of time periods..... =  5

   1  Time..... =  1.5 [y]
   2  Time..... =  10 [y]
   3  Time..... =  20 [y]
   4  Time..... =  30 [y]
   5  Time..... =  40 [y]


                Concentration [mg/l]
```

| Distance [ft] | Time 1.50[y] | Time 10.00[y] | Time 20.00[y] | Time 30.00[y] | Time 40.00[y] |
|---|---|---|---|---|---|
| 0.00 | 8.1300E-01 | 8.1300E-01 | 8.1300E-01 | 8.1300E-01 | 8.1300E-01 |
| 20.00 | 6.0293E-01 | 6.0503E-01 | 6.0503E-01 | 6.0503E-01 | 6.0503E-01 |
| 40.00 | 4.4175E-01 | 4.5026E-01 | 4.5026E-01 | 4.5026E-01 | 4.5026E-01 |
| 60.00 | 3.1367E-01 | 3.3508E-01 | 3.3508E-01 | 3.3508E-01 | 3.3508E-01 |
| 80.00 | 2.0953E-01 | 2.4937E-01 | 2.4937E-01 | 2.4937E-01 | 2.4937E-01 |
| 100.00 | 1.2714E-01 | 1.8558E-01 | 1.8558E-01 | 1.8558E-01 | 1.8558E-01 |
| 120.00 | 6.7771E-02 | 1.3811E-01 | 1.3811E-01 | 1.3811E-01 | 1.3811E-01 |
| 140.00 | 3.0879E-02 | 1.0278E-01 | 1.0278E-01 | 1.0278E-01 | 1.0278E-01 |
| 160.00 | 1.1782E-02 | 7.6486E-02 | 7.6486E-02 | 7.6486E-02 | 7.6486E-02 |
| 180.00 | 3.7099E-03 | 5.6921E-02 | 5.6921E-02 | 5.6921E-02 | 5.6921E-02 |
| 200.00 | 9.5423E-04 | 4.2360E-02 | 4.2360E-02 | 4.2360E-02 | 4.2360E-02 |
| 220.00 | 1.9907E-04 | 3.1524E-02 | 3.1524E-02 | 3.1524E-02 | 3.1524E-02 |
| 240.00 | 3.3515E-05 | 2.3460E-02 | 2.3460E-02 | 2.3460E-02 | 2.3460E-02 |
| 260.00 | 4.5372E-06 | 1.7459E-02 | 1.7459E-02 | 1.7459E-02 | 1.7459E-02 |
| 280.00 | 4.9261E-07 | 1.2993E-02 | 1.2993E-02 | 1.2993E-02 | 1.2993E-02 |

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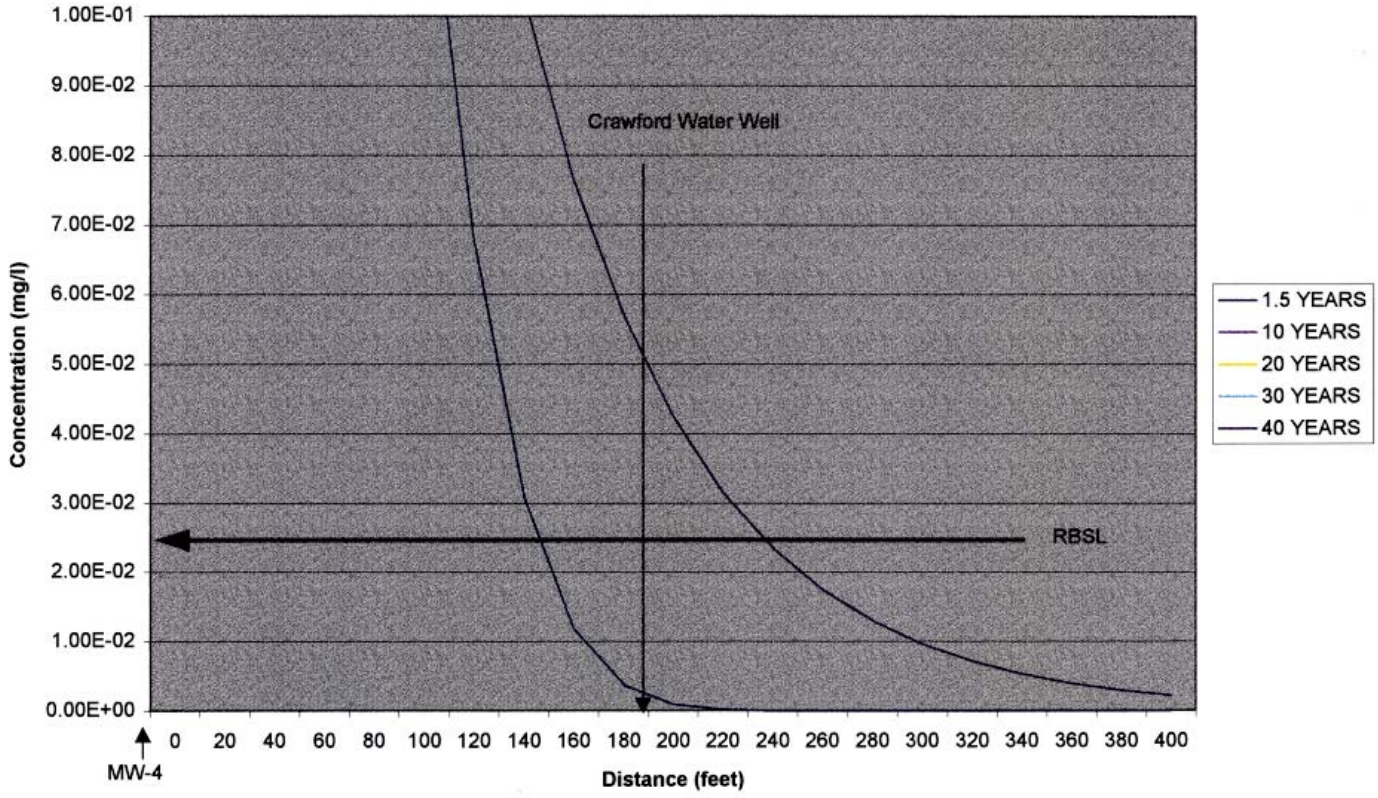
| | | | | | |
|---|---|---|---|---|---|
| 300.00 | 4.2782E-08 | 9.6691E-03 | 9.6692E-03 | 9.6692E-03 | 9.6692E-03 |
| 320.00 | 2.9702E-09 | 7.1956E-03 | 7.1958E-03 | 7.1958E-03 | 7.1958E-03 |
| 340.00 | 1.6460E-10 | 5.3548E-03 | 5.3551E-03 | 5.3551E-03 | 5.3551E-03 |
| 360.00 | 7.2745E-12 | 3.9848E-03 | 3.9852E-03 | 3.9852E-03 | 3.9852E-03 |
| 380.00 | 2.5619E-13 | 2.9651E-03 | 2.9658E-03 | 2.9658E-03 | 2.9658E-03 |
| 400.00 | 7.1860E-15 | 2.2062E-03 | 2.2071E-03 | 2.2071E-03 | 2.2071E-03 |

**Crawford's Country Store**
**Naphthalene Concentrations in Ground Water**

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*Appendix IX*
*Soil Leachability Results*

# Leachability Input Parameters

**South Carolina Department of Health and Environmental Control (DHEC)**
**Bureau of Underground Storage Tank Management**

**Site Data**

Facility Name Crawford's Country Store Site ID # 12335

**Input Parameters**

| | | | | | |
|---|---|---|---|---|---|
| Percent Sand in Soil | | 63.4 | % | 5% < sand < 70% | |
| Percent Clay in Soil | | 31.71 | % | 5% < clay < 60% | |
| DAF | | 8 | | | |
| Worst Case Soil Analyses | Benzene | 4.17 | mg/kg | C s | |
| | Toluene | 119 | mg/kg | C s | |
| | Ethylbenzene | 43.7 | mg/kg | C s | |
| | Xylenes | 262 | mg/kg | C s | |
| | Naphthalene | 7.5 | mg/kg | C s | |
| | Other CoC | | mg/kg | C s | |
| | | | | | Figure |
| Natural organic carbon content | | 0 | mg/kg | $f_{oc}$ | |
| TPH | | 0 | mg/kg | TPH | |
| Porosity | | .42 | decimal % | ∅ | C1 |
| Residual water content | | 0.09 | decimal % | $W_r$ | C2 |
| Bulk density of soil | | 1.64 | g/cc | $B_d$ | C3 |
| Soil hydraulic conductivity | | 2.8 E-4 | cm/sec | $K_r$ | C4 |
| Average annual recharge | | 25 | cm | $H_w$ | |
| Wetting front suction (negative Number) | | -10 | cm | $H_r$ | C5 |
| Distance from highest soil contamination to water table | | 91.44 | cm | L | |
| Groundwater RBSL (or SSTL if appropriate) | | | mg/L | $C_{rbsl}$ | |

List possible human exposure pathways from soil.



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# Leachability Results and Conclusions

## South Carolina Department of Health and Environmental Control (DHEC)
## Bureau of Underground Storage Tank Management

**Site Data**

Facility Name Crawford's Country Store Site ID # 12335

Chemical of Concern (Benzene, Naphthalene, etc.): Benzene

(Please use a separate form for each Chemical of Concern that exceeds the RBSL in soil).

**Chemical Specific Data**

| | | | | |
|---|---|---|---|---|
| Biodegradation half-life period | 16 | days | $t_{1/2}$ | Refer to |
| Soil/water partitioning coefficient | 81 | mg/L | $K_{oc}$ | Table |
| Henry's law constant | 0.226 | | $H^9$ | C2 |

**Results**

| | | | | Equation Set | Step |
|---|---|---|---|---|---|
| Total organic carbon content | 0 | decimal % | $f_{cs}$ | I | 1 |
| Air filled porosity | 0.33 | decimal % | f | I | 2 |
| Leachate concentration | 43.83 | mg/L | $C_w$ | I | 3 |
| Infiltration time | 54786 | seconds | t | II | 1 |
| Velocity of water | 1724.89 | ft/yr | $V_w$ | II | 2 |
| Soil/water distribution coefficient | 0 | mL/g | $K_d$ | III | 1 |
| CoC percolation rate | 1724.89 | ft/yr | $V_c$ | III | 2 |
| Time to reach groundwater | 0.6 | days | $T_c$ | IV | 1 |
| Concentration to protect groundwater | 0.0051 | mg/L | $C_p$ | IV | 2 |
| Site specific target level | 3.91 E-3 | mg/kg | $C_{sstl}$ | V | |

**Conclusions**

Does concentration of CoC in soil exceed SSTL? Yes X No _____

Risk of human exposure due to contaminated soil? Yes _____ No X



MARSHALL MILLER & ASSOCIATES

# Leachability Results and Conclusions

## South Carolina Department of Health and Environmental Control (DHEC)
## Bureau of Underground Storage Tank Management

**Site Data**

Facility Name Crawford's Country Store Site ID # 12335

Chemical of Concern (Benzene, Naphthalene, etc.): Toluene

(Please use a separate form for each Chemical of Concern that exceeds the RBSL in soil)

**Chemical Specific Data**

| | | | |
|---|---|---|---|
| Biodegradation half-life period | 22 days | $t_{½}$ | Refer to |
| Soil/water partitioning coefficient | 133 mg/L | $K_{oc}$ | Table |
| Henry's law constant | 0.301 | $H^9$ | C2 |

**Results**

| | | | Equation Set | Step |
|---|---|---|---|---|
| Total organic carbon content | 0 decimal % | $f_{cs}$ | I | 1 |
| Air filled porosity | 0.33 decimal % | f | I | 2 |
| Leachate concentration | 1087.36 mg/L | $C_w$ | I | 3 |
| Infiltration time | 54786 seconds | t | II | 1 |
| Velocity of water | 1724.89 ft/yr | $V_w$ | II | 2 |
| Soil/water distribution coefficient | 0 mL/g | $K_d$ | III | 1 |
| CoC percolation rate | 1724.89 ft/yr | $V_c$ | III | 2 |
| Time to reach groundwater | 0.6 days | $T_c$ | IV | 1 |
| Concentration to protect Groundwater | 1.02 mg/L | $C_p$ | IV | 2 |
| Site specific target level | 8.93 E-1 mg/kg | $C_{sstl}$ | V | |

**Conclusions**

Does concentration of CoC in soil exceed SSTL? Yes X No _____

Risk of human exposure due to contaminated soil? Yes _____ No X



MARSHALL MILLER & ASSOCIATES

# Leachability Results and Conclusions

## South Carolina Department of Health and Environmental Control (DHEC)
## Bureau of Underground Storage Tank Management

**Site Data**

Facility Name Crawford's Country Store Site ID # 12335

Chemical of Concern (Benzene, Naphthalene, etc.): Ethylbenzene

(Please use a separate form for each Chemical of Concern that exceeds the RBSL in soil).

**Chemical Specific Data**

| | | | | |
|---|---|---|---|---|
| Biodegradation half-life period | 10 | days | $t_{1/2}$ | Refer to |
| Soil/water partitioning coefficient | 176 | mg/L | $K_{oc}$ | Table |
| Henry's law constant | 0.280 | | $H^9$ | C2 |

**Results**

| | | | | Equation Set | Step |
|---|---|---|---|---|---|
| Total organic carbon content | 0 | decimal % | $f_{cs}$ | I | 1 |
| Air filled porosity | 0.33 | decimal % | f | I | 2 |
| Leachate concentration | 414.48 | mg/L | $C_w$ | I | 3 |
| Infiltration time | 54786 | seconds | t | II | 1 |
| Velocity of water | 1724.89 | ft/yr | $V_w$ | II | 2 |
| Soil/water distribution coefficient | 0 | mL/g | $K_d$ | III | 1 |
| CoC percolation rate | 1724.89 | ft/yr | $V_c$ | III | 2 |
| Time to reach groundwater | 0.6 | days | $T_c$ | IV | 1 |
| Concentration to protect groundwater | 0.7315 | mg/L | $C_p$ | IV | 2 |
| Site specific target level | 6.17 E-1 | mg/kg | $C_{sstl}$ | V | |

**Conclusions**

Does concentration of CoC in soil exceed SSTL? Yes X No _____

Risk of human exposure due to contaminated soil? Yes _____ No X



MARSHALL MILLER & ASSOCIATES

# Leachability Results and Conclusions

## South Carolina Department of Health and Environmental Control (DHEC)
## Bureau of Underground Storage Tank Management

**Site Data**

Facility Name Crawford's Country Store Site ID # 12335

Chemical of Concern (Benzene, Naphthalene, etc.): Total Xylenes

(Please use a separate form for each Chemical of Concern that exceeds the RBSL in soil).

**Chemical Specific Data**

| | | | |
|---|---|---|---|
| Biodegradation half-life period | 28 days | $t_{1/2}$ | Refer to |
| Soil/water partitioning coefficient | 639 mg/L | $K_{oc}$ | Table |
| Henry's law constant | 0.278 | $H^9$ | C2 |

**Results**

| | | | Equation Set | Step |
|---|---|---|---|---|
| Total organic carbon content | 0 decimal % | $f_{cs}$ | I | 1 |
| Air filled porosity | 0.33 decimal % | f | I | 2 |
| Leachate concentration | 2494 mg/L | $C_w$ | I | 3 |
| Infiltration time | 54786 seconds | t | II | 1 |
| Velocity of water | 1724.89 ft/yr | $V_w$ | II | 2 |
| Soil/water distribution coefficient | 0 mL/g | $K_d$ | III | 1 |
| CoC percolation rate | 1724.89 ft/yr | $V_c$ | III | 2 |
| Time to reach groundwater | 0.6 days | $T_c$ | IV | 1 |
| Concentration to protect groundwater | 10.158 mg/L | $C_p$ | IV | 2 |
| Site specific target level | 8.54 mg/kg | $C_{sstl}$ | V | |

**Conclusions**

Does concentration of CoC in soil exceed SSTL? Yes X No

Risk of human exposure due to contaminated soil? Yes No X



MARSHALL MILLER & ASSOCIATES

# Leachability Results and Conclusions

## South Carolina Department of Health and Environmental Control (DHEC)
## Bureau of Underground Storage Tank Management

**Site Data**

Facility Name Crawford's Country Store Site ID # 12335

Chemical of Concern (Benzene, Naphthalene, etc.): Naphthalene

(Please use a separate form for each Chemical of Concern that exceeds the RBSL in soil).

**Chemical Specific Data**

| | | | |
|---|---|---|---|
| Biodegradation half-life period | 48 days | $t_{1/2}$ | Refer to |
| Soil/water partitioning coefficient | 1543 mg/L | $K_{oc}$ | Table |
| Henry's law constant | 0.002 | $H^9$ | C2 |

**Results**

| | | | Equation Set | Step |
|---|---|---|---|---|
| Total organic carbon content | 0 decimal % | $f_{cs}$ | I | 1 |
| Air filled porosity | 0.33 decimal % | f | I | 2 |
| Leachate concentration | 4999 mg/L | $C_w$ | I | 3 |
| Infiltration time | 54786 seconds | t | II | 1 |
| Velocity of water | 1724.89 ft/yr | $V_w$ | II | 2 |
| Soil/water distribution coefficient | 0 mL/g | $K_d$ | III | 1 |
| CoC percolation rate | 1724.89 ft/yr | $V_c$ | III | 2 |
| Time to reach groundwater | 0.6 days | $T_c$ | IV | 1 |
| Concentration to protect groundwater | 0.0252 mg/L | $C_p$ | IV | 2 |
| Site specific target level | 1.06 E-2 mg/kg | $C_{sstl}$ | V | |

**Conclusions**

| | | |
|---|---|---|
| Does concentration of CoC in soil exceed SSTL? | Yes X | No |
| Risk of human exposure due to contaminated soil? | Yes | No X |



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*Appendix X*
*South Carolina Certified Surveyed Map*

No. _____

# Schnabel Engineering Associates, Inc.

## MANIFEST - NON-HAZARDOUS LIQUIDS

RC

| | | | |
|---|---|---|---|
| Date of Shipment: 8 - 5 - 99 | | Project #: 12335 | Load #: |
| Generation Site (Transport from): (Name & Address): Crawford Country Store | | Generator's Phone No.: | |
| | | Person to Contact: | |
| | | Fax No.: | |
| Consultant's Name & Billing Address: SCHNABEL ENGINEERING ASSOCIATES, INC. 104 CORPORATE BLVD. SUITE 420 WEST COLUMBIA, SC 29169 | | Consultant's Phone No.: 803-796-6240 | |
| | | Person to Contact: Danny Rawl | |
| | | Fax No.: 803-796-6250 | |
| Waste Type, Volume, Container Type: Purged groundwater 83.14 gallons collected. Collected in 55 gallon plastic drums | | RECEIVED AUG 20 1999 DIVISION OF UNDERGROUND STORAGE TANK MGMT. | |
| Transporter's Name & Mailing Address: SCHNABEL ENGINEERING ASSOCIATES, INC. 104 CORPORATE BLVD. SUITE 420 WEST COLUMBIA, SC 29169 | | Facility Phone No.: 803-796-6240 | |
| | | Person to Contact.: Danny Rawl | |
| | | Fax No.: 803-796-6250 | |
| Designated Facility (Transport to): (Name & Address): SCHNABEL ENGINEERING ASSOCIATES, INC. 104 CORPORATE BLVD. SUITE 420 WEST COLUMBIA, SC 29169 | | Transporter's Phone No.: 803-796-6240 | |
| | | Person to Contact: Danny Rawl | |
| | | Fax No : 803-796-6250 | |
| Generator | Date | Time | Generator: |
| Relinquished by (Signature): Danny Rawl | 8-5-99 | 1415 | Received by: (Signature) |
| Relinquished by: (Signature) | | | Received by (Signature) |
| Transporter | Date | Time | Transporter: |
| Relinquished by: (Signature) | | | Received by. (Signature) |
| Relinquished by: (Signature) | | | Received by: (Signature) |
| Designated Facility | Date | Time | Designated Facility: |
| Relinquished by: (Signature) | | | Received by: (Signature) |
| Relinquished by: (Signature) | | | Received by: (Signature) |

UST DOCKETING

Remarks:

Purged groundwater combined with groundwater collected from other sites held until enough for disposal and treatment.

*Chain of Custody Record*

# TESTAMERICA INC.

Page 1 of 2

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| ☐ Asheville, NC (A) (828) 254-5169 | ☐ Bartlett, IL (C) (630) 289-3100 | ☐ Cedar Falls, IA (E) (319) 277-2401 | ☐ Charlotte, NC (G) (704) 392-1164 | ☐ Dayton, OH (I) (937) 294-6856 | ☐ Lumberton, NC (K) (910) 738-6190 | ☐ Nashville, TN (M) (615) 726-0177 | ☐ Pontiac, MI (O) (248) 332-1940 | ☐ Rockford, Il (Q) (815) 874-2171 |
| ☐ Atlanta, GA (B) (770) 368-0636 | ☐ Brighton, CO (D) (303) 659-0497 | ☐ Charleston, SC (F) (843) 849-6550 | ☒ Columbia, SC (H) (803) 796-8989 | ☐ Davenport, IA (J) (319) 323-7944 | ☐ Indianapolis, IN (L) (317) 842-4261 | ☐ Macon, GA (N) (912) 757-0811 | ☐ Orlando, FL (P) (407) 851-2560 | ☐ Watertown, WI (R) (920) 261-1660 |

Client: SCDHEC
Project No.: 12335
Report Address: 2600 Bull St. Cola., S.C. 29201
Invoice Address: Crawford Country Store AHN: Bob Faller
Attn: D. Thomas
Attn: Reed Corley
Phone No.: 898-4350
Sampled By: Danny Rawl
Fax No.: 898-4330
P.O. No: 1831
Quote No.
State Samples Collected: S.C.

**TURNAROUND TIME**
☐ Standard
☒ Rush (surcharges may apply)
Date Needed: 8/9/99

**REQUESTED PARAMETERS**
8020/8260 BTEX, MTBE, Naph

Is this work being conducted for regulatory compliance monitoring? Yes___ No___
Is this work being conducted for regulatory enforcement action? Yes___ No___
Which regulations apply: RCRA___ NPDES Wastewater___ UST___ Drinking Water___ Other___ None___

| Sample ID | Date | Time | Comp (C) Grab (G) | Matrix | Lab Use | HCL | HCl | NaOH | $HNO_3$ | $H_2SO_4$ | Other | None | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-4 | 8/5/99 | 0920 | C | GW | | ✓ | 2 | | | | | | |
| MW-9 | ↓ | 1015 | ↓ | ↓ | | ✓ | 2 | | | | | | Bull Cola |
| DMW-17 | ↓ | 1100 | ↓ | ↓ | | ✓ | 2 | | | | | | 8320 |
| MW-6 | ↓ | 1105 | ↓ | ↓ | | ✓ | 2 | | | | | | DHEC |
| MW-5 | ↓ | 1120 | ↓ | ↓ | | ✓ | 2 | | | | | | 48 hr |
| MW-8 | ↓ | 1135 | ↓ | ↓ | | ✓ | 2 | | | | | | turn |
| MW-7 | ↓ | 1150 | ↓ | ↓ | | ✓ | 2 | | | | | | |
| CLS-WW | ↓ | 1155 | ↓ | ↓ | | ✓ | 2 | | | | | | |
| MW-12 | ↓ | 1215 | ↓ | ↓ | | ✓ | 2 | | | | | | |
| MW-14 | ↓ | 1240 | ↓ | ↓ | | ✓ | 2 | | | | | | |

QC Deliverables: ☐ None ☐ Level 2 - Batch QC ☐ Level 3 ☐ Level 4 ☐ Other

Init Lab Temp: 1.4°C    Rec Lab Temp:

COMMENTS: Fax copy of report to Cola.

| Relinquished By | Date | Time | Received By | Date | Time |
|---|---|---|---|---|---|
| Danny Rawl | 8-5-99 | 1730 | Michelle Riddle | 8/5/99 | 1730 |
| Relinquished By: | Date | Time | Received By: | Date | Time |
| Relinquished By: | Date | Time | Received By: | Date | Time |
| Relinquished By: | Date | Time | Received By: | Date | Time |

LAB USE ONLY:
Custody Seal: ☐ Yes ☐ No ☐ N/A
Bottles Supplied by TA: ☐ Yes ☐ No

# TESTAMERICA INC.

*Chain of Custody Record*

Page 2 of 2

❒ Asheville, NC (A) (828) 254-5169 ❒ Bartlett, IL (C) (630) 289-3100 ❒ Cedar Falls, IA (E) (319) 277-2401 ❒ Charlotte, NC (G) (704) 392-1164 ❒ Dayton, OH (I) (937) 294-6856 ❒ Lumberton, NC (K) (910) 738-6190 ❒ Nashville, TN (M) (615) 726-0177 ❒ Pontiac, MI (O) (248) 332-1940 ❒ Rockford. Il (Q) (815) 874-2171
❒ Atlanta, GA (B) (770) 368-0636 ❒ Brighton, CO (D) (303) 659-0497 ❒ Charleston, SC (F) (843) 849-6550 ☒ Columbia, SC (H) (803) 796-8989 ❒ Davenport. IA (J) (319) 323-7944 ❒ Indianapolis, IN (L) (317) 842-4261 ❒ Macon, GA (N) (912) 757-0811 ❒ Orlando, FL (P) (407) 851-2560 ❒ Watertown, WI (R) (920) 261-1660

| | |
|---|---|
| Client: SCDHEC | Project No.: 12335 |
| Report Address: 2600 Bull St Cola, S.C. 29201 | Invoice Address: Crawford Country Store AttN: Bob Faller |
| Attn: D. Thomas | Attn: Reed Corley |
| Phone No.: 898-4350 | Sampled By: Danny Rawl |
| Fax No.: 898-4330 | P.O. No: 1831 |
| TURNAROUND TIME | Quote No. |
| ❒ Standard | State Samples Collected S.C. |
| ☒ Rush (surcharges may apply) | Date Needed: 8/9/99 |

**REQUESTED PARAMETERS**

Is this work being conducted for regulatory compliance monitoring? Yes___ No___

Is this work being conducted for regulatory enforcement action? Yes___ No___

Which regulations apply:
RCRA___ NPDESWastewater___
UST___ Drinking Water___
Other___ None___

| Sample ID | Date | Time | Comp (C) Grab (G) | Matrix | Lab Use | HCL | # and type of containers: HCl | NaOH | $HNO_3$ | $H_2SO_4$ | Other | None | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-13 | 8/5/99 | 1300 | G | GW | | — | 2 | | | | | | Bull Cola. |
| MW-11 | ↓ | 1320 | ↓ | ↓ | | ✓ | 2 | | | | | | 8320 |
| MW-11e | | 1340 | | | | ✓ | 2 | | | | | | |
| MW-15 | | 1400 | | | | ✓ | 2 | | | | | | DHEC |
| | | | | | | | | | | | | | 48 hr. |
| Trip Blank | 8-3-99 | — | | | | | 1 | | | | | | turn |

QC Deliverables: ❒ None ❒ Level 2 - Batch QC ❒ Level 3 ❒ Level 4 ❒ Other

4°C
Intt Lab Temp | Rec Lab Temp

COMMENTS: Fax copy of report to Col A.

| | | | | | |
|---|---|---|---|---|---|
| Relinquished By: Danny Rawl | Date 8-5-99 | Time 1730 | Received By: Michelle Riddle | Date 8/5/99 | Time 1730 |
| Relinquished By: | Date | Time | Received By: | Date | Time |
| Relinquished By: | Date | Time | Received By: | Date | Time |
| Relinquished By: | Date | Time | Received By: | Date | Time |

LAB USE ONLY:
Custody Seal: ❒ Yes ❒ No ❒ N/A
Bottles Supplied by TA: ❒ Yes ❒ No

**South Carolina Department of Health and Environmental Control**
**Bureau of Underground Storage Tank Management**
**Field Data Information Sheet for Ground-Water Sampling**

**Date (mm/dd/yy):** 8-5-99
**Field Personnel:** Danny Rawl
**General Weather Conditions:** CLEAR

**Ambient Air Temperature:** 29 °C

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 980420166 | serial no. | 980420166 |
| pH=4.0 | 4.0 | standard | 1413 |
| pH=7.0 | 7.0 | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** CRAWFORD COUNTRY STORE
**Site ID#:** 12335 **Monitoring Well #:**
**Water Supply Well** **Public:** **Private:** CP-WW

Monitoring Well Diameter (D): _____ feet

Conversion factor (C): 3.14 X $(D/2)^2$ for a 2 inch well C = 0.163
for a 4 inch well C = 0.652

* Free Product Thickness: _____ feet
Depth to Ground Water (DGW) _____ feet
Total Well Depth (TWD) _____ feet
Length of water column (LWC = TWD - DGW) _____ feet

1 casing volume (CV = LWC X C) = _____ X _____ = _____ gals
3 casing volume 3 X CV = _____ gals (standard purge volume)

Total Volume of Water Purged Before Sampling — gals.
* If free product is present over 1/8 inch, sampling will not be required.

| | Initial | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post sampling | |
|---|---|---|---|---|---|---|---|---|
| Cumulative Volume Purged (gallons) | | | | | | | | |
| Time (military) | | | | | | | | |
| pH (s.u.) | | NO | SAMPLE | | | | | |
| Specific Cond. (umhos/cm) | | | | | | | | |
| Water Temperature (°C) | | | | | | | | |
| Dissolved Oxygen | | Private Well | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: NO SAMPLE DUE TO NO POWER TO PUMP

**South Carolina Department of Health and Environmental Control**
**Bureau of Underground Storage Tank Management**
**Field Data Information Sheet for Ground-Water Sampling** 1155

**Date (mm/dd/yy):** 8-5-99
**Field Personnel:** Danny Rawl
**General Weather Conditions:** CLEAR

**Ambient Air Temperature:** 29 °C

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 980420166 | serial no. | 980420166 |
| pH=4.0 | 4.0 | standard | 1413 |
| pH=7.0 | 7.0 | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** CRAWFORD COUNTRY STORE
**Site ID#:** 12335 **Monitoring Well #:**
**Water Supply Well** **Public:** **Private:** CLS-WW

Monitoring Well Diameter (D): _____ feet

Conversion factor (C): 3.14 X $(D/2)^2$ for a 2 inch well C = 0.163
for a 4 inch well C = 0.652

* Free Product Thickness: _____ feet
Depth to Ground Water (DGW) _____ feet
Total Well Depth (TWD) _____ feet
Length of water column (LWC = TWD - DGW) _____ feet

1 casing volume (CV = LWC X C) = _____ X _____ = _____ gals
3 casing volume 3 X CV = _____ gals (standard purge volume)

Total Volume of Water Purged Before Sampling — gals.
* If free product is present over 1/8 inch, sampling will not be required.

| | Initial | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post sampling | |
|---|---|---|---|---|---|---|---|---|
| Cumulative Volume Purged (gallons) | | | | | | | | |
| Time (military) | | | | | | | | |
| pH (s.u.) | | PRIVATE | | WELL | | | | |
| Specific Cond. (umhos/cm) | | | | | | | | |
| Water Temperature (°C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: _____

**South Carolina Department of Health and Environmental Control**
**Bureau of Underground Storage Tank Management**
**Field Data Information Sheet for Ground-Water Sampling** 6920

**Date (mm/dd/yy):** 8-5-99
**Field Personnel:** Danny Rawl
**General Weather Conditions:** Clear

**Ambient Air Temperature:** 26 °C

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 980420166 | serial no. | 980420166 |
| pH=4.0 | 4.0 | standard | 1413 |
| pH=7.0 | 7.0 | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** CRAWFORD COUNTRY STORE
**Site ID#:** 12335 **Monitoring Well #:** MW-4
**Water Supply Well** **Public:** _____ **Private:** _____

Monitoring Well Diameter (D): 2" feet

Conversion factor (C): 3.14 X $(D/2)^2$ for a 2 inch well C = 0.163
for a 4 inch well C = 0.652

* Free Product Thickness: _____ feet
Depth to Ground Water (DGW) 17.59 feet
Total Well Depth (TWD) 25.23 feet
Length of water column (LWC = TWD - DGW) 7.64 feet

1 casing volume (CV = LWC X C) = 7.64 X .163 = 1.25 gals
3 casing volume 3 X CV = 3.75 gals (standard purge volume)

Total Volume of Water Purged Before Sampling 4.0 gals.
* If free product is present over 1/8 inch, sampling will not be required.

| | Initial | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post sampling | |
|---|---|---|---|---|---|---|---|---|
| Cumulative Volume Purged (gallons) | .25 | 1.5 | 2.75 | 4.0 | | | | |
| Time (military) | 0912 | 0914 | 0915 | 0917 | | | | |
| pH (s.u.) | 4.55 | 4.18 | 4.21 | 4.26 | | | | |
| Specific Cond. (umhos/cm) | 134.8 | 82.5 | 77.6 | 75.7 | | | | |
| Water Temperature (°C) | 22 | 22 | 21 | 21 | | | | |
| Dissolved Oxygen | 1.25 | 1.18 | 1.21 | 2.06 | | | | |
| PID readings, if required | | | | | | | | |

Remarks: _____

**South Carolina Department of Health and Environmental Control**
**Bureau of Underground Storage Tank Management**
**Field Data Information Sheet for Ground-Water Sampling**

**Date (mm/dd/yy):** 8-5-99
**Field Personnel:** Danny Rawl
**General Weather Conditions:** CLEAR

**Ambient Air Temperature:** 28 °C

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 980420166 | serial no. | 980420166 |
| pH=4.0 | 4.0 | standard | 1413 |
| pH=7.0 | 7.0 | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** CRAWFORD COUNTRY STORE
**Site ID#:** 12335 **Monitoring Well #:** MW-10
**Water Supply Well** **Public:** _____ **Private:** _____

Monitoring Well Diameter (D): 2" feet

Conversion factor (C): 3.14 X $(D/2)^2$ for a 2 inch well C = 0.163
DEPTH TO F.P. 17.05 for a 4 inch well C = 0.652
* Free Product Thickness: 1.01 feet
Depth to Ground Water (DGW) 18.06 feet
Total Well Depth (TWD) 24.8 feet
Length of water column (LWC = TWD - DGW) _____ feet

1 casing volume (CV = LWC X C) = _____ X _____ = _____ gals
3 casing volume 3 X CV = _____ gals (standard purge volume)

Total Volume of Water Purged Before Sampling — gals.
* If free product is present over 1/8 inch, sampling will not be required.

| | Initial | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post sampling | |
|---|---|---|---|---|---|---|---|---|
| Cumulative Volume Purged (gallons) | | | | | | | | |
| Time (military) | | | | | | | | |
| pH (s.u.) | NO | SAMPLE | | | | | | |
| Specific Cond. (umhos/cm) | | | | | | | | |
| Water Temperature (°C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: DEPTH TO F.P. 17.05/1.01' F.P. IN WELL

**South Carolina Department of Health and Environmental Control**
**Bureau of Underground Storage Tank Management**
**Field Data Information Sheet for Ground-Water Sampling**

**Date (mm/dd/yy):** 8.5 -99
**Field Personnel:** Danny Rawl
**General Weather Conditions:** CLEAR

**Ambient Air Temperature:** 26 °C

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 980420166 | serial no. | 980420166 |
| pH=4.0 | 4.0 | standard | 1413 |
| pH=7.0 | 7.0 | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** CRAWFORD
**Site ID#:** 12335 **Monitoring Well #:** MW-2
**Water Supply Well** **Public:** _____ **Private:** _____

Monitoring Well Diameter (D): 2" feet

Conversion factor (C): 3.14 X $(D/2)^2$ for a 2 inch well C = 0.163
Depth to F.P. 16.90 for a 4 inch well C = 0.652
* Free Product Thickness: 2.29 feet
Depth to Ground Water (DGW) 19.19 feet
Total Well Depth (TWD) 25.3 feet
Length of water column (LWC = TWD - DGW) _____ feet

1 casing volume (CV = LWC X C) = _____ X _____ = _____ gals
3 casing volume 3 X CV = _____ gals (standard purge volume)

Total Volume of Water Purged Before Sampling — gals.
* If free product is present over 1/8 inch, sampling will not be required.

| | Initial | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post sampling | |
|---|---|---|---|---|---|---|---|---|
| Cumulative Volume Purged (gallons) | | | | | | | | |
| Time (military) | | | | | | | | |
| pH (s.u.) | NO | SAMPLE | | | | | | |
| Specific Cond. (umhos/cm) | | | | | | | | |
| Water Temperature (°C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: DEPTH TO F.P. 16.90' / 2.29' F.P. IN WELL

**South Carolina Department of Health and Environmental Control**
**Bureau of Underground Storage Tank Management**
**Field Data Information Sheet for Ground-Water Sampling**

**Date (mm/dd/yy):** 8-5-99
**Field Personnel:** Danny Rawl
**General Weather Conditions:** CLEAR

**Ambient Air Temperature:** 27 °C

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 980420166 | serial no. | 980420166 |
| pH=4.0 | 4.0 | standard | 1413 |
| pH=7.0 | 7.0 | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** CRAWFORD COUNTRY STORE
**Site ID#:** 12335 **Monitoring Well #:** OMW-1
**Water Supply Well** **Public:** _____ **Private:** _____

Monitoring Well Diameter (D): 2" feet

Conversion factor (C): 3.14 X $(D/2)^2$ for a 2 inch well C = 0.163
for a 4 inch well C = 0.652

DEPTH TO F.P. 16.90
* Free Product Thickness: 1.05 feet
Depth to Ground Water (DGW) 17.95 feet
Total Well Depth (TWD) 22.00 feet
Length of water column (LWC = TWD - DGW) _____ feet

1 casing volume (CV = LWC X C) = _____ X _____ = _____ gals
3 casing volume 3 X CV = _____ gals (standard purge volume)

Total Volume of Water Purged Before Sampling — gals.
* If free product is present over 1/8 inch, sampling will not be required.

| | Initial | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post sampling | |
|---|---|---|---|---|---|---|---|---|
| Cumulative Volume Purged (gallons) | | | | | | | | |
| Time (military) | | | | | | | | |
| pH (s.u.) | | N/D | SAMPLE | | | | | |
| Specific Cond. (umhos/cm) | | | | | | | | |
| Water Temperature (°C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: DEPTH TO F.P. 16.9' / 1.05' F.P. IN WELL

**South Carolina Department of Health and Environmental Control**
**Bureau of Underground Storage Tank Management**
**Field Data Information Sheet for Ground-Water Sampling**

**Date (mm/dd/yy):** 8 - 5 -99
**Field Personnel:** Danny Rawl
**General Weather Conditions:** CLEAR

**Ambient Air Temperature:** 27 °C

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 980420166 | serial no. | 980420166 |
| pH=4.0 | 4.0 | standard | 1413 |
| pH=7.0 | 7.0 | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** CRAWFORD COUNTRY STORE
**Site ID#:** 12335 **Monitoring Well #:** MW-3
**Water Supply Well** **Public:** _____ **Private:** _____

Monitoring Well Diameter (D): 2" feet

Conversion factor (C): 3.14 X $(D/2)^2$ for a 2 inch well C = 0.163
DEPTH TO F.P. 16.95 for a 4 inch well C = 0.652
* Free Product Thickness: 1.01 feet
Depth to Ground Water (DGW) 17.96 feet
Total Well Depth (TWD) 25.3 feet
Length of water column (LWC = TWD - DGW) _____ feet

1 casing volume (CV = LWC X C) = _____ X _____ = _____ gals
3 casing volume 3 X CV = _____ gals (standard purge volume)

Total Volume of Water Purged Before Sampling — gals.
* If free product is present over 1/8 inch, sampling will not be required.

| | Initial | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post sampling | |
|---|---|---|---|---|---|---|---|---|
| Cumulative Volume Purged (gallons) | | | | | | | | |
| Time (military) | | | | | | | | |
| pH (s.u.) | NA | SAMPLE | | | | | | |
| Specific Cond. (umhos/cm) | | | | | | | | |
| Water Temperature (°C) | | | | | | | | |
| Dissolved Oxygen | | | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: DEPTH TO F.P. 16.95'/ 1.01' F.P. IN WELL

**South Carolina Department of Health and Environmental Control**
**Bureau of Underground Storage Tank Management**
**Field Data Information Sheet for Ground-Water Sampling**

1015

**Date (mm/dd/yy):** 8-5 -99
**Field Personnel:** Danny Rawl
**General Weather Conditions:** CLEAR

**Ambient Air Temperature:** 27 °C

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 980420166 | serial no. | 980420166 |
| pH=4.0 | 4.0 | standard | 1413 |
| pH=7.0 | 7.0 | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** CRAWFORD COUNTRY STORE
**Site ID#:** 12335 **Monitoring Well #:** MW-9
**Water Supply Well** **Public:** _____ **Private:** _____

Monitoring Well Diameter (D): 2 in feet

Conversion factor (C): 3.14 X $(D/2)^2$ for a 2 inch well C = 0.163
for a 4 inch well C = 0.652

* Free Product Thickness: _____ feet
Depth to Ground Water (DGW) 16.74 feet
Total Well Depth (TWD) 25. feet
Length of water column (LWC = TWD - DGW) 8.26 feet

1 casing volume (CV = LWC X C) = 8.26 X .163 = 1.35 gals
3 casing volume 3 X CV = 4.05 gals (standard purge volume)

Total Volume of Water Purged Before Sampling 1.85 gals.
* If free product is present over 1/8 inch, sampling will not be required.

| | Initial | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post sampling | |
|---|---|---|---|---|---|---|---|---|
| Cumulative Volume Purged (gallons) | 25 | 1.6 | 1.85 | | | | | |
| Time (military) | 1008 | 1010 | 1012 | | | | | |
| pH (s.u.) | 4.96 | 5.25 | 4.87 | | | | | |
| Specific Cond. (umhos/cm) | 63.3 | 58.5 | 57.2 | | | | | |
| Water Temperature (°C) | 23 | 23 | 22 | | | | | |
| Dissolved Oxygen | 0.68 | 1.14 | 1.47 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: SLIGHT ODOR, LIGHT SHEEN, TURBID / DRY @ 1.85 GAL

1100

**South Carolina Department of Health and Environmental Control**
**Bureau of Underground Storage Tank Management**
**Field Data Information Sheet for Ground-Water Sampling**

**Date (mm/dd/yy):** 8 - 5 -99
**Field Personnel:** Danny Rawl
**General Weather Conditions:** CLEAR

**Ambient Air Temperature:** 27 °C

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 980420166 | serial no. | 980420166 |
| pH=4.0 | 4.0 | standard | 1413 |
| pH=7.0 | 7.0 | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** CRAWFORD COUNTRY STORE
**Site ID#:** 12335 **Monitoring Well #:** DMW-17
**Water Supply Well** **Public:** _____ **Private:** _____

Monitoring Well Diameter (D): 2" feet

Conversion factor (C): 3.14 X $(D/2)^2$ for a 2 inch well C = 0.163
for a 4 inch well C = 0.652

* Free Product Thickness: _____ feet
Depth to Ground Water (DGW) 16.16 feet
Total Well Depth (TWD) 75.74 feet
Length of water column (LWC = TWD - DGW) 59.58 feet

1 casing volume (CV = LWC X C) = 59.58 X .163 = 9.7 gals
3 casing volume 3 X CV = 29.10 gals (standard purge volume)

Total Volume of Water Purged Before Sampling 29.35 gals.
* If free product is present over 1/8 inch, sampling will not be required.

| | Initial | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post sampling | |
|---|---|---|---|---|---|---|---|---|
| Cumulative Volume Purged (gallons) | .25 | 9.95 | 19.65 | 29.35 | | | | |
| Time (military) | 1001 | 1026 | 1043 | 1059 | | | | |
| pH (s.u.) | 6.08 | ~~5.86~~ 5.86 | 6.11 | 5.57 | | | | |
| Specific Cond. (umhos/cm) | 101.0 | 103.9 | 90.3 | 90.8 | | | | |
| Water Temperature (°C) | 22 | 24 | 21.0 | 20.5 | | | | |
| Dissolved Oxygen | 1.69 | 3.69 | 3.46 | 2.76 | | | | |
| PID readings, if required | | | | | | | | |

Remarks: _____

1105

**South Carolina Department of Health and Environmental Control**
**Bureau of Underground Storage Tank Management**
**Field Data Information Sheet for Ground-Water Sampling**

**Date (mm/dd/yy):** 8-5-99
**Field Personnel:** Danny Rawl
**General Weather Conditions:** CLEAR

**Ambient Air Temperature:** 27 °C

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 980420166 | serial no. | 980420166 |
| pH=4.0 | 4.0 | standard | 1413 |
| pH=7.0 | 7.0 | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** CRAWFORD COUNTRY STORE
**Site ID#:** 12335 **Monitoring Well #:** MW-6
**Water Supply Well** **Public:** _____ **Private:** _____

Monitoring Well Diameter (D): 2" feet

Conversion factor (C): 3.14 X $(D/2)^2$ for a 2 inch well C = 0.163
for a 4 inch well C = 0.652

* Free Product Thickness: _____ feet
Depth to Ground Water (DGW) 15.44 feet
Total Well Depth (TWD) 25.77 feet
Length of water column (LWC = TWD - DGW) 10.33 feet

1 casing volume (CV = LWC X C) = 10.33 X .163 = 1.68 gals
3 casing volume 3 X CV = 5.04 gals (standard purge volume)

Total Volume of Water Purged Before Sampling 5.29 gals.
* If free product is present over 1/8 inch, sampling will not be required.

| | Initial | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post sampling | |
|---|---|---|---|---|---|---|---|---|
| Cumulative Volume Purged (gallons) | .25 | 1.93 | 3.61 | 5.29 | | | | |
| Time (military) | 1044 | 1050 | 1058 | 1103 | | | | |
| pH (s.u.) | 4.65 | 4.22 | 4.57 | 4.63 | | | | |
| Specific Cond. (umhos/cm) | 98.5 | 102.6 | 96.5 | 96.0 | | | | |
| Water Temperature (°C) | 22.0 | 23 | 22.0 | 22.0 | | | | |
| Dissolved Oxygen | 1.16 | 1.13 | 1.40 | 2.35 | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Turb:2

**South Carolina Department of Health and Environmental Control**
**Bureau of Underground Storage Tank Management**
**Field Data Information Sheet for Ground-Water Sampling** 1120

**Date (mm/dd/yy):** 8-5-99
**Field Personnel:** Danny Rawl
**General Weather Conditions:** Clear

**Ambient Air Temperature:** 29 °C

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 980420166 | serial no. | 980420166 |
| pH=4.0 | 4.0 | standard | 1413 |
| pH=7.0 | 7.0 | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** CRAWFORD COUNTRY STORE
**Site ID#:** 12335 **Monitoring Well #:** MW-5
**Water Supply Well** **Public:** _____ **Private:** _____

Monitoring Well Diameter (D): 2" feet

Conversion factor (C): 3.14 X $(D/2)^2$ for a 2 inch well C = 0.163
for a 4 inch well C = 0.652

* Free Product Thickness: _____ feet
Depth to Ground Water (DGW) 15.95 feet
Total Well Depth (TWD) 24.95 feet
Length of water column (LWC = TWD - DGW) 9 feet

1 casing volume (CV = LWC X C) = 9.0 X .163 = 1.47 gals
3 casing volume 3 X CV = 4.41 gals (standard purge volume)

Total Volume of Water Purged Before Sampling 2.47 gals.
* If free product is present over 1/8 inch, sampling will not be required.

| | Initial | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post sampling | |
|---|---|---|---|---|---|---|---|---|
| Cumulative Volume Purged (gallons) | .25 | 1.72 | 2.47 | | | | | |
| Time (military) | 1112 | 1114 | 1116 | | | | | |
| pH (s.u.) | 4.41 | 4.43 | 4.45 | | | | | |
| Specific Cond. (umhos/cm) | 112.4 | 110.2 | 111.8 | | | | | |
| Water Temperature (°C) | 23 | 22 | 21 | | | | | |
| Dissolved Oxygen | 1.55 | .95 | 1.65 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: TURBID, DRY @ 2.47 GAL.

**South Carolina Department of Health and Environmental Control**
**Bureau of Underground Storage Tank Management**
**Field Data Information Sheet for Ground-Water Sampling** 1135

**Date (mm/dd/yy):** 8-5-99
**Field Personnel:** Danny Rawl
**General Weather Conditions:** CLEAR

**Ambient Air Temperature:** 28 °C

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 980420166 | serial no. | 980420166 |
| pH=4.0 | 4.0 | standard | 1413 |
| pH=7.0 | 7.0 | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** CRAWFORD COUNTRY STORE
**Site ID#:** 12335 **Monitoring Well #:** MW-8
**Water Supply Well** **Public:** _____ **Private:** _____

Monitoring Well Diameter (D): 2" feet

Conversion factor (C): 3.14 X $(D/2)^2$ for a 2 inch well C = 0.163
for a 4 inch well C = 0.652

* Free Product Thickness: _____ feet
Depth to Ground Water (DGW) 14.59 feet
Total Well Depth (TWD) 25.40 feet
Length of water column (LWC = TWD - DGW) 10.81 feet

1 casing volume (CV = LWC X C) = 10.81 X .163 = 1.76 gals
3 casing volume 3 X CV = 5.28 gals (standard purge volume)

Total Volume of Water Purged Before Sampling 2.76 gals.
* If free product is present over 1/8 inch, sampling will not be required.

| | Initial | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post sampling | |
|---|---|---|---|---|---|---|---|---|
| Cumulative Volume Purged (gallons) | .25 | 2.01 | 2.76 | | | | | |
| Time (military) | 1131 | 1132 | 1133 | | | | | |
| pH (s.u.) | 4.68 | 4.53 | 4.9 | | | | | |
| Specific Cond. (umhos/cm) | 77.1 | 46.8 | 45.4 | | | | | |
| Water Temperature (°C) | 23 | 21 | 21 | | | | | |
| Dissolved Oxygen | 1.03 | 1.85 | 3.07 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: TURBID

**South Carolina Department of Health and Environmental Control**
**Bureau of Underground Storage Tank Management**
**Field Data Information Sheet for Ground-Water Sampling** 1150

**Date (mm/dd/yy):** 8-5 -99
**Field Personnel:** Danny Rawl
**General Weather Conditions:** CLEAR

**Ambient Air Temperature:** 28 °C

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 980420166 | serial no. | 980420166 |
| pH=4.0 | 4.0 | standard | 1413 |
| pH=7.0 | 7.0 | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** CRAWFORD COUNTRY STORE
**Site ID#:** 12335 **Monitoring Well #:** MW-7
**Water Supply Well** **Public:** _____ **Private:** _____

Monitoring Well Diameter (D): 2" feet

Conversion factor (C): 3.14 X $(D/2)^2$ for a 2 inch well C = 0.163
for a 4 inch well C = 0.652

* Free Product Thickness: _____ feet
Depth to Ground Water (DGW) 15.41 feet
Total Well Depth (TWD) 24.8 feet
Length of water column (LWC = TWD - DGW) 9.39 feet

1 casing volume (CV = LWC X C) = 9.39 X .163 = 1.53 gals
3 casing volume 3 X CV = 4.59 gals (standard purge volume)

Total Volume of Water Purged Before Sampling 2.03 gals.
* If free product is present over 1/8 inch, sampling will not be required.

| | Initial | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post sampling | |
|---|---|---|---|---|---|---|---|---|
| Cumulative Volume Purged (gallons) | .25 | 1.78 | 2.03 | | | | | |
| Time (military) | 1142 | 1145 | 1147 | | | | | |
| pH (s.u.) | 4.9 | 4.59 | 4.58 | | | | | |
| Specific Cond. (umhos/cm) | 98.9 | 96.8 | 92.8 | | | | | |
| Water Temperature (°C) | 22 | 19 | 19 | | | | | |
| Dissolved Oxygen | 1.97 | 2.21 | 2.74 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: TURBID, DRY @ 2.03

**South Carolina Department of Health and Environmental Control**
**Bureau of Underground Storage Tank Management**
**Field Data Information Sheet for Ground-Water Sampling**

1215

**Date (mm/dd/yy):** 8-5-99
**Field Personnel:** Danny Rawl
**General Weather Conditions:** CLEAR

**Ambient Air Temperature:** 29 °C

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 980420166 | serial no. | 980420166 |
| pH=4.0 | 4.0 | standard | 1413 |
| pH=7.0 | 7.0 | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** CRAWFORD COUNTRY STORE
**Site ID#:** 12335 **Monitoring Well #:** MW-12
**Water Supply Well** **Public:** _____ **Private:** _____

Monitoring Well Diameter (D): 2" feet

Conversion factor (C): 3.14 X $(D/2)^2$ for a 2 inch well C = 0.163
for a 4 inch well C = 0.652

* Free Product Thickness: _____ feet
Depth to Ground Water (DGW) 17.33 feet
Total Well Depth (TWD) 24.55 feet
Length of water column (LWC = TWD - DGW) 7.22 feet

1 casing volume (CV = LWC X C) = 7.22 X .163 = 1.18 gals
3 casing volume 3 X CV = 3.54 gals (standard purge volume)

Total Volume of Water Purged Before Sampling 3.79 gals.
* If free product is present over 1/8 inch, sampling will not be required.

| | Initial | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post sampling | |
|---|---|---|---|---|---|---|---|---|
| Cumulative Volume Purged (gallons) | .25 | 1.43 | 2.61 | 3.79 | | | | |
| Time (military) | 1207 | 1209 | 1211 | 1213 | | | | |
| pH (s.u.) | 4.72 | 4.55 | 4.55 | 4.64 | | | | |
| Specific Cond. (umhos/cm) | 134.6 | 131.1 | 130.4 | 129.2 | | | | |
| Water Temperature (°C) | 23.0 | 20 | 19.5 | 19 | | | | |
| Dissolved Oxygen | 1.38 | 1.42 | 1.89 | 2.09 | | | | |
| PID readings, if required | | | | | | | | |

Remarks: SLIGHTLY TURBID

1240

1249

**South Carolina Department of Health and Environmental Control**
**Bureau of Underground Storage Tank Management**
**Field Data Information Sheet for Ground-Water Sampling**

**Date (mm/dd/yy):** 8-5-99
**Field Personnel:** Danny Rawl
**General Weather Conditions:** CLEAR

**Ambient Air Temperature:** 29 °C

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 980420166 | serial no. | 980420166 |
| pH=4.0 | 4.0 | standard | 1413 |
| pH=7.0 | 7.0 | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** CRAWFORD COUNTRY STORE
**Site ID#:** 12335 **Monitoring Well #:** MW-14
**Water Supply Well** **Public:** _____ **Private:** _____

Monitoring Well Diameter (D): 2" feet

Conversion factor (C): 3.14 X $(D/2)^2$ for a 2 inch well C = 0.163
for a 4 inch well C = 0.652

* Free Product Thickness: _____ feet
Depth to Ground Water (DGW) 7.96 feet
Total Well Depth (TWD) 24.7 feet
Length of water column (LWC = TWD - DGW) 16.74 feet

1 casing volume (CV = LWC X C) = 16.74 X .163 = 2.73 gals
3 casing volume 3 X CV = 8.19 gals (standard purge volume)

Total Volume of Water Purged Before Sampling 8.44 gals.
* If free product is present over 1/8 inch, sampling will not be required.

| | Initial | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post sampling | |
|---|---|---|---|---|---|---|---|---|
| Cumulative Volume Purged (gallons) | .25 | 2.98 | 5.71 | 8.44 | | | | |
| Time (military) | 1230 | 1231 | 1232 | 1236 | | | | |
| pH (s.u.) | 5.41 | 5.14 | 5.05 | 4.98 | | | | |
| Specific Cond. (umhos/cm) | 259 | 277 | 278 | 312 | | | | |
| Water Temperature (°C) | 19 | 19 | 18 | 19 | | | | |
| Dissolved Oxygen | 1.02 | 1.14 | .73 | .80 | | | | |
| PID readings, if required | | | | | | | | |

Remarks: _____

**South Carolina Department of Health and Environmental Control**
**Bureau of Underground Storage Tank Management**
**Field Data Information Sheet for Ground-Water Sampling** 1300

**Date (mm/dd/yy):** 8-5-99
**Field Personnel:** Danny Rawl
**General Weather Conditions:** CLEAR

**Ambient Air Temperature:** 29 °C

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 980420166 | serial no. | 980420166 |
| pH=4.0 | 4.0 | standard | 1413 |
| pH=7.0 | 7.0 | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** CRAWFORD COUNTRY STORE
**Site ID#:** 12335 **Monitoring Well #:** MW-13
**Water Supply Well** **Public:** _____ **Private:** _____

Monitoring Well Diameter (D): 2" feet

Conversion factor (C): 3.14 X $(D/2)^2$ for a 2 inch well C = 0.163
for a 4 inch well C = 0.652

* Free Product Thickness: _____ feet
Depth to Ground Water (DGW) 21.26 feet
Total Well Depth (TWD) 25.85 feet
Length of water column (LWC = TWD - DGW) 4.59 feet

1 casing volume (CV = LWC X C) = 4.59 X .163 = .74 gals
3 casing volume 3 X CV = 2.22 gals (standard purge volume)

Total Volume of Water Purged Before Sampling 1.98 gals.
* If free product is present over 1/8 inch, sampling will not be required.

| | Initial | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post sampling | |
|---|---|---|---|---|---|---|---|---|
| Cumulative Volume Purged (gallons) | .25 | .99 | 1.24 | 1.98 | | | | |
| Time (military) | 1254 | 1256 | 1258 | 1259 | | | | |
| pH (s.u.) | 4.35 | 4.19 | 4.21 | 4.23 | | | | |
| Specific Cond. (umhos/cm) | 59.6 | 55.1 | 52.4 | 51.7 | | | | |
| Water Temperature (°C) | 21 | 19 | 19 | 18 | | | | |
| Dissolved Oxygen | 3.1 | 2.52 | 2.28 | 2.32 | | | | |
| PID readings, if required | | | | | | | | |

Remarks: TURBID

**South Carolina Department of Health and Environmental Control**
**Bureau of Underground Storage Tank Management**
**Field Data Information Sheet for Ground-Water Sampling**

1320

**Date (mm/dd/yy):** 8-5-99
**Field Personnel:** Danny Rawl
**General Weather Conditions:** CLEAR

**Ambient Air Temperature:** 29 °C

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 980420166 | serial no. | 980420166 |
| pH=4.0 | 4.0 | standard | 1413 |
| pH=7.0 | 7.0 | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** CRAWFORD COUNTRY STORE
**Site ID#:** 12335 **Monitoring Well #:** MW-11
**Water Supply Well** **Public:** _____ **Private:** _____

Monitoring Well Diameter (D): 2" feet

Conversion factor (C): 3.14 X $(D/2)^2$ for a 2 inch well C = 0.163
for a 4 inch well C = 0.652

* Free Product Thickness: _____ feet
Depth to Ground Water (DGW) 15.60 feet
Total Well Depth (TWD) 25.13 feet
Length of water column (LWC = TWD - DGW) 9.53 feet

1 casing volume (CV = LWC X C) = 9.53 X .163 = 1.55 gals
3 casing volume 3 X CV = 4.65 gals (standard purge volume)

Total Volume of Water Purged Before Sampling 4.9 gals.
* If free product is present over 1/8 inch, sampling will not be required.

| | Initial | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post sampling | |
|---|---|---|---|---|---|---|---|---|
| Cumulative Volume Purged (gallons) | .25 | 1.8 | 3.35 | 4.9 | | | | |
| Time (military) | 1311 | 1312 | 1315 | 1317 | | | | |
| pH (s.u.) | 4.74 | 4.78 | 4.83 | 4.82 | | | | |
| Specific Cond. (umhos/cm) | 44.2 | 41.6 | 38.9 | 42.7 | | | | |
| Water Temperature (°C) | 22 | 21 | 22 | 22 | | | | |
| Dissolved Oxygen | 6.35 | 5.86 | 5.48 | 6.38 | | | | |
| PID readings, if required | | | | | | | | |

Remarks: TURBID

**South Carolina Department of Health and Environmental Control**
**Bureau of Underground Storage Tank Management**
**Field Data Information Sheet for Ground-Water Sampling** 1340

**Date (mm/dd/yy):** 8-5 -99
**Field Personnel:** Danny Rawl
**General Weather Conditions:** CLEAR

**Ambient Air Temperature:** 29 °C

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 980420166 | serial no. | 980420166 |
| pH=4.0 | 4.0 | standard | 1413 |
| pH=7.0 | 7.0 | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** CRAWFORD COUNTRY STORE
**Site ID#:** 12335 **Monitoring Well #:** MW-16
**Water Supply Well** **Public:** _____ **Private:** _____

Monitoring Well Diameter (D): 2" feet

Conversion factor (C): 3.14 X $(D/2)^2$ for a 2 inch well C = 0.163
for a 4 inch well C = 0.652

* Free Product Thickness: _____ feet
Depth to Ground Water (DGW) 11.22 feet
Total Well Depth (TWD) 25.20 feet
Length of water column (LWC = TWD - DGW) 13.98 feet

1 casing volume (CV = LWC X C) = 13.98 X .163 = 2.27 gals
3 casing volume 3 X CV = 6.81 gals (standard purge volume)

Total Volume of Water Purged Before Sampling 7.03 gals.
* If free product is present over 1/8 inch, sampling will not be required.

| | Initial | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post sampling | |
|---|---|---|---|---|---|---|---|---|
| Cumulative Volume Purged (gallons) | .25 | 2.52 | 4.76 | 7.03 | | | | |
| Time (military) | 1329 | 1332 | 1333 | 1335 | | | | |
| pH (s.u.) | 5.01 | 5.02 | 4.98 | 4.94 | | | | |
| Specific Cond. (umhos/cm) | 55.4 | 54.1 | 49.3 | 49, | | | | |
| Water Temperature (°C) | 20 | 20 | 20 | 18 | | | | |
| Dissolved Oxygen | 1.36 | .73 | .59 | .79 | | | | |
| PID readings, if required | | | | | | | | |

Remarks: _____

**South Carolina Department of Health and Environmental Control**
**Bureau of Underground Storage Tank Management**
**Field Data Information Sheet for Ground-Water Sampling** 1400

**Date (mm/dd/yy):** 9-5 -99
**Field Personnel:** Danny Rawl
**General Weather Conditions:** CLEAR

**Ambient Air Temperature:** 29 °C

Quality Assurance

| pH Meter | | Conductivity Meter | |
|---|---|---|---|
| serial no. | 980420166 | serial no. | 980420166 |
| pH=4.0 | 4.0 | standard | 1413 |
| pH=7.0 | 7.0 | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** CRAWFORD COUNTRY STORE
**Site ID#:** 12335 **Monitoring Well #:** MW-15
**Water Supply Well** **Public:** _____ **Private:** _____

Monitoring Well Diameter (D): 2" feet

Conversion factor (C): 3.14 X $(D/2)^2$ for a 2 inch well C = 0.163
for a 4 inch well C = 0.652

* Free Product Thickness: _____ feet
Depth to Ground Water (DGW) 6.28 feet
Total Well Depth (TWD) 24.78 feet
Length of water column (LWC = TWD - DGW) 18.5 feet

1 casing volume (CV = LWC X C) = 2.78 X .163 = 3.0 gals
3 casing volume 3 X CV = 9.0 gals (standard purge volume)

Total Volume of Water Purged Before Sampling 9.25 gals.
* If free product is present over 1/8 inch, sampling will not be required.

| | Initial | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post sampling | |
|---|---|---|---|---|---|---|---|---|
| Cumulative Volume Purged (gallons) | .25 | 3.25 | 6.25 | 9.25 | | | | |
| Time (military) | 1343 | 1348 | 1352 | 1355 | | | | |
| pH (s.u.) | 4.81 | 4.8 | 4.78 | 4.76 | | | | |
| Specific Cond. (umhos/cm) | 89.1 | 90.6 | 86.5 | 86.5 | | | | |
| Water Temperature (°C) | 20 | 19 | 19 | 18 | | | | |
| Dissolved Oxygen | 1.35 | .71 | .86 | .87 | | | | |
| PID readings, if required | | | | | | | | |

Remarks: SLIGHTLY TURBID

TestAmerica
INCORPORATED

SOUTH CAROLINA DIVISION

RECEIVED
AUG 11 1999
DIVISION OF UNDERGROUND
STORAGE TANK MGMT.

# FAX ~~~FAX~~~FAX

Company: SCDHEC

To: Debbie Thomas FAX No: 898-4300

From: Michelle - TA Date: 8/10/99 Time: _____

No. of Pages including this one: 17

Subject: Project # 12335 - Crawford Cty. Store

Comments: OMW-1, MW-2, MW-3, MW-4, MW-5, HRC MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, OMW-17, CLS-WW, + CP-WW

Aug.10. 1999 4:55PM No.2004 P. 1/17

SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

# ANALYTICAL REPORT

TESTAMERICA/HYDROLOGIC, INC 8320

200 RICH LEX DR
LEXINGTON, SC 29072

Project: 12335
Project Name: CRAWFORD CO. STORE
Sampler: DANNT RAWL

Lab Number: 99-A118256
Sample ID: MW-4
Sample Type: Water
Site ID:

Date Collected: 8/ 5/99
Time Collected: 9:20
Date Received: 8/ 7/99
Time Received: 9:00

| Analyte | Result | Units | Report Limit | Quan Limit | Dil Factor | Date | Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| *ORGANIC PARAMETERS* | | | | | | | | | | |
| Benzene | 14200 | ug/l | 500. | 1.0 | 500 | 8/10/99 | 11:28 | T.Johnson | 8021B | 549 |
| Toluene | 34600 | ug/l | 500. | 1.0 | 500 | 8/10/99 | 11:28 | T.Johnson | 8021B | 549 |
| Ethylbenzene | 2750 | ug/l | 500. | 1.0 | 500 | 8/10/99 | 11:28 | T.Johnson | 8021B | 549 |
| Xylenes, total | 15900 | ug/l | 500. | 1.0 | 500 | 8/10/99 | 11:28 | T.Johnson | 8021B | 549 |
| Methyl-t-butylether | 109000 | ug/l | 500. | 1.0 | 500 | 8/10/99 | 11:28 | T.Johnson | 8021B | 549 |
| Naphthalene | ND | ug/l | 2500 | 5.0 | 500 | 8/10/99 | 11:28 | T.Johnson | 8021B | 549 |

ND = Not detected at the report limit.

| Surrogate | % Recovery | Target Range |
|---|---|---|
| BTEX/GRO Surr., a,a,a-trifluorotoluene | 90. | 50. - 150. |

Report Approved By: _____ Report Date: 8/10/99

Theodore J. Duello, Ph.D., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Services
Eric Smith, Assistant Technical Director
Gail A Lage, Technical Services

Laboratory Certification Number: 84009

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SPECIALIZED ASSAYS, INC.

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Nashville, TN 37204-0566
Phone 1-615-726-0177

# ANALYTICAL REPORT

TESTAMERICA/HYDROLOGIC, INC 8320

200 RICH LEX DR
LEXINGTON, SC 29072

Project: 12335
Project Name: CRAWFORD CO. STORE
Sampler: DANNT RAWL

Lab Number: 99-A118260
Sample ID: MW-5
Sample Type: Water
Site ID:

Date Collected: 8/ 5/99
Time Collected: 11:20
Date Received: 8/ 7/99
Time Received: 9:00

| Analyte | Result | Units | Report Limit | Quan Limit | Dil Factor | Date | Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| *ORGANIC PARAMETERS* | | | | | | | | | | |
| Benzene | 6400 | ug/l | 50.0 | 1.0 | 50 | 8/ 9/99 | 21:03 | T.Johnson | 8021B | 549 |
| Toluene | 61600 | ug/l | 500. | 1.0 | 500 | 8/10/99 | 11:55 | T.Johnson | 8021B | 549 |
| Ethylbenzene | 2460 | ug/l | 50.0 | 1.0 | 50 | 8/ 9/99 | 21:03 | T.Johnson | 8021B | 549 |
| Xylenes, total | 12100 | ug/l | 50.0 | 1.0 | 50 | 8/ 9/99 | 21:03 | T.Johnson | 8021B | 549 |
| Methyl-t-butylether | 410. | ug/l | 50.0 | 1.0 | 50 | 8/ 9/99 | 21:03 | T.Johnson | 8021B | 549 |
| Naphthalene | 335. | ug/l | 250. | 5.0 | 50 | 8/ 9/99 | 21:03 | T.Johnson | 8021B | 549 |

ND = Not detected at the report limit.

| Surrogate | % Recovery | Target Range |
|---|---|---|
| BTEX/GRO Surr., a,a,a-trifluorotoluene | 98. | 50. - 150. |

Report Approved By: _____ Report Date: 8/10/99

Theodore J. Duello, Ph.D., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Services
Eric Smith, Assistant Technical Director
Gail A Lage, Technical Services

Laboratory Certification Number: 84009

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# ANALYTICAL REPORT

TESTAMERICA/HYDROLOGIC, INC 8320

200 RICH LEX DR
LEXINGTON, SC 29072

Project: 12335
Project Name: CRAWFORD CO. STORE
Sampler: DANNT RAWL

Lab Number: 99-A118259
Sample ID: MW-6
Sample Type: Water
Site ID:

Date Collected: 8/ 5/99
Time Collected: 11:05
Date Received: 8/ 7/99
Time Received: 9:00

| Analyte | Result | Units | Report Limit | Quan Limit | Dil Factor | Date | Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| *ORGANIC PARAMETERS* | | | | | | | | | | |
| Benzene | 4.1 | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 20:36 | T.Johnson | 8021B | 549 |
| Toluene | 1.1 | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 20:36 | T.Johnson | 8021B | 549 |
| Ethylbenzene | 3.7 | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 20:36 | T.Johnson | 8021B | 549 |
| Xylenes, total | 16.7 | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 20:36 | T.Johnson | 8021B | 549 |
| Methyl-t-butylether | 5.0 | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 20:36 | T.Johnson | 8021B | 549 |
| Naphthalene | ND | ug/l | 5.0 | 5.0 | 1 | 8/ 9/99 | 20:36 | T.Johnson | 8021B | 549 |

ND = Not detected at the report limit.

| Surrogate | % Recovery | Target Range |
|---|---|---|
| BTEX/GRO Surr., a,a,a-trifluorotoluene | 99. | 50. - 150. |

Report Approved By: _____ Report Date: 8/10/99

Theodore J. Duello, Ph.D., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Services
Eric Smith, Assistant Technical Director
Gail A Lage, Technical Services

Laboratory Certification Number: 84009

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# ANALYTICAL REPORT

TESTAMERICA/HYDROLOGIC, INC 8320

200 RICH LEX DR
LEXINGTON, SC 29072

Project: 12335
Project Name: CRAWFORD CO. STORE
Sampler: DANNT RAWL

Lab Number: 99-A118262
Sample ID: MW-7
Sample Type: Water
Site ID:

Date Collected: 8/ 5/99
Time Collected: 11:50
Date Received: 8/ 7/99
Time Received: 9:00

| Analyte | Result | Units | Report Limit | Quan Limit | Dil Factor | Date | Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| *ORGANIC PARAMETERS* | | | | | | | | | | |
| Benzene | ND | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 21:57 | T.Johnson | 8021B | 549 |
| Toluene | ND | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 21:57 | T.Johnson | 8021B | 549 |
| Ethylbenzene | ND | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 21:57 | T.Johnson | 8021B | 549 |
| Xylenes, total | ND | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 21:57 | T.Johnson | 8021B | 549 |
| Methyl-t-butylether | 41.2 | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 21:57 | T.Johnson | 8021B | 549 |
| Naphthalene | ND | ug/l | 5.0 | 5.0 | 1 | 8/ 9/99 | 21:57 | T.Johnson | 8021B | 549 |

ND = Not detected at the report limit.

| Surrogate | % Recovery | Target Range |
|---|---|---|
| BTEX/GRO Surr., a,a,a-trifluorotoluene | 98. | 50. - 150. |

Report Approved By: _____ Report Date: 8/10/99

Theodore J. Duello, Ph.D., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Services
Eric Smith, Assistant Technical Director
Gail A Lage, Technical Services

Laboratory Certification Number: 84009

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# ANALYTICAL REPORT

TESTAMERICA/HYDROLOGIC, INC 8320

200 RICH LEX DR
LEXINGTON, SC 29072

Project: 12335
Project Name: CRAWFORD CO. STORE
Sampler: DANNT RAWL

Lab Number: 99-A118261
Sample ID: MW-8
Sample Type: Water
Site ID:

Date Collected: 8/ 5/99
Time Collected: 11:35
Date Received: 8/ 7/99
Time Received: 9:00

| Analyte | Result | Units | Report Limit | Quan Limit | Dil Factor | Date | Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| *ORGANIC PARAMETERS* | | | | | | | | | | |
| Benzene | ND | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 21:30 | T.Johnson | 8021B | 549 |
| Toluene | ND | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 21:30 | T.Johnson | 8021B | 549 |
| Ethylbenzene | ND | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 21:30 | T.Johnson | 8021B | 549 |
| Xylenes, total | ND | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 21:30 | T.Johnson | 8021B | 549 |
| Methyl-t-butylether | ND | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 21:30 | T.Johnson | 8021B | 549 |
| Naphthalene | ND | ug/l | 5.0 | 5.0 | 1 | 8/ 9/99 | 21:30 | T.Johnson | 8021B | 549 |

ND = Not detected at the report limit.

| Surrogate | % Recovery | Target Range |
|---|---|---|
| BTEX/GRO Surr., a,a,a-trifluorotoluene | 101. | 50. - 150. |

Report Approved By: T J Duello Report Date: 8/10/99

Theodore J. Duello, Ph.D., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Services
Eric Smith, Assistant Technical Director
Gail A Lage, Technical Services

Laboratory Certification Number: 84009

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Nashville, TN 37204-0566
Phone 1-615-726-0177

# ANALYTICAL REPORT

TESTAMERICA/HYDROLOGIC, INC 8320

200 RICH LEX DR
LEXINGTON, SC 29072

Project: 12335
Project Name: CRAWFORD CO. STORE
Sampler: DANNT RAWL

Lab Number: 99-A118257
Sample ID: MW-9
Sample Type: Water
Site ID:

Date Collected: 8/ 5/99
Time Collected: 10:15
Date Received: 8/ 7/99
Time Received: 9:00

| Analyte | Result | Units | Report Limit | Quan Limit | Dil Factor | Date | Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| *ORGANIC PARAMETERS* | | | | | | | | | | |
| Benzene | 110. | ug/l | 100. | 1.0 | 100 | 8/ 9/99 | 19:41 | T.Johnson | 8021B | 549 |
| Toluene | 4280 | ug/l | 100. | 1.0 | 100 | 8/ 9/99 | 19:41 | T.Johnson | 8021B | 549 |
| Ethylbenzene | 2450 | ug/l | 100. | 1.0 | 100 | 8/ 9/99 | 19:41 | T.Johnson | 8021B | 549 |
| Xylenes, total | 17000 | ug/l | 100. | 1.0 | 100 | 8/ 9/99 | 19:41 | T.Johnson | 8021B | 549 |
| Methyl-t-butylether | 150. | ug/l | 100. | 1.0 | 100 | 8/ 9/99 | 19:41 | T.Johnson | 8021B | 549 |
| Naphthalene | ND | ug/l | 500. | 5.0 | 100 | 8/ 9/99 | 19:41 | T.Johnson | 8021B | 549 |

ND = Not detected at the report limit.

| Surrogate | % Recovery | Target Range |
|---|---|---|
| BTEX/GRO Surr., a,a,a-trifluorotoluene | 100. | 50. - 150. |

Report Approved By: _____ Report Date: 8/10/99

Theodore J. Duello, Ph.D., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Services
Eric Smith, Assistant Technical Director
Gail A Lage, Technical Services

Laboratory Certification Number: 84009

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**SPECIALIZED ASSAYS, INC.**

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

# ANALYTICAL REPORT

TESTAMERICA/HYDROLOGIC, INC 8320

200 RICH LEX DR
LEXINGTON, SC 29072

Project: 12335
Project Name: CRAWFORD CO. STORE
Sampler: DANNT RAWL

Lab Number: 99-A118267
Sample ID: MW-11
Sample Type: Water
Site ID:

Date Collected: 8/ 5/99
Time Collected: 13:20
Date Received: 8/ 7/99
Time Received: 9:00

| Analyte | Result | Units | Report Limit | Quan Limit | Dil Factor | Date | Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| *ORGANIC PARAMETERS* | | | | | | | | | | |
| Benzene | ND | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 13:45 | T.Johnson | 8021B | 549 |
| Toluene | ND | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 13:45 | T.Johnson | 8021B | 549 |
| Ethylbenzene | ND | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 13:45 | T.Johnson | 8021B | 549 |
| Xylenes, total | ND | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 13:45 | T.Johnson | 8021B | 549 |
| Methyl-t-butylether | 7.0 | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 13:45 | T.Johnson | 8021B | 549 |
| Naphthalene | ND | ug/l | 5.0 | 5.0 | 1 | 8/10/99 | 13:45 | T.Johnson | 8021B | 549 |

ND = Not detected at the report limit.

| Surrogate | % Recovery | Target Range |
|---|---|---|
| BTEX/GRO Surr., a,a,a-trifluorotoluene | 100. | 50. - 150. |

Report Approved By: _____ Report Date: 8/10/99

Theodore J. Duello, Ph.D., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Services
Eric Smith, Assistant Technical Director
Gail A Lage, Technical Services

Laboratory Certification Number: 84009

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Phone 1-615-726-0177

# ANALYTICAL REPORT

TESTAMERICA/HYDROLOGIC, INC 8320

200 RICH LEX DR
LEXINGTON, SC 29072

Project: 12335
Project Name: CRAWFORD CO. STORE
Sampler: DANNT RAWL

Lab Number: 99-A118264
Sample ID: MW-12
Sample Type: Water
Site ID:

Date Collected: 8/ 5/99
Time Collected: 12:15
Date Received: 8/ 7/99
Time Received: 9:00

| Analyte | Result | Units | Report Limit | Quan Limit | Dil Factor | Date | Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| *ORGANIC PARAMETERS* | | | | | | | | | | |
| Benzene | 5000 | ug/l | 200. | 1.0 | 200 | 8/10/99 | 12:23 | T.Johnson | 8021B | 549 |
| Toluene | 260. | ug/l | 200. | 1.0 | 200 | 8/10/99 | 12:23 | T.Johnson | 8021B | 549 |
| Ethylbenzene | ND | ug/l | 200. | 1.0 | 200 | 8/10/99 | 12:23 | T.Johnson | 8021B | 549 |
| Xylenes, total | 780. | ug/l | 200. | 1.0 | 200 | 8/10/99 | 12:23 | T.Johnson | 8021B | 549 |
| Methyl-t-butylether | 41200 | ug/l | 200. | 1.0 | 200 | 8/10/99 | 12:23 | T.Johnson | 8021B | 549 |
| Naphthalene | ND | ug/l | 1000 | 5.0 | 200 | 8/10/99 | 12:23 | T.Johnson | 8021B | 549 |

ND = Not detected at the report limit.

| Surrogate | % Recovery | Target Range |
|---|---|---|
| BTEX/GRO Surr., a,a,a-trifluorotoluene | 92. | 50. - 150. |

Report Approved By: _____ Report Date: 8/10/99

Theodore J. Duello, Ph.D., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Services
Eric Smith, Assistant Technical Director
Gail A Lage, Technical Services

Laboratory Certification Number: 84009

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Nashville, TN 37204-0566
Phone 1-615-726-0177

# ANALYTICAL REPORT

TESTAMERICA/HYDROLOGIC, INC 8320

200 RICH LEX DR
LEXINGTON, SC 29072

Project: 12335
Project Name: CRAWFORD CO. STORE
Sampler: DANNT RAWL

Lab Number: 99-A118266
Sample ID: MW-13
Sample Type: Water
Site ID:

Date Collected: 8/ 5/99
Time Collected: 13:00
Date Received: 8/ 7/99
Time Received: 9:00

| Analyte | Result | Units | Report Limit | Quan Limit | Dil Factor | Date | Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| *ORGANIC PARAMETERS* | | | | | | | | | | |
| Benzene | 2.6 | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 0:41 | T.Johnson | 8021B | 549 |
| Toluene | ND | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 0:41 | T.Johnson | 8021B | 549 |
| Ethylbenzene | ND | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 0:41 | T.Johnson | 8021B | 549 |
| Xylenes, total | ND | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 0:41 | T.Johnson | 8021B | 549 |
| Methyl-t-butylether | 604. | ug/l | 10.0 | 1.0 | 10 | 8/10/99 | 13:17 | T.Johnson | 8021B | 549 |
| Naphthalene | ND | ug/l | 5.0 | 5.0 | 1 | 8/10/99 | 0:41 | T.Johnson | 8021B | 549 |

ND = Not detected at the report limit.

| Surrogate | % Recovery | Target Range |
|---|---|---|
| MTBE/GRO Surr., a,a,a-trifluorotoluene | 96. | 50. - 150. |

Report Approved By: T J Duello Report Date: 8/10/99

Theodore J. Duello, Ph.D., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Services
Eric Smith, Assistant Technical Director
Gail A Lage, Technical Services

Laboratory Certification Number: 84009

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Phone 1-615-726-0177

# ANALYTICAL REPORT

TESTAMERICA/HYDROLOGIC, INC 8320

200 RICH LEX DR
LEXINGTON, SC 29072

Project: 12335
Project Name: CRAWFORD CO. STORE
Sampler: DANNT RAWL

Lab Number: 99-A118265
Sample ID: MW-14
Sample Type: Water
Site ID:

Date Collected: 8/ 5/99
Time Collected: 12:40
Date Received: 8/ 7/99
Time Received: 9:00

| Analyte | Result | Units | Report Limit | Quan Limit | Dil Factor | Date | Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| *ORGANIC PARAMETERS* | | | | | | | | | | |
| Benzene | 56.7 | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 0:14 | T.Johnson | 8021B | 549 |
| Toluene | 6.7 | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 0:14 | T.Johnson | 8021B | 549 |
| Ethylbenzene | 1.2 | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 0:14 | T.Johnson | 8021B | 549 |
| Xylenes, total | 23.0 | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 0:14 | T.Johnson | 8021B | 549 |
| Methyl-t-butylether | 606. | ug/l | 10.0 | 1.0 | 10 | 8/10/99 | 12:50 | T.Johnson | 8021B | 549 |
| Naphthalene | 5.0 | ug/l | 5.0 | 5.0 | 1 | 8/10/99 | 0:14 | T.Johnson | 8021B | 549 |

ND = Not detected at the report limit.

| Surrogate | % Recovery | Target Range |
|---|---|---|
| BTEX/GRO Surr., a,a,a-trifluorotoluene | 98. | 50. - 150. |

Report Approved By: _____ Report Date: 8/10/99

Theodore J. Duello, Ph.D., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Services
Eric Smith, Assistant Technical Director
Gail A Lage, Technical Services

Laboratory Certification Number: 84009

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Nashville, TN 37204-0566
Phone 1-615-726-0177

# ANALYTICAL REPORT

TESTAMERICA/HYDROLOGIC, INC 8320

200 RICH LEX DR
LEXINGTON, SC 29072

Project: 12335
Project Name: CRAWFORD CO. STORE
Sampler: DANNT RAWL

Lab Number: 99-A118269
Sample ID: MW-15
Sample Type: Water
Site ID:

Date Collected: 8/ 5/99
Time Collected: 14:00
Date Received: 8/ 7/99
Time Received: 9:00

| Analyte | Result | Units | Report Limit | Quan Limit | Dil Factor | Date | Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| *ORGANIC PARAMETERS* | | | | | | | | | | |
| Benzene | 2.6 | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 2:03 | T.Johnson | 8021B | 549 |
| Toluene | 5.9 | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 2:03 | T.Johnson | 8021B | 549 |
| Ethylbenzene | 1.2 | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 2:03 | T.Johnson | 8021B | 549 |
| Xylenes, total | 5.8 | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 2:03 | T.Johnson | 8021B | 549 |
| Methyl-t-butylether | 27.0 | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 2:03 | T.Johnson | 8021B | 549 |
| Naphthalene | ND | ug/l | 5.0 | 5.0 | 1 | 8/10/99 | 2:03 | T.Johnson | 8021B | 549 |

ND = Not detected at the report limit.

| Surrogate | % Recovery | Target Range |
|---|---|---|
| BTEX/GRO Surr., a,a,a-trifluorotoluene | 99. | 50. - 150. |

Report Approved By: _____ Report Date: 8/10/99

Theodore J. Duello, Ph.D., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Services
Eric Smith, Assistant Technical Director
Gail A Lage, Technical Services

Laboratory Certification Number: 84009

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Nashville, TN 37204-0566
Phone 1-615-726-0177

# ANALYTICAL REPORT

TESTAMERICA/HYDROLOGIC, INC 8320

200 RICH LEX DR
LEXINGTON, SC 29072

Project: 12335
Project Name: CRAWFORD CO. STORE
Sampler: DANNT RAWL

Lab Number: 99-A118268
Sample ID: MW-16
Sample Type: Water
Site ID:

Date Collected: 8/ 5/99
Time Collected: 13:40
Date Received: 8/ 7/99
Time Received: 9:00

| Analyte | Result | Units | Report Limit | Quan Limit | Dil Factor | Date | Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| *ORGANIC PARAMETERS* | | | | | | | | | | |
| Benzene | 2.2 | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 1:35 | T.Johnson | 8021B | 549 |
| Toluene | 8.8 | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 1:35 | T.Johnson | 8021B | 549 |
| Ethylbenzene | 1.6 | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 1:35 | T.Johnson | 8021B | 549 |
| Xylenes, total | 7.1 | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 1:35 | T.Johnson | 8021B | 549 |
| Methyl-t-butylether | 3.5 | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 1:35 | T.Johnson | 8021B | 549 |
| Naphthalene | ND | ug/l | 5.0 | 5.0 | 1 | 8/10/99 | 1:35 | T.Johnson | 8021B | 549 |

ND = Not detected at the report limit.

| Surrogate | % Recovery | Target Range |
|---|---|---|
| BTEX/GRO Surr., a,a,a-trifluorotoluene | 101. | 50. - 150. |

Report Approved By: _____ Report Date: 8/10/99

Theodore J. Duello, Ph.D., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Services
Eric Smith, Assistant Technical Director
Gail A Lage, Technical Services

Laboratory Certification Number: 84009

**SPECIALIZED ASSAYS, INC.**

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

# ANALYTICAL REPORT

TESTAMERICA/HYDROLOGIC, INC 8320

200 RICH LEX DR
LEXINGTON, SC 29072

Project: 12335
Project Name: CRAWFORD CO. STORE
Sampler: DANNT RAWL

Lab Number: 99-A118258
Sample ID: DMW-17
Sample Type: Water
Site ID:

Date Collected: 8/ 5/99
Time Collected: 11:00
Date Received: 8/ 7/99
Time Received: 9:00

| Analyte | Result | Units | Report Limit | Quan Limit | Dil Factor | Date | Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| *ORGANIC PARAMETERS* | | | | | | | | | | |
| Benzene | ND | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 20:08 | T.Johnson | 8021B | 549 |
| Toluene | ND | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 20:08 | T.Johnson | 8021B | 549 |
| Ethylbenzene | ND | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 20:08 | T.Johnson | 8021B | 549 |
| Xylenes, total | ND | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 20:08 | T.Johnson | 8021B | 549 |
| Methyl-t-butylether | ND | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 20:08 | T.Johnson | 8021B | 549 |
| Naphthalene | ND | ug/l | 5.0 | 5.0 | 1 | 8/ 9/99 | 20:08 | T.Johnson | 8021B | 549 |

ND = Not detected at the report limit.

| Surrogate | % Recovery | Target Range |
|---|---|---|
| BTEX/GRO Surr., a,a,a-trifluorotoluene | 100. | 50. - 150. |

Report Approved By: _____ Report Date: 8/10/99

Theodore J. Duello, Ph.D., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Services
Eric Smith, Assistant Technical Director
Gail A Lage, Technical Services

Laboratory Certification Number: 84009

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SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
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Nashville, TN 37204-0566
Phone 1-615-726-0177

# ANALYTICAL REPORT

TESTAMERICA/HYDROLOGIC, INC 8320

200 RICH LEX DR
LEXINGTON, SC 29072

Project: 12335
Project Name: CRAWFORD CO. STORE
Sampler: DANNT RAWL

Lab Number: 99-A118263
Sample ID: CLS-WW
Sample Type: Water
Site ID:

Date Collected: 8/ 5/99
Time Collected: 11:55
Date Received: 8/ 7/99
Time Received: 9:00

| Analyte | Result | Units | Report Limit | Quan Limit | Dil Factor | Date | Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| *ORGANIC PARAMETERS* | | | | | | | | | | |
| Benzene | ND | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 23:19 | T.Johnson | 8021B | 549 |
| Toluene | ND | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 23:19 | T.Johnson | 8021B | 549 |
| Ethylbenzene | ND | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 23:19 | T.Johnson | 8021B | 549 |
| Xylenes, total | ND | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 23:19 | T.Johnson | 8021B | 549 |
| Methyl-t-butylether | ND | ug/l | 1.0 | 1.0 | 1 | 8/ 9/99 | 23:19 | T.Johnson | 8021B | 549 |
| Naphthalene | ND | ug/l | 5.0 | 5.0 | 1 | 8/ 9/99 | 23:19 | T.Johnson | 8021B | 549 |

ND = Not detected at the report limit.

| Surrogate | % Recovery | Target Range |
|---|---|---|
| BTEX/GRO Surr., a,a,a-trifluorotoluene | 100. | 50. - 150. |

Report Approved By: _____ Report Date: 8/10/99

Theodore J. Duello, Ph.D., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Services
Eric Smith, Assistant Technical Director
Gail A Lage, Technical Services

Laboratory Certification Number: 84009

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2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

# ANALYTICAL REPORT

TESTAMERICA/HYDROLOGIC, INC 8320

200 RICH LEX DR
LEXINGTON, SC 29072

Project: 12335
Project Name: CRAWFORD CO. STORE
Sampler: DANNT RAWL

Lab Number: 99-A118270
Sample ID: TRIP BLANK
Sample Type: Water
Site ID:

Date Collected: 8/ 3/99
Time Collected:
Date Received: 8/ 7/99
Time Received: 9:00

| Analyte | Result | Units | Report Limit | Quan Limit | Dil Factor | Date | Time | Analyst | Method | Batch |
|---|---|---|---|---|---|---|---|---|---|---|
| *ORGANIC PARAMETERS* | | | | | | | | | | |
| Benzene | ND | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 2:30 | T.Johnson | 8021B | 549 |
| Toluene | ND | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 2:30 | T.Johnson | 8021B | 549 |
| Ethylbenzene | ND | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 2:30 | T.Johnson | 8021B | 549 |
| Xylenes, total | ND | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 2:30 | T.Johnson | 8021B | 549 |
| Methyl-t-butylether | ND | ug/l | 1.0 | 1.0 | 1 | 8/10/99 | 2:30 | T.Johnson | 8021B | 549 |
| Naphthalene | ND | ug/l | 5.0 | 5.0 | 1 | 8/10/99 | 2:30 | T.Johnson | 8021B | 549 |

ND = Not detected at the report limit.

| Surrogate | % Recovery | Target Range |
|---|---|---|
| BTEX/GRO Surr., a,a,a-trifluorotoluene | 100. | 50. - 150. |

Report Approved By: _____ Report Date: 8/10/99

Theodore J. Duello, Ph.D., Lab Director
Michael H. Dunn, M.S., Technical Director
Johnny A. Mitchell, Dir. Technical Services
Eric Smith, Assistant Technical Director
Gail A Lage, Technical Services

Laboratory Certification Number: 84009

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SPECIALIZED ASSAYS, INC.

2960 Foster Creighton Dr.
P.O. Box 40566
Nashville, TN 37204-0566
Phone 1-615-726-0177

# PROJECT QUALITY CONTROL DATA

## Matrix Spike Recovery

| Analyte | units | Orig. Val. | MS Val | Spike Conc | Recovery | Target Range | Q.C. Batch |
|---|---|---|---|---|---|---|---|
| Benzene | ng/l | < 0.0010 | 0.0204 | 0.0200 | 102 | 75. - 125. | 549 |
| Toluene | ng/l | < 0.0010 | 0.0207 | 0.0200 | 104 | 70. - 125. | 549 |
| Ethylbenzene | ng/l | < 0.0010 | 0.0199 | 0.0200 | 100 | 71. - 129. | 549 |
| Xylenes, total | ng/l | < 0.0010 | 0.0389 | 0.0400 | 97 | 71. - 133. | 549 |
| Methyl-t-butylether | ng/l | < 0.0010 | 0.0197 | 0.0200 | 98 | 75. - 125. | 549 |
| Naphthalene | ng/l | < 0.005 | 0.017 | 0.020 | 85 | 68. - 119. | 549 |

## Matrix Spike Duplicate

| Analyte | units | Orig. Val. | Duplicate | RPD | Limit | Q.C. Batch |
|---|---|---|---|---|---|---|
| Benzene | ng/l | 0.0204 | 0.0204 | 0.00 | 20. | 549 |
| Toluene | ng/l | 0.0207 | 0.0207 | 0.00 | 20. | 549 |
| Ethylbenzene | ng/l | 0.0199 | 0.0201 | 1.00 | 20. | 549 |
| Xylenes, total | ng/l | 0.0389 | 0.0400 | 2.79 | 20. | 549 |
| Methyl-t-butylether | ng/l | 0.0197 | 0.0196 | 0.51 | 20. | 549 |
| Naphthalene | ng/l | 0.017 | 0.019 | 11.11 | 19. | 549 |

## Laboratory Control Data

| Analyte | units | Known Val. | Analyzed Val | % Recovery | Target Range | Q.C. Batch |
|---|---|---|---|---|---|---|
| Benzene | ng/l | 0.0200 | 0.0203 | 102 | 70 - 130 | 549 |
| Toluene | ng/l | 0.0200 | 0.0206 | 103 | 70 - 130 | 549 |
| Ethylbenzene | ng/l | 0.0200 | 0.0198 | 99 | 70 - 130 | 549 |
| Xylenes, total | ng/l | 0.0400 | 0.0387 | 97 | 70 - 130 | 549 |
| Methyl-t-butylether | ng/l | 0.0200 | 0.0194 | 97 | 70 - 130 | 549 |
| Naphthalene | ng/l | 0.020 | 0.018 | 90 | 60 - 140 | 549 |

## Blank Data

| Analyte | Blank Value | Units | Q.C. Batch |
|---|---|---|---|
| Benzene | < 0.0010 | ng/l | 549 |
| Toluene | < 0.0010 | ng/l | 549 |
| Ethylbenzene | < 0.0010 | ng/l | 549 |
| Xylenes, total | < 0.0010 | ng/l | 549 |
| Methyl-t-butylether | < 0.0010 | ng/l | 549 |
| Naphthalene | < 0.005 | ng/l | 549 |

COPY 1

*Chain of Custody Record*

# TESTAMERICA INC.




☐ Asheville, NC (A) (828) 254-5169 ☐ Bartlett, IL (C) (630) 289-3100 ☐ Cedar Falls, IA (E) (319) 277-2401 ☐ Charlotte, NC (G) (704) 392-1164 ☐ Dayton, OH (I) (937) 294-6856 ☐ Lumberton, NC (K) (910) 738-6190 ☐ Nashville, TN (M) (615) 726-0177 ☐ Pontiac, MI (O) (248) 332-1940 ☐ Rockford. Il (Q) (815) 874-2171
☐ Atlanta, GA (B) (770) 368-0636 ☐ Brighton, CO (D) (303) 659-0497 ☐ Charleston, SC (F) (843) 849-6550 ☒ Columbia, SC (H) (803) 796-8989 ☐ Davenport. IA (J) (319) 323-7944 ☐ Indianapolis, IN (L) (317) 842-4261 ☐ Macon, GA (N) (912) 757-0811 ☐ Orlando, FL (P) (407) 851-2560 ☐ Watertown, WI (R) (920) 261-1660


| | |
|---|---|
| Client: SCDHEC | Project No.: 12335 |
| Report Address: 8600 Bull St. Cola., S.C. 29201 | Invoice Address: Crawford Country Store ATTN: Bob Faller |
| Attn: D. THOMA | Attn: Reed Corley |
| Phone No.: 898-4350 | Sampled By: Danny Raul |
| Fax No.: 898-4330 | P.O. No: 1831 179280 |
| TURNAROUND TIME ☐ Standard ☒ Rush (surcharges may apply) | Quote No. |
| | State Samples Collected: S.C. |
| | Date Needed: 8/9/99 |

154922 **REQUESTED PARAMETERS**

8020/8260 BTEX, MTBE, Naphs.

Is this work being conducted for regulatory compliance monitoring? Yes___ No___

Is this work being conducted for regulatory enforcement action? Yes___ No___

Which regulations apply:
RCRA____ NPDESWastewater____
UST____ Drinking Water____
Other___ None____

| Sample ID | Date | Time | Comp (C) Grab (G) | Matrix | Lab Use | HCl | # and type of containers: HCl | NaOH | HNO3 | H2SO4 | Other | None | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-4 | 8/5/99 | 0920 | C | GW | 118256 | ✓ | 2 | | | | | | |
| MW-9 | | 1015 | | | 57 | ✓ | 2 | | | | | | |
| DMW-17 | | 1100 | | | 58 | ✓ | 2 | | | | | | |
| MW-6 | | 1105 | | | 59 | ✓ | 2 | | | | | | |
| MW-5 | | 1120 | | | 60 | ✓ | 2 | | | | | | |
| MW-8 | | 1135 | | | 61 | ✓ | 2 | | | | | | |
| MW-7 | | 1150 | | | 62 | ✓ | 2 | | | | | | |
| CLS-WW | | 1155 | | | 63 | ✓ | 2 | | | | | | |
| MW-12 | | 1215 | | | 64 | ✓ | 2 | | | | | | |
| MW-14 | ↓ | 1240 | ↓ | ↓ | 118265 | ✓ | 2 | | | | | | |
| | | | | | | SA | | | | | | | |

Bill Col A
8320
DHEC
48 hr turn

QC Deliverables: ☐ None ☐ Level 2 - Batch QC ☐ Level 3 ☐ Level 4 ☐ Other

1.4°C Init Lab Temp — 4° Rec Lab Temp

COMMENTS: Fax Copy of report to Col A.
FedEx SA⇒ 8126610173 5

| | | | | | |
|---|---|---|---|---|---|
| Relinquished By: Danny Raul | Date 8-5-99 Time 1730 | Received By: Michelle Riddle | Date 8/5/99 Time 1730 | LAB USE ONLY: | |
| Relinquished By: Michelle Riddle | Date 8-6-99 Time 1636 | Received By: | Date Time | | |
| Relinquished By: | Date Time | Received By: | Date Time | Custody Seal: ☐Yes ☐No ☐N/A | |
| Relinquished By: | Date Time | Received By: | Date 8/7/99 Time 0900 | Bottles Supplied by TA: ☐Yes ☐No | |

*Chain of Custody Record*

# TESTAMERICA INC.




☐ Asheville, NC (A) (828) 254-5169 ☐ Bartlett, IL (C) (630) 289-3100 ☐ Cedar Falls, IA (E) (319) 277-2401 ☐ Charlotte, NC (G) (704) 392-1164 ☐ Dayton, OH (I) (937) 294-6856 ☐ Lumberton, NC (K) (910) 738-6190 ☐ Nashville, TN (M) (615) 726-0177 ☐ Pontiac, MI (O) (248) 332-1940 ☐ Rockford. Il (Q) (815) 874-2171
☐ Atlanta, GA (B) (770) 368-0636 ☐ Brighton, CO (D) (303) 659-0497 ☐ Charleston, SC (F) (843) 849-6550 ☒ Columbia, SC (H) (803) 796-8989 ☐ Davenport. IA (J) (319) 323-7944 ☐ Indianapolis, IN (L) (317) 842-4261 ☐ Macon, GA (N) (912) 757-0811 ☐ Orlando, FL (P) (407) 851-2560 ☐ Watertown, WI (R) (920) 261-1660


Client: SCDHEC
Report Address: 8100 Bull St
Cola, S.C. 29201
Attn: D. Thomas
Phone No.: 898-4350
Fax No.: 898-4330

Project No.: 12335
Invoice Address: Crawford Country Store
Attn: Bob Falker
Attn: Reed Corley
Sampled By: Danny Rawl
P.O. No: 183T 179220
Quote No.
State Samples Collected: S.C.
Date Needed: 8/9/99

TURNAROUND TIME
☐ Standard
☒ Rush (surcharges may apply)

**REQUESTED PARAMETERS**

8020/8260 BTEX+MTBE+Naph.

Is this work being conducted for regulatory compliance monitoring? Yes___ No___

Is this work being conducted for regulatory enforcement action? Yes___ No___

Which regulations apply:
RCRA___ NPDESWastewater___
UST___ Drinking Water___
Other___ None___

| Sample ID | Date | Time | Comp (C) Grab (G) | Matrix | Lab Use | HCl | # and type of containers: HCl | NaOH | $HNO_3$ | $H_2SO_4$ | Other | None | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-13 | 8/5/99 | 1300 | G | GW | 118266 | — | 2 | | | | | | |
| MW-11 | ↓ | 1320 | ↓ | ↓ | 67 | ✓ | 2 | | | | | | Bull Col A. |
| MW-16 | | 1340 | | | 68 | ✓ | 3 | | | | | | 8320 |
| MW-15 | ↓ | 1400 | ↓ | ↓ | 69 | ✓ | 2 | | | | | | |
| | | | | | | | | | | | | | |
| Trip Blank | 8/3/99 | — | | | 118270 | | 1 | | | | | | DHEC 48 hr. turn |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

QC Deliverables: ☐ None ☐ Level 2 - Batch QC ☐ Level 3 ☐ Level 4 ☐ Other

SH

Init Lab Temp: 4°C
Rec Lab Temp: 4°

COMMENTS: Fax copy of report to Col A. FedEx SA ⇒ 812661101735

| Relinquished By | Date | Time | Received By | Date | Time |
|---|---|---|---|---|---|
| Danny Rawl | 8-5-99 | 1730 | Michelle Riddle | 8/5/99 | 1730 |
| Michelle Riddle | 8/6/99 | 1630 | Received By: | Date | Time |
| Relinquished By: | Date | Time | Received By: | Date | Time |
| Relinquished By: | Date | Time | Received By: | 8/7/99 | 0900 |

LAB USE ONLY:
Custody Seal: ☐ Yes ☐ No ☐ N/A
Bottles Supplied by TA: ☐ Yes ☐ No

D H E C
PROMOTE PROTECT PROSPER
South Carolina Department of Health and Environmental Control

BUREAU OF
BUSINESS MANAGEMENT
DIVISION OF PROCUREMENT SERVICES
2600 Bull Street
Columbia, SC 29201-1708
Telephone (803) 898-3501 Fax (803) 898-3505

BID MUST BE SUBMITTED ON THIS FORM TO BE ACCEPTED

| SEALED BID INVITATION | BID NUMBER: SB-9570-12/02/99-TC (Number Must Be Shown On Front Of Envelope) | DATE ISSUED: 10/20/99 PAGE 1 OF 123 |
|---|---|---|

SEALED BIDS WILL BE RECEIVED UNTIL:

TIME: 2:30 pm DATE: 12/02/99
(Local Time)

AND THEN PUBLICLY OPENED

Mail To:

S.C. Department of Health & Environmental Control
Division of Procurement Services
2600 Bull Street
Columbia, South Carolina 29201-1708
ATTENTION: BID CLERK
BID#: SB-9570-12/02/99-TC

DIRECT INQUIRIES TO:
Tripp Clark, (803) 898-3501

REASON FOR NO BID

VENDOR:

**This Section Must Be Completed By Vendor:**

_____
Vendor Name

_____
Mailing Address

_____
City State Zip Code

Area Code: Telephone Number _____

Toll Free Number _____

Federal I.D. Or Social Security Number: _____

Bid Security Is Attached When Required In
The Amount of: $_____

I certify that this bid is made without prior understanding, agreement or connection with any corporation, firm or person submitting a bid for the same materials, supplies or equipment and is in all respects fair and without collusion or fraud. I agree to abide by all conditions of this bid and certify that I am authorized to sign this bid for the bidder. In compliance with the invitation and subject to all conditions thereof, the above signed offers and agrees, if this bid is accepted within 60 days from date of opening, to furnish any or all items/services quoted at the prices set forth.

_____ _____ ___/___/___
Authorized Signature (Manual) Authorized Signature (Typed) Title Date Signed

COMMODITY: To perform corrective action of a petroleum release from a regulated underground storage tank site at Crawfords Country Store (UST Permit #12335), 5870 Hwy. 28 N., Abbeville, South Carolina

METHOD OF BID AWARD: Award will be made by total to the lowest responsive and responsible bidder.

VERIFIED MW SCANNED

UST DOCKET 69 Tech

**SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL**
**BID NUMBER: SB-9570-12/02/99-TC**

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**PURPOSE and SCOPE OF WORK**

The Division of Underground Storage Tank (UST) Management of the South Carolina Department of Health and Environmental Control (DHEC) is seeking services to perform corrective action of a petroleum release from a regulated underground storage tank site in accordance with defined remediation goals. The objective is to remove free product AND/OR reduce the levels of chemicals of concern (CoC) in the ground water and subsurface soil to or below defined site specific target levels (SSTLs). All bidders must be South Carolina Certified Class I Site Rehabilitation Contractors. The scope of work defined in this bid invitation is to be implemented at Crawfords Country Store (UST Permit #12335), 5870 Hwy. 28 N., Abbeville, South Carolina for the release reported on December 3, 1991.

**SPECIAL CONDITIONS**

1. CONTRACT PERIOD: The contract will be effective from date of award until the corrective action is complete as described in this contract.

2. This contract is for corrective action at only one (1) site in South Carolina. Compensation from the SUPERB Account is not considered a state contract for purposes of procurement or subject to state bid requirements in accordance with Section 44-2-130(D) of the SUPERB Act.

3. AWARD: Award will be made to a South Carolina Certified UST Site Rehabilitation Contractor based on the total cost of corrective action to SSTLs and removal or abandonment of assessment and rehabilitation items. The proposed implementation schedule to achieve the remediation goals, the removal of all equipment and abandonment of wells, (including pre-existing wells), trenches, etc. installed by the contractor, and the proposed remediation technology(ies) or method(s) must protect public health and the environment and be eligible for permitting by DHEC. The total cost, methods, and estimated time to complete the contract must also be advantageous to the State of South Carolina.

4. REASONABLE BID: DHEC reserves the right to reject any and all bids that appear to be above the customary and reasonable cost for the same scope of work in a similar geologic setting.

5. Contractor must agree to make positive efforts to use women and minority owned businesses and individuals.

6. AMENDMENTS: All amendments to this solicitation will be in writing from the DHEC Procurement Officer indicated on page one of this solicitation. DHEC will not be legally bound by any amendment or interpretation that is not in writing.

7. QUESTIONS: Questions or requests for information must be submitted in writing and received by 5:00 P.M.,November 9, 1999. After this date, no further questions will be addressed. A written response will be mailed to all requestors of the bid package. The questions may be faxed to Tripp Clark, fax number (803) 898-3505.

8. **NOTE . . . THE ONLY OFFICIAL CONTACT PERSON AT DHEC DURING THE BIDDING AND AWARDING PROCESS IS THE PROCUREMENT OFFICER INDICATED ON PAGE ONE OF THIS SOLICITATION. BIDDING CONTRACTORS ARE NOT TO CONTACT DHEC PERSONNEL LOCATED OUTSIDE THE BUREAU OF BUSINESS MANAGEMENT.**

9. The contractor will be required to treat the area where the petroleum chemicals of concern are above site-specific target levels (see figure #2). Verification that interim corrective action goals have been met will be based upon ground-water quality samples collected from monitoring wells OMW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, DMW-17, and water wells CLS-WW, and CP-WW. Verification that final corrective goals have been met will be based upon ground-water quality samples collected from all existing monitoring wells (including water wells CLS-WW and CP-WW), and additional verification wells and verification soil borings to be installed at locations designated by SCDHEC (see specification #10 for more detail).

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
BID NUMBER: SB-9570-12/02/99-TC

10. REPORTS: Deliver the reports to: SCDHEC, Division of UST Management, ATTN: **H. Reed Corley**, 2600 Bull Street, Columbia, SC 29201. A minimum of two (2) copies of each plan and two (2) copies of each report must be delivered to the above address. Based on permitting and other requirements, an engineering report, UIC permits, air modeling forms or NPDES Permits may be required. Please contact the Department for the exact number of copies of each document to be submitted.

11. INVOICING: Invoices will be submitted to: SCDHEC, Division of UST Management, ATTN: Financial Section, 2600 Bull Street, Columbia, SC 29201, using the Department's Corrective Action (CA) Bid Invoice form. The initial invoice must be received at the above address within four months of CAP approval or funds will be uncommitted as required by the Section 44-2-40(B) of the SUPERB Act. If funds are uncommitted the submitted invoice will be held until funding is available. Payment to the contractor will be a pay for performance system as follows:

A. Payment of forty percent (40%) of the total bid price will be made within 90 days of operation of the remediation system or implementation of corrective action as described in the approved corrective action plan (CAP), subject to the limitations of Section 44-2-40 of the SUPERB Act. The implementation should be documented in the first corrective action monitoring report.

B. Payment of thirty-five percent (35%) of the total bid price will be made based on removal of free product to .01 foot as verified in monitoring wells OMW-1, MW-2, MW-3, and MW-10 and achieving interim CoC mass reduction goals at the site as verified in monitoring wells OMW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, DMW-17, and water wells CLS-WW, and CP-WW. Payment will be made for interim goals of 25, 50, and 75 percent reduction of <u>total</u> CoC mass by the implementation of corrective action. **NOTE: Payment cannot be based on laboratory analyses for any well that has been used for injection unless that well has returned to ambient conditions.** The CoC mass requiring reduction is as follows:

CoC mass in parts per billion (mg/l) based on 08/05/99, sampling: (CoC may increase or decrease in the future)

| Well | Benzene | Toluene | Ethylbenzene | Xylenes | MTBE | Naphthalene | Total Mass |
|---|---|---|---|---|---|---|---|
| OMW-1** | 226,000 | 301,000 | 280,000 | 278,000 | 5,110,000 | 2,000 | 6,197,000 |
| MW-2** | 226,000 | 301,000 | 280,000 | 278,000 | 5,110,000 | 2,000 | 6,197,000 |
| MW-3** | 226,000 | 301,000 | 280,000 | 278,000 | 5,110,000 | 2,000 | 6,197,000 |
| MW-4 | 14,200 | 34,600 | 2,750 | 15,900 | 109,000 | <5 | 176,455 |
| MW-5 | 6,400 | 61,600 | 2,460 | 12,100 | 410 | 335 | 83,305 |
| MW-7 | <1 | <1 | <1 | <1 | 41 | <1 | 46 |
| MW-8 | <1 | <1 | <1 | <1 | <1 | <1 | 6 |
| MW-9 | 110 | 4,280 | 2,450 | 17,000 | 150 | <500 | 24,490 |
| MW-10** | 226,000 | 301,000 | 280,000 | 278,000 | 5,110,000 | 2,000 | 6,197,000 |
| MW-11 | <1 | <1 | <1 | <1 | 7 | <5 | 16 |

## SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
## BID NUMBER: SB-9570-12/02/99-TC

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| MW-12 | 5,000 | 260 | <200 | <200 | 41,200 | <1000 | 47,860 |
| MW-13 | 3 | <1 | <1 | <1 | 604 | <5 | 615 |
| MW-14 | 57 | 7 | 1 | 23 | 606 | 5 | 699 |
| MW-15 | 3 | 6 | 1 | 6 | 27 | <5 | 48 |
| DMW-17 | <1 | <1 | <1 | <1 | <1 | <1 | 6 |
| CLS-WW | <1 | <1 | <1 | <1 | <1 | <1 | 6 |
| CP-WW+ | 81 | 1 | <1 | 10 | 35 | <5 | 133 |
| Initial Mass* | 929,859 | 1,304,760 | 1,127,869 | 1,157,245 | 20,592,083 | 9,869 | 25,121,685 |
| SSTL Mass | 61 | 7,280 | 5,109 | 70,245 | 473 | 209 | 83,377 |
| Initial Mass above SSTL | 929,798 | 1,297,480 | 1,122,760 | 1,087,000 | 20,591,610 | 9,660 | 25,038,308 |

* CoC mass may change due to seasonal fluctuations in the groundwater.

** Contains free phase product (OMW-1 {1.05 ft.}, MW-2 {2.29 ft.}, MW-3 {1.01 ft.}, and MW-10 {1.01 ft.}) initial mass based on maximum solubility limits

\+ Sample collected December 1997

(1) 25 percent total mass reduction will be achieved when free product has been removed to .01 foot from OMW-1, MW-2, MW-3, and MW-10, and one-quarter of the initial BTEX, MTBE, and Naphthalene mass from monitoring wells OMW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, DMW-17, and water wells CLS-WW, and CP-WW is removed compared to the SSTLs. The following formula will be used to calculate the percent total mass reduction: total mass above SSTLs from initial sampling less total mass above SSTLs from subsequent sampling divided by total mass above SSTLs from initial sampling. Payment of 10 percent (10%) of the total bid price will be made upon verification (see Specifications item 10 for the method of verification) of at least one-quarter of the total CoC mass above SSTLs is removed.

(2) 50 percent total mass reduction will be achieved when one-half of the initial BTEX, MTBE, and Naphthalene mass from monitoring wells OMW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, DMW-17, and water wells CLS-WW, and CP-WW is removed as compared to the SSTLs. The formula outlined in item 11. B. (1) will be used. Payment of 10 percent (10%) of the total bid price will be made upon verification (see Specifications item 10 for the method of verification) of at least one-half of the total CoC mass above SSTLs is removed.

(3) 75 percent total mass reduction will be achieved when three-quarters of the initial BTEX, MTBE, and Naphthalene mass from monitoring wells OMW-1, MW-2, MW-3, MW-4, MW-5, MW-7, MW-8, MW-9, MW-10, MW-11, MW-12, MW-13, MW-14, MW-15, DMW-17, and water wells CLS-WW, and CP-WW is removed as compared to the SSTLs. The formula outlined in item 11 B (1) will be used. Payment of 15 percent (15%) of the total bid price will be made upon verification (see Specifications item 10 for the method of verification) of at least three-quarters of the total CoC mass above SSTLs is removed.

C. **The final 25 percent (25%) of the total bid price will be paid upon: 1) verification that the thickness of free product does not exceed .01 foot and the levels of CoC do not exceed the site-specific target levels (SSTLs) defined in item 11.C. at any point in the area of concern (see figure #2). Verification that the SSTLs have been met will be based upon ground-water quality samples collected from all existing monitoring wells, additional verification wells, and soil quality samples from verification soil borings to be installed at locations designated by DHEC (see specification #10 for more detail); and 2) all remediation and assessment items installed by the contractor (e.g., wells [including preexisting wells], trenches, etc.) are removed from the site or properly abandoned.** The SSTLs are as follows:

Site Specific Target Levels (SSTLs) in parts per billion (mg/l)

| Well | Benzene | Toluene | Ethylbenzene | Xylenes | MTBE | Naphthalene |
|---|---|---|---|---|---|---|
| OMW-1 | 5 | 1,000 | 700 | 10,000 | 40 | 25 |
| MW-2 | 5 | 1,000 | 700 | 10,000 | 40 | 25 |
| MW-3 | 5 | 1,000 | 700 | 10,000 | 40 | 25 |
| MW-4 | 5 | 1,000 | 700 | 10,000 | 40 | <5** |
| MW-5 | 5 | 1,000 | 700 | 10,000 | 40 | 25 |
| MW-7 | <1** | <1** | <1** | <1** | <1** | <1** |
| MW-8 | <1** | <1** | <1** | <1** | <1** | <1** |
| MW-9 | 5 | 1,000 | 700 | 10,000 | 40 | 25 |
| MW-10 | 5 | 1,000 | 700 | 10,000 | 40 | 25 |
| MW-11 | <1** | <1** | <1** | <1** | 7* | <5** |
| MW-12 | 5 | 260* | <200** | <200** | 40 | 25 |
| MW-13 | 3* | <1** | <1** | <1** | 40 | <5** |
| MW-14 | 5 | 7* | 1* | 23* | 40 | 5* |
| MW-15 | 3* | 6* | 1* | 6* | 27* | <5** |
| DMW-17 | <1** | <1** | <1** | <1** | <1** | <1** |
| CLS-WW | <1** | <1** | <1** | <1** | <1** | <1** |
| CP-WW | 5 | <1** | <1** | 10* | 35* | <5** |
| Total | 61 | 7,280 | 5,109 | 70,245 | 473 | 209 |

* Laboratory analysis is less than calculated SSTLs; therefore, SSTL mass is set equal to laboratory mass.

** Laboratory analysis is below detection limits; therefore, SSTL mass is set equal to detection limits.

Soil CoC mass is parts per billion (ug/kg) based on 11/10/97, sampling: (CoC mass may increase or decrease in the future)

| Soil Boring | Benzene | Toluene | Ethylbenzene | Xylenes | Naphthalene |
|---|---|---|---|---|---|
| SB-1 | 26 | 19 | <5 | 18 | 7 |

## SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
## BID NUMBER: SB-9570-12/02/99-TC

| | | | | | |
|---|---|---|---|---|---|
| SB-4 | 4,170 | 119,000 | 43,700 | 262,000 | 7,500 |
| SB-5 | 401 | 1,940 | 372 | 2,120 | 551 |
| SB-7 | 172 | 145 | 62 | 374 | 204 |

Soil Site Specific Target Levels (SSTLs) in parts per billion (ug/kg):

| Soil Boring | Benzene | Toluene | Ethylbenzene | Xylenes | Naphthalene |
|---|---|---|---|---|---|
| SB-1 | 5 | 19* | <5** | 18* | 6* |
| SB-4 | 5 | 1,622 | 1,260 | 42,470 | 210 |
| SB-5 | 5 | 1,622 | 373* | 2,120* | 210 |
| SB-7 | 5 | 145* | 62* | 374* | 204* |

* Laboratory analysis is less than calculated SSTLs; therefore, SSTL mass is set equal to laboratory mass.

** Laboratory analysis is below detection limits; therefore, SSTL masss is set equal to detection limits.

1. NOTIFICATION FOR FAILURE TO PERFORM: If the contractor fails to meet any specification of corrective action as outlined in this document, DHEC will notify the contractor by certified letter of the deficiency (ies). If the contractor does not correct the deficiency(ies) within 30 days, the contractor will be in breach of contract and the bid award may be voided by DHEC. DHEC will notify the contractor by certified letter that the bid award is void and any invoices are payable upon review and approval of DHEC. If the contractor corrects the deficiency(ies) within 30 days, the bid award will continue. Please note contractor-owned items used on-site for the contract that are destroyed by acts of nature, improper maintenance or handling, theft or vandalism will not be replaced or reimbursed by the SUPERB fund. The accepted bid will be final and will not be increased or cancelled for any reason (e.g., unanticipated iron fouling of a system, wells clogging because of biological activity or sediments, increased subcontractor costs, loss of utilities, modification to the system to meet the remediation goals, etc.) with the exception of unforeseen geologic circumstances or identification of additional CoC from another release.

2. SITE SPECIFIC DETAILS: A brief technical summary of the release, including a location map and specifics of existing wells, is attached. The detailed technical file will be available for review through the Freedom of Information (FOI) Office located on the third floor of the Sims Building, 2600 Bull Street, Columbia, SC. **Review of the detailed technical file is not mandatory; however, bidders are strongly encouraged to review the file to ensure a complete understanding of the contract requirements. The successful bidder will be responsible for all information included in the technical file.** Appointments to view the technical file may be scheduled on weekdays between the hours of 8:30 A.M. to 5:00 P.M. by calling the SCDHEC Freedom of Information Office at (803) 898-3882. Please request file #12335.

3. **The contractor will submit a CAP within 30 days of Statement of Award notification from the Bureau of Business Management in accordance with Specification item 2.** The implementation of the CAP will be initiated immediately upon Departmental approval of the CAP and all associated permit(s), and in accordance with the schedule presented in the bid. A performance bond or irrevocable standby letter of credit, equal to the award price, will be required by DHEC. The issuing institution for an irrevocable standby letter of credit must be an entity that has the authority to issue letters of credit in South Carolina and whose letter-of-credit operations are regulated and examined by a federal or state agency. The original performance bond or irrevocable standby letter of credit will be submitted to the Division of UST Management, Attn: Chris Doll, within 30 days of award. The performance bond or irrevocable standby letter of credit will specify that the SUPERB Account will be the recipient of any forfeiture.

4. **MINIMUM REQUIREMENTS: Corrective action will be considered complete once the levels of CoC in the area of concern (see figure #2) are verified to be at or below the SSTLs listed in item 11.C., and removal or abandonment of all remediation and assessment items installed by the contractor (e.g., wells [including preexisting wells], trenches, etc.). See Specification #10 for the method of verification.** All rehabilitation activities associated with a UST release must be performed by a SCDHEC certified Class I site rehabilitation contractor as required by R. 61-98. All corrective action plans and reports must be sealed by a Professional Engineer or Professional Geologist registered in the State of South Carolina. All engineering reports, drawings and plans must be sealed by a Professional Engineer registered in the State of South Carolina. All laboratory analysis for CoC must be performed by a SC certified laboratory. All monitoring, verification, injection, or recovery wells must be installed and abandoned by a SC certified well driller. All applicable certification, training, permits, applications, and fees associated with well installation; injection, discharge, treatment, or transportation of ground water, air, or soil; construction or operation of a remediation system; and any other action requiring a permit are the responsibility of the contractor. Any required business or occupation license and occupational safety and health training (e.g., OSHA) as defined by the laws and regulations of the United States of America, State of South Carolina, county or city is also the responsibility of the contractor. The terms and conditions of all applicable permits will be met. Any contaminated ground water, soil, or construction material must be properly transported and disposed of, or treated at an approved facility with prior approval from DHEC. Any costs for utilities construction and service (electric, telephone, sewer, etc.) required by the corrective action are the responsibility of the contractor.

**SPECIFICATIONS for CORRECTIVE ACTION**

The successful contractor must meet the following specifications as required by the proposed treatment method(s) or corrective action technology(ies):

1. Submit a CAP bid proposal. The proposal will outline in general terms an approach to achieve the remediation goals (e.g., reduction of each CoC to SSTL). The proposal must outline the following:

   A. A description of the proposed treatment method(s) or technology(ies) for corrective action.

   B. The total cost (in thousands of dollars) to complete site rehabilitation to meet the remediation goals and to remove or abandon all assessment and remediation items installed as part of corrective action.

   C. The estimated amount of time in months to complete site rehabilitation to meet the remediation goals, install verification wells, and remove or abandon all assessment and remediation items installed as part of corrective action.

2. Complete and submit a detailed CAP (three copies) for the release at Crawford's Country Store, 5870 Hwy. 28 N., Abbeville, South Carolina **within 30 days of Statement of Award notification by the Bureau of Business Management. NOTE: *Use of monitoring well(s) for injection purposes is not allowed.*** A condition of the plan may include installation of additional recovery, sparge, compliance, or injection wells. The plan must define all active (pump and treat, sparge, vapor extraction, excavation of impacted soils, bioremediation, etc.) and passive (intrinsic remediation, monitoring, etc.) corrective action method(s) proposed to reduce CoC to SSTLs. It must be shown, by use of scientific models, computations, or discussion, how each CoC will be reduced to the SSTL for each remediation method proposed for the release. Any assumptions used in a model will be listed or shown, as well as, appropriate references. Intrinsic corrective action will require monitoring to verify remediation. General construction details will be included (e.g., install four additional recovery wells, construct a compliance point, install four air injection wells, excavate 3,000 cubic yards of impacted soils, etc.) as well as details of well abandonment and equipment removal. A remediation timetable including abandonment of wells and removal of equipment will be included with the CAP. The Division of UST Management will review the CAP and initiate a public notice period for a maximum of 30 days. The contractor must obtain a copy of the applicable portion of the tax map. This map will depict the location of the facility,

and all impacted properties, and all properties located adjacent to the impacted properties. The names and addresses of the owners of each of these properties will be provided. The contractor may be required to attend or provide input at a public meeting upon request by DHEC. Any CAP amendments and modifications arising from public notice must be submitted within 15 days of notification by DHEC. The CAP and any amendments or modifications must be sealed by a qualified Professional Engineer or Geologist registered in the State of South Carolina. The owner/operator, Frank Crawford, will be consulted and will approve the location of the corrective action system. If permanent, the system must be enclosed in a fenced area or small building. The initial invoice must be received at the above address within four months or funds will be uncommitted as required by the SUPERB Act. If funds are uncommitted this invoice will be held until funding is available.

An initial monitoring report documenting CoC concentrations in all wells and potentiometric conditions prior to start up (including verification of system operation or CAP implementation) must be submitted to the Division of UST Management within 45 days after award. Sampling for the initial monitoring report must occur prior to system startup.

Based on naturally occurring conditions, the dissolved concentration of petroleum chemicals of concern (CoC) will increase or decrease. For the purposes of this contract, the total CoC mass for the wells included in the bid package may reasonably increase up to 150 percent or decrease as much as 50 percent. If the total CoC concentration in all wells listed in Special Condition 11.B. increases more than 150 percent based on this initial sampling or if measurable free product that has not been previously documented in any report is detected during the initial sampling event, the contractor may request in writing that the award be canceled. **If either of these conditions occurs, the contractor will contact the UST project manager within two days of problem identification and will submit written documentation within five days of notification.** The contractor will be reimbursed for one personnel mobilization to collect samples, one sample collection and one analytical fee each monitoring well sampled as outlined in SUPERB Allowable Costs, plus $6,000 for all other costs incurred (e.g., CAP preparation, obtaining performance bond, business license). The contract will be canceled and the performance bond will be returned to the company. If the total CoC concentration in all wells listed in Special Condition 11.B. decreases more than 50 percent based on this initial sampling the DHEC may cancel the award. If the corrective action system is started or treatment is performed, the contractor will be required to complete the contract unless geological conditions change or another release is confirmed. See special condition 12. If the contract is canceled by DHEC, the contractor will be notified by certified letter and an invoice for the above outlined items shall be submitted within 20 days from the date of the certified letter canceling the contract.

3. Complete and submit all applications for permits (injection, NPDES, BAQC modeling form, thermal treatment, construction, etc.; 3 copies) and an engineering report (ER; 4 copies) with the CAP. Any required permit changes or corrections will be submitted within 15 days of notification by DHEC. The ER and any ER amendments and modifications, must be sealed by a Professional Engineer registered in the State of South Carolina. After review of the CAP and all permit applications by DHEC, the Division of UST Management will issue a notice to proceed with CAP implementation.

   Implementation of the corrective action plan before the completion of the public notice process and approval of all permits by DHEC is not authorized. If premature implementation occurs, the Department will not reimburse those costs from the SUPERB Account, and the bid award will be reduced by that amount. If the Department agrees with early implementation to better protect human health in an emergency and provides approval in writing, early implementation without any reduction to the bid amount will be authorized.

4. Implement the CAP within 30 days of receipt of notice to proceed and any required permit to construct. Disruption to the owner/operator's normal business will be kept to a minimum. Upon completion of any required construction, DHEC will inspect the system and issue a permit to operate.

5. Gain access to the adjacent property to sample monitoring wells and to install any corrective action equipment, as required.

6. Initiate system startup within 15 days of receipt of the permit to operate. Remediation as defined in the CAP and ER will begin upon system startup. **If any problem with CAP implementation occurs, the contractor will contact the UST project manager within 24 hours of problem identification and will submit written documentation within five days of notification.** ***Note: The application of corrective action technologies can result in the mobilization and possible increase in the thickness of free phase product or elevated CoC concentrations in the monitoring wells.***

7. Complete and submit a corrective action monitoring report (first quarterly due within 90 days of the date of the permit to operate and quarterly thereafter) 3 copies plus one copy for any DHEC Bureau that issued a permit) on a quarterly basis. The corrective action monitoring reports must include:

   A. A narrative portion that documents current site conditions and system effectiveness in achieving the remediation goals (e.g., free product removal, reducing CoC to the SSTLs) as outlined in the CAP. Any system down time and the associated reason(s) will be included in the report.

   B. Conclusions and recommendations based on the reported data.

   C. Ground-water laboratory analytical data for all monitoring wells in the following format (additional parameters such as dissolved oxygen may be required; do not sample wells containing free product):

Analytical Data (mg/l)

| Monitoring Well | Date | Benzene | Toluene | Ethylbenzene | Xylenes | MTBE | Naphthalene |
|---|---|---|---|---|---|---|---|
| MW-1 | 7/15/97<br>10/15/97 | 145<br>140 | 200<br>190 | 146<br>140 | 1,000<br>900 | 170<br>50 | 47<br>165 |
| MW-2 | 7/15/97<br>10/15/97 | 580<br>480 | 800<br>690 | 300<br>257 | 1,000<br>912 | 60<br>50 | 20<br>19 |

   D. Ground-water potentiometric data for all monitoring wells in the following format:

Ground water Data (feet)

| Monitoring Well | Date | TOC Elevation | TOC to GW | TOC to FP | FP Thickness | GW Elevation |
|---|---|---|---|---|---|---|
| MW-1 | 7/15/97<br>10/15/97 | 98.0<br>98.0 | 17.54<br>17.90 | | | 80.46<br>80.10 |
| MW-2 | 7/15/97<br>10/15/97 | 100.0<br>100.0 | 20.50<br>21.50 | 20.47<br>21.48 | 0.03<br>0.02 | 79.50<br>78.50 |

E. A ground-water elevation contour map of the site based on current ground-water potentiometric data.

F. A CoC map based upon current ground-water laboratory analytical data. The ground-water data should be adjacent to the relevant monitoring well using the following format (additional parameters such as dissolved oxygen may be required):

MW - Number
Benzene (mg/l)
Toluene (mg/l)
Ethylbenzene (mg/l)
Xylenes (mg/l)
MTBE (mg/l)
Naphthalene (mg/l)

G. A copy of the DHEC approval letter and manifests for any contaminated soil and ground-water removed from the site for treatment and/or disposal.

H. Additional data required by permits (e.g., air analyses, wastewater effluent analyses and amounts, etc.). The data should be reported on a form or in a format specified in the permits, and attached to the monitoring report as an addendum.

All rehabilitation activities associated with the UST release must be performed by a SCDHEC Certified Site Rehabilitation Contractor. All air, soil, and ground-water analyses must be performed by a South Carolina certified laboratory. The corrective action monitoring report must be sealed by a Professional Engineer or Geologist registered in the State of South Carolina. All monitoring wells associated with the release will be sampled on a quarterly basis for the first year. Thereafter, the number of wells sampled may be reduced and/or the interval between corrective action monitoring reports may be lengthened upon clear demonstration of CoC reduction, unless restricted by permit requirements. DHEC may require data to be reported on a form or in a specific format. The contractor will be provided with the proper report forms and format prior to system startup. The contractor will be notified of any revisions to the report forms or format 90 days prior to the due date for the corrective action monitoring report.

8. Collect one (1) ground-water sample per monitoring event for all monitoring wells associated with the release. Each well should be purged prior to sampling. Purging is considered complete once the ground-water temperature and pH have stabilized. Sampling logs should note all temperature and pH measurements, as well as the location and type of each sample submitted for laboratory analysis. Each ground-water sample will be collected in accordance with established QA/QC protocol and submitted to a certified laboratory for analysis. The ground-water samples must be analyzed for the following parameters:

| Analyte | Analytical Method* | Reporting Limit (mg/l) |
|---|---|---|
| BTEX | 8260B/5030B | 5 |
| Naphthalene | 8260B/5030B | 5 |
| MTBE | 8260B/5030B | 5 |

*or EPA equivalent method that can achieve the same reporting level

The soil samples must be analyzed for the following parameters:

| Analyte | Analytical Method* | Reporting Limit (mg/kg) |
|---|---|---|
| BTEX | 8260B/5030B | 5 |
| Naphthalene | 8260B/5030B | 5 |

*or EPA equivalent method that can achieve the same reporting level

Additional samples (air, groundwater, effluent, soil) required by permits must be collected in accordance with established QA/QC protocol and submitted to a certified laboratory for analysis. The samples will be analyzed for parameters stipulated in the permits. Sampling and analytical data for each sample (e.g., field sampling logs, chain of custody forms, certificates of analysis, and the lab certification number) will be included in the corrective action monitoring report.

9. Properly dispose of all contaminated soil and ground water generated during the implementation of the CAP and installation of verification wells and soil borings. DHEC must approve the disposal facility selected for treatment and disposal of the free product and contaminated soil and ground water. The owner/operator of the facility is considered the generator for any contaminated soil and ground water. The contractor must document all disposal of free product and contaminated soil and ground water in the corrective action monitoring report.

10. Verification for the removal of free product will be conducted by SCDHEC personnel with an interface probe. If the remediation technology is in-situ (e.g., pump and treat, air sparging, vapor extraction): suspend operation of the system once the remediation goals for all CoC have been maintained for a period of 30 days. Samples are to be taken after one (1) quarter or after all CoC levels have reached equilibrium and again after a second quarter. Along with the parameters listed in Specification #8, the ground-water samples should also be sampled for the following parameters:

| Analyte | Analytical Method* | Reporting Limit (mg/l) |
|---|---|---|
| Dissolved Oxygen | SM4500-O G | 500 |
| Ferrous Iron | SM3500-Fe D | 30 |
| Methane | Kerr Method | 1000 |
| Nitrate | 9056/9210 | 100 |
| Sulfate | 9038/9056 | 1000 |

*or EPA equivalent method that can achieve the same reporting level

If sample results indicate that the remediation goals are not sustained, the contractor must submit a corrective action status report (3 copies) that outlines the deficiency(ies) and offers recommendations for achieving the remediation goals with a revised timetable. Modifying and restarting of the system will be directed by DHEC. The system will operate until all remediation goals are again maintained for a period of 30 days. Operation of the system will then be suspended again and samples taken to verify that remediation goals are sustained. This cycle of activity, including status reports, will be repeated until all CoC levels remain below SSTLs for all wells listed in Special Conditions item 11 C for two (2) consecutive quarters. **Three (3)** verification wells and **three (3)** verification soil borings may then be installed at locations designated by DHEC. Costs for verification well and soil boring installation are considered part of this bid price. Each well and soil boring will be sampled in accordance with Specifications item 8 and the analyses compared to the calculated SSTLs for the CoC at that well and soil boring location. If the laboratory analyses are at or below the SSTLs, corrective action will be considered complete. If any analysis is above the SSTL, the corrective action will not be considered complete, and the activity cycle described above must be repeated until all CoC levels remain below SSTLs for those wells and soil borings listed in Special Conditions item 11 C. Split or duplicate samples may be collected by DHEC **(or its subcontractors)** to verify achievement of remediation goals. **At least two weeks**

**notice will be provided to DHEC prior to mobilizing to the site for sampling to verify attainment of remediation goals.** Costs for transportation and analysis of split or duplicate samples will be paid by DHEC.

or

If the remediation technology is a single event (e. g. excavation of impacted soils, vacuum enhanced recovery): collect sufficient samples as outlined in the CAP to verify the reduction of CoC to the remediation goals. The contractor may be required to install and sample **three (3)** verification wells and **three (3)** verification soil borings at locations designated by DHEC. If the levels of CoC in all samples are at or below SSTLs, corrective action will be considered complete. If the level of any CoC is above the SSTL, additional corrective action will be required. The contractor will submit one (1) corrective action status report to document the reduction of CoC to the remediation goals. Split or duplicate samples will be collected **by DHEC (or its subcontractors)** to verify achievement of remediation goals. **At least two weeks notice will be provided to DHEC prior to mobilizing to the site for sampling to verify attainment of remediation goals.** Costs for transportation and analysis of split or duplicate samples will be paid by DHEC.

11. Disassemble and remove the remediation system and all associated remediation items including utilities from the site within 60 days of notification by DHEC that the remediation goal for the release associated with the UST(s) at the site has been achieved. Disruption to the owner/operator's normal business will be kept to a minimum.

12. Properly abandon all wells (including preexisting wells), borings, trenches, and piping/utility runs installed by the contractor as part of corrective action within 60 days of notification by DHEC that the remediation goal for the release associated with the UST(s) at the site has been achieved. The abandonment will be in accordance with South Carolina Well Standards and Regulations R. 61-71 and accepted industry standards for abandonment of trenches and piping/utility runs. Disruption to the property owner's normal business will be kept to a minimum. The contractor must notify DHEC of the method of well abandonment and final disposal of any free product and contaminated soil or ground water. The contractor will return the site to the condition prior to corrective action (e.g., asphalt paved areas will be repaved with asphalt, concrete areas will be replaced with concrete, grass areas will have soil replaced to the original grade and reseeded or sodded with grass, etc.).

BIDDING SCHEDULE

**The total cost in dollars to treat the area of concern (see figure #2) such that the thickness of free product does not exceed .01 foot and the levels of CoC do not exceed the site-specific target levels (SSTLs) defined in item 11.C. at any point, complete all associated monitoring and post-remediation verification, prepare all plans, reports, and correspondence; obtain and meet all terms and conditions of all required permits and licenses; design, install, monitor, operate, maintain, and when completed, properly abandon or remove all assessment and remediation items installed as part of corrective action; provide evidence of performance bond; and other items outlined in this bid invitation for the Crawford's Country Store, (UST Permit # 12335), 5870 Hwy. 28 N., Abbeville, South Carolina is:**

$ _____

**SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL**
**BID NUMBER: SB-9570-12/02/99-TC**

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**OTHER CRITERIA**

Please respond to the following questions that have been designed to verify your corrective action qualifications:

1. The corrective action method(s) or technology (ies) that will be proposed in the CAP will be (list all active and/or intrinsic methods or technologies for remediation of the aquifer; attach additional pages(s) as required):

   _____

   _____

   _____

   _____

2. The estimated time in months to complete the corrective action from the date of bid award, corrective action goals are met, and all corrective action items are removed from the site or properly abandoned is approximately _____ months. This time assumes all submitted plans and reports will be reviewed by DHEC within 30 days of receipt.

**BID ACCEPTANCE and DELIVERY STATEMENT**

In compliance with the bid solicitation and subject to all conditions thereof, the contractor offers and agrees, if this bid is accepted within _____ days from date of bid opening, to furnish any or all items/services quoted at the prices set forth.

## SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
## BID NUMBER: SB-9570-12/02/99-TC

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# PLEASE READ THE FOLLOWING CAREFULLY PRIOR TO COMPLETING BID

## INSTRUCTIONS TO BIDDERS

DISCUSSIONS AND NEGOTIATIONS: By submission of a bid, bidder agrees that during the period following issuance of this solicitation and prior to notification of intent or award of a contract, the bidder shall not discuss this procurement with any party except members of the DHEC Procurement Division or other parties designated in this solicitation. Bidder shall not discuss or attempt to negotiate with the using area or program any aspects of the procurement without prior approval of the DHEC Procurement Division Buyer responsible for the procurement. Infractions may result in rejection of the violator's bid.

1. Unless otherwise required herein, only one signed copy of the invitation to bid is required.
2. Bids "faxed" directly to the DHEC Procurement Office will not be accepted or considered for award.
3. Bids, amendments thereto or withdrawal request must be received by the time advertised for bid opening. It is the bidder's sole responsibility to insure that these documents are received by the person (or office) at the time indicated in this solicitation document. Any withdrawal request received after the time of the bid opening shall be governed by DHEC Underground Storage Tank Environmental Remediation Procedures.
4. When specifications or descriptive papers are submitted with the bid submission, enter bidder's name thereon.
5. Submit your signed bid on this form. Show the bid number on the envelope as instructed. DHEC assumes no responsibility for unmarked or improperly marked envelopes. All envelopes received showing a bid number are placed directly under locked security until the date and time of opening. Do not include more than one bid invitation per envelope. If directing any other correspondence, address the envelope to the Procurement Officer but do not include the bid number on the envelope since it does not include your bid.
6. Bidders must clearly mark as "CONFIDENTIAL" each part of their bid which they consider to be proprietary information that could be **exempt from disclosure** under Section 30-4-40, Code of Laws of South Carolina 1976 (1986 Cum. Supp.; Freedom of Information Act) If any part is designated as confidential, there must be attached to that part an explanation of how this information fits within one or more categories listed in Section 30-4-40. DHEC reserves the right to determine whether this information should be exempt from disclosure and no legal action may be brought against the State, DHEC or its agents for its determination in this regard.
7. By submission of a bid, **you are guaranteeing** that all goods and services meet the requirements of this solicitation during the contract period.
8. Tie bids will be resolved as outlined in DHEC Underground Storage Tank Environmental Remediation Procedures.
9. **Do not include any taxes** that DHEC may be required to pay in the bid price. Upon submission of a bid by a state agency, the Procurement Officer will compute a 5% sales and use tax to the non-state agency bids when applicable (service and labor excluded) in determining the low bidder. This procedure conforms with the SC Tax Commission Sales and Use Tax Regulation 117-174-.95.
10. **Correction of errors on this bid form:** All prices and notations should be printed in ink or typewritten. Errors should be crossed out corrections entered and initialed by the person signing the bid. Erasures or use of typewriter correction fluid may be cause for rejection. No bid shall be altered or amended after the time specified for the bid opening.
11. **Ambiguous bids** which are uncertain as to terms, delivery, quantity or compliance with this solicitation may be rejected or otherwise disregarded.
12. Any bidder desiring to exercise a grievance may do so under section IV of DHEC Underground Storage Tank Environmental Remediation Procedures. All correspondence should be directed to the Director of Procurement Services, Bureau of Business Management, 2600 Bull Street, Columbia, SC 29201.
13. **Failure to respond** to three consecutive bid notices may result in removal of bidder's name from the mailing list.

## GENERAL PROVISIONS

14. DHEC reserves the right to reject any and all bids, and to cancel this solicitation.
15. **Unit prices will govern** over extended prices unless otherwise stated in this solicitation.
16. **Prohibition of Gratuities:** Amended section 8-13-420 of the 1976 Code of Laws of South Carolina States: "Whoever gives or offers to any public official or public employee any compensation, including a promise of future employment, to influence his action, vote, opinion or judgement as a public official or public employee or such public official solicits or accepts such compensation to influence his action, vote, opinion or judgement shall be subject to the punishment as provided by Section 16-9-210 and Section 16-9-220. The provision of this section shall not apply to political contributions unless such contributions are conditioned upon the performance of specific action of the person accepting such contribution nor shall they prohibit a parent, grand-parent or relative from making a gift to a child, grandchild or other close relative for love and affection except as hereafter provided".
17. **Bidder's Qualification:** Bidders must, upon request of DHEC, furnish satisfactory evidence of their ability to furnish products or services in accordance with the terms and conditions of these specifications. DHEC reserves the right to make the final determination as to the bidder's ability to provide the products or services requested herein.

# SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL
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18. **Bidder's Responsibility:** Each bidder shall fully acquaint himself with conditions relating to the scope and restrictions attending th execution of the work under the conditions of this solicitation. It is expected that this will sometimes require on-site observation. Th failure or omission of a bidder to acquaint himself with existing conditions shall in no way relieve him of any obligation with respect to th bid or to the subsequent contract.
19. **Amendments:** All amendments to and interpretations of this solicitation shall be in writing from the DHEC Procurement Office. Neith DHEC or the Procurement Officer shall be legally bound by any amendment or interpretation that is not in writing.
20. **Award Criteria:** Award shall be as indicated herein to the lowest responsible and responsive bidder whose bid meets the requiremen and criteria set forth in this solicitation. Award may take longer than fourteen days. A copy of the award notice should be posted on th Procurement Bulletin Board located at 2600 Bull Street in the Aycock Building directly across from the Personnel Division and next to th Bureau of Business Management Procurement Services Division.
21. **Rejection:** DHEC reserves the right to reject any bid that contains prices for individual items or services that are unreasonable whe compared to the same or other bids if the rejection is in the best interest of the State.
22. **Competition:** This solicitation is intended to promote competition. If the language, specifications, terms and conditions, or an combination thereof restricts or limits the requirements in this solicitation to a single source, it shall be the responsibility of the intereste bidders to notify the DHEC Procurement Office in writing so as to be received five days prior to the opening date. Notification may b "faxed" to the DHEC Procurement Office, (803) 734-4874. The solicitation may or may not be changed but a review of such notificatio will be made prior to award.
23. **Order of Precedence:** In the event of inconsistency between provisions of this solicitation, the inconsistency shall be resolved by givir precedence in the following order; (A) the bidding schedule, (B) the specifications, (C) general conditions, (D) special provisions c special conditions of the contract whether incorporated by reference or otherwise, and (E)instruction to bidders.

### GENERAL CONDITIONS

24. **Contract Administration:** Questions or problems arising after award of this solicitation/contract shall be directed to the DHE Procurement Office, 2600 Bull Street, Columbia, SC, 29201. Reference the solicitation and contract number.
25. **Default:** In case of default by the contractor, DHEC reserves the right to purchase any or all items in default in the open market, chargir the contractor with any additional costs. The defaulting contractor shall not be considered a responsible bidder until the assessed charg has been satisfied.
26. **Save Harmless:** (This General Condition does not apply to solicitations for service requirements). The successful bidder shall indemni and save harmless the State of South Carolina and DHEC and all its officers, agents and employees from all suits or claims of ar character brought by reason of infringing on any patent, trade mark or copyright. The bidder shall have no liability to DHEC if such pater trade mark or copyright infringement or claim is based upon the bidder's use of material furnished to the bidder by the State.
27. **Publicity Releases:** By submission of a bid, the contractor agrees not to refer to award of this contract in commercial advertising in suc a manner as to state or imply that the products or services provided are endorsed or preferred by DHEC or user.
28. **Tax Credit Availability:** Bidders interested in income tax credit availability by subcontracting with Certified Minority Firms should conta the Office of Minority Business Assistance, 1205 Pendleton Street, Columbia, SC, 29201. (803-734-0562)
29. **Affirmative Action:** The successful bidder will take affirmative action in complying with all Federal and State requirements concernir fair employment and employment of the handicapped, and concerning the treatment of all employees, without regard or discriminatic by reason of race, color, religion, sex, national origin or physical handicap.
30. **Assignment:** Unless otherwise indicated in this solicitation, no contract or its provisions may be assigned, sublet, subcontracted, c transferred without the prior written consent of the DHEC Procurement Office.
31. **Termination:** Any contract resulting from this solicitation may be terminated by DHEC by providing a thirty day advance notice in writir to the successful contractor.
32. **Non-Appropriations:** Any contract entered into by DHEC resulting from this solicitation shall be subject to cancellation without damag or further obligation when funds are not appropriated or otherwise made available to support continuation of performance in a subseque fiscal period or appropriated year.
33. **Convenience:** In the event that this contract is terminated or canceled upon request and for the convenience of DHEC without th required thirty days advance written notification, then DHEC shall negotiate reasonable applicable termination costs.
34. **Cause:** Any contract resulting from this solicitation may be terminated without advance notice by DHEC for cause, default or negligenc on the part of the successful contractor.
35. **S.C. Law Clause:** Upon award of a contract under this bid, the person/partnership, association or corporation to whom the award is mac must comply with the laws of South Carolina which require such person or entity to be authorized and/or licensed to do business with th State. Notwithstanding the fact that applicable statutes may exempt or exclude the successful bidder from requirements that it b authorized and/or licensed to do business in this State. By submission of a bid, the bidder agrees to subject himself to the jurisdiction ar process of the courts of the State of South Carolina as to all matters and disputes arising or to arise under the contract and th performance thereof, including any questions as to the liability for taxes, licenses or fees levied by the State of South Carolina.
36. **Quality of Product:** (This general condition does not apply to solicitations for printing or service requirements.) Unless otherwis indicated in this solicitation, it is understood and agreed that any item offered or shipped as a result of this solicitation shall be new ar in first class condition, that all containers shall be new and suitable for storage or shipment, and that prices include standard commerci

packaging. If items that are other than new (i.e., remanufactured or refurbished) are desired to be bid, the bidder must obtain writte permission to bid such items at least five days in advance of the bid opening date. Written permission must be obtained from the DHE Procurement Office.

37. **Compliance with Federal Requirements:** S.C. State or Federal requirements that are more restrictive shall be followed in bidding awarding and performance of this contract.
38. **Drug-Free Workplace:** Required by Section 44-107-10 (Drug Free Work-Place Act) of the SC Code of Laws, 1976, as amended. B submission of a bid, the bidder certifies that he will comply with all aspects of the Drug-Free Workplace Act and will not engage in th unlawful manufacture, distribution, dispensation, possession or use of a controlled substance in the performance of this contract. Thi certification also applies to any individual or firm employed by the contractor.
39. **Confidentiality Policy:** The successful contractor agrees to abide by DHEC's policy of confidentiality which states in part that a information as to personal facts and circumstances given or made available to employees and/or contractors of DHEC in administratio of programs shall be held confidential and shall not be divulged without the express written consent of the individual(s) to which it pertains
40. **Item Substitution:** No substitution of items will be allowed on any purchase made from the awarded contract without written permissio from the DHEC Procurement Office.
41. **Outside Contractor Program:** If applicable to scope of contract, contracted employees working on DHEC properties are entitled t information about hazardous chemicals present at DHEC; and DHEC's personnel are entitled to information about hazardous chemical brought to the facilities by contractors. In order to assure continued compliance with the Hazard Communication Standards whil contractors are on DHEC property and to control potential compliance obligations under the Superfund Amendments and Re-authorizatio Act, it is DHEC's policy to:
    A. Obtain written assurance that the contractor's employees have been trained to understand the hazards of the chemicals at DHE and how to use appropriate personal protective equipment. All personal protective equipment and training required for th contractor's employees will be provided by the contractor at the contractor's expense. (This includes SC State General Service employees).
    B. Require the contractor to notify the DHEC Bureau of Business Management or the appropriate DHEC unit Director whe introducing hazardous chemicals into DHEC work areas, which may harmfully expose DHEC employees. If the contractor introducing such hazardous chemicals into any DHEC facility or onto DHEC property, the contractor shall provide the DHE Division of Procurement Services or the DHEC unit Director copies of the Material Safety Data Sheets (MSDS) for thos chemicals. The DHEC Division of Procurement Services or the DHEC unit Director should provide appropriate information t the DHEC employees before the contractor(s) enter any DHEC facility with chemicals.
    C. DHEC reserves the right to refuse to allow any contractor to bring any chemical onto DHEC property. DHEC also reserves th right to refuse to allow any contractor to bring certain quantities of chemicals on DHEC property.
42. Any written assurances, MSDS's, or correspondence required must be submitted prior to beginning any aspect of the contract.
43. **Travel:** As applicable, reimbursement to contractors for travel expenses will be made in accordance with regulations established for Sta employee travel and in accordance with guidelines established by DHEC.

## SPECIAL PROVISIONS

44. **FOB Destination:** All deliveries shall be FOB Destination. It is agreed by the parties hereto that delivery by the contractor to the comm carrier does not constitute delivery to the State. Any claim for loss or damage shall be between the contractor and the carrier. Bi received otherwise may be subject to rejection.
45. **Shipping/Delivery Charges:** Unless otherwise indicated in the "Special Conditions", any applicable shipping, delivery, assembly installation charges are to be indicated on the bidding schedule herein.
46. **Specifications:** The specifications listed herein are not to be considered restrictive to one source of supply. However, items offered m be equal in quality and performance. The bidder to include with his bid supporting product data sufficient for DHEC to determine equali and acceptability. DHEC reserves the right to reject any offering in which the items offered are considered unsatisfactory in any manne DHEC will determine if minor deviations from the listed features or performance are acceptable.
47. **Confidentiality:** The Contractor and all contracting employees shall not discuss, disclose, release, divulge or otherwise communicat any confidential information as to personal facts and circumstances observed or overheard while performing work pursuant to this contra The Contractor and all contracting employees, their agents, personal representatives and assigns, shall be fully liable and accountab for any resulting damage or injury to any person, institution or DHEC.

UST
APR 2 9 2011
PROGRAM

**UNDERGROUND STORAGE TANK (UST) OWNER/OPERATOR LEAD INFORMATION SHEET**

## 1. CONTRACTOR OF CHOICE

As the UST Owner/Operator of UST Permit # 12335, I would like to use the contractor or person(s)* listed below and request that they represent me for: (check one)

( ) Initial Groundwater Assessment
( ) Other (please specify)_____
(X) all future assessments scopes. **

Name of Contractor/Person(s): Midlands Environmental Consultants, Inc.

Address: 235-B Dooley Road, Lexington, SC 29073

Telephone Number: (803) 808-2043

Note: Site rehabilitation activities must be performed by a SCDHEC Certified Site Rehabilitation Contractor in accordance with R.61-98.

* indicate if the person listed is your own employee

** if you would like the contractor to perform all future assessment activities at this and/or other facilities that have confirmed releases, please provide a list of all sites on your letterhead and provide the information requested in items 2 and 3 below within the context of the letter.

## 2. FINANCIAL OR FAMILIAL RELATIONSHIP

Does a financial or familial relationship, as defined below, exist between you and the contractor/person that you listed above? _____ Yes _X_ No (please initial) ✓

Financial Relationship: A connection or association through a material interest of sources of income which exceed five percent of annual gross income from a business entity.

Familial Relationship: A connection or association by family or relatives, in which a family member or relative has a material interest. Family or relatives include: father, mother, son, daughter, brother, sister, uncle, aunt, first cousin, nephew, niece, husband, wife, father-in-law, mother-in-law, son-in-law, daughter-in-law, stepfather, stepmother, stepson, stepdaughter, stepbrother, stepsister, half brother, half sister, grandparent, grandchild, great grandchild, step grandparent, step great grandparent, step grandchild, step great grandchild, or fiancee.

## 3. PAYMENT

You can pay the contractor and, upon the submittal of the canceled check (or a notarized statement from the contractor), be compensated from the SUPERB Account, or have payment issued directly from us to the contractor.

I request that payment be made to me after I have paid the contractor. _____ Yes _____ No (please initial)
I request that payment be made directly to the contractor. _X_ Yes _____ No (please initial) fc

Note: All costs must receive prior financial approval from the Department regardless of payment option.

Underground Storage Tank Owner/Operator Signature Harold Franklin Corp

Date 4-28-2011

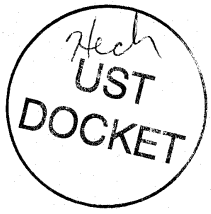
UST
DOCKET
to Tech

Midlands Environmental Consultants, Inc.

June 1, 2011

Mr. Joel P. Padgett, P.G., Hydrologist
Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land & Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Subject: Report of Monitoring Well Installation,
Groundwater Sampling and Chemical Analyses
Crawford's Country Store
5870 S.C. Highway 28 North
Antreville, South Carolina
SCDHEC Site ID# 12335, CA # 41318
MECI Project Number 11-3327
Certified Site Rehabilitation Contractor UCC-0009




Dear Mr. Padgett,

Midlands Environmental Consultants Inc. (MECI) is pleased to submit the attached Report of Monitoring Well Installation, Groundwater Sampling, and Chemical Analyses for the referenced site. This report describes assessment activities conducted at the site in general accordance with South Carolina Department of Health and Environmental Control (SCDHEC) guidelines.

**PROJECT INFORMATION**

The subject site (Crawford's Country Store) is located at 5870 S.C. Highway 28 North in Antreville, Abbeville County, South Carolina (see Figure 1). The subject site is currently an active gasoline service station and convenience store. Previously, the subject site maintained one 2,000 gallon gasoline underground storage tank (UST), one 1,000 gallon kerosene UST, one 560 gallon diesel UST, one 8,000 gallon gasoline UST, and one 10,000 gallon gasoline UST. The former UST's were removed from the ground in October of 1991. The South Carolina Department of Health and Environmental Control (SCDHEC) reported a release of petroleum product in December of 1991 and confirmed the release in March of 1993. Currently, the subject site maintains one 3,000 gallon diesel UST, one 6,000 gallon off-road diesel UST, one 6,000 gallon premium gasoline UST, one regular unleaded gasoline UST, and one 10,000 gallon regular unleaded gasoline UST.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

The above information is based on reports and correspondence obtained from SCDHEC files and MECI field notes.

## FIELD EXPLORATION

Field exploration conducted at the site included:

- construction of six monitoring wells;
- groundwater sampling and chemical analysis;
- water supply well sampling and chemical analysis; and
- a comprehensive survey of subject site (See Figure 2).

The monitoring well locations were selected based on SCDHEC project manager instructions, existing site conditions, and drilling accessibility.

## MONITORING WELL INSTALLATION

On May 11 and 12, 2011, six single cased, watertable bracketing monitoring wells were installed at the subject site. These monitoring wells (MW-18, MW-19, MW-20, MW-21, MW-22, and MW-23) were installed by Geologic Exploration, of Statesville, North Carolina (S.C. Driller Certification: Danny Summers #B 01430). The wells were installed using an ATV-mounted drilling rig employing 7.5-inch outer diameter hollow-stem augers to construct the borehole. These monitoring wells were installed to better define the contaminant plume. The following table presents select well installation details.

| Well Number | Screened Interval (ft) | Total Depth (ft) |
|---|---|---|
| **MW-18** | 7.0-17.0 | 17.0 |
| **MW-19** | 15.0-25.0 | 25.0 |
| **MW-20** | 17.0-27.0 | 27.0 |
| **MW-21** | 15.0-25.0 | 25.0 |
| **MW-22** | 19.0-29.0 | 29.0 |
| **MW-22** | 13.0-23.0 | 23.0 |

The soils encountered during drilling activities consisted of fine to medium grained sandy silts and silts of the Piedmont Province. Representative portions of soil samples were screened with a Photo Ionization Detector (PID) and classified by MECI personnel. Soil samples were collected from drill cuttings produced during the installation of the monitoring wells installed in conjunction with the subject assessment. Test boring records showing soil descriptions and screening result are attached.

Based on PID readings and lack of access to spread soils onsite, soil cuttings were transported to Waste Management/Richland Landfill, Elgin, SC by MECI. A total of 2.36 tons was disposed of in this manner. A disposal manifest for these soils is attached at the end of this report.

Following completion of the wells, the wells were developed by bailing until they were determined to be functioning properly and turbidity was reduced. Test Boring Records showing soil descriptions and monitoring well installation details are attached. The drummed purge water was treated by MECI personnel using a granular activated carbon drum. A total of one (1) drum of purge/development water was disposed of in this manner. A disposal manifest for the drummed purge water is attached at the end of this report.

## SITE SURVEY

Following monitoring well installation, a comprehensive survey was conducted by Construction Support Services of Columbia, SC (Jay S. Joshi PLS# 14811) dated May 24, 2011 (see Figure 2) to locate the vertical and horizontal positions of the monitoring wells and relevant structures.

## MONITORING WELL SAMPLING AND CHEMICAL ANALYSES

On May 16, 2011, MECI personnel collected groundwater samples from twelve (12) monitoring wells at the subject site. Purging was completed by bailing at least three well volumes of water from the well or until pH, conductivity, dissolved oxygen stabilized to within 10%, whichever occurred first. Field measurements of pH, conductivity, dissolved oxygen, dissolved carbon dioxide, and water temperature were obtained before well sampling process. Monitoring wells OMW-1 and MW-3 contained a noticeable petroleum sheen and field measurements were not obtained prior to sampling. Monitoring well MW-13 has a destroyed manhole and bent casing, it was sampled with the aid of a 1"-bailer and field measurements were not obtained. The well cap for MW-8 was not functioning properly, and was replaced. During this sampling event, MW-6 and MW-15 could not be located with the aid of a metal detector. However, during the comprehensive survey at the subject site, MW-15 was located. Table 1 presents the results of the field measurements obtained. The wells were sampled in accordance with SCDHEC guidelines.

Groundwater samples obtained were sent to Pace Analytical Services, Inc. of Huntersville, NC (SCDHEC Laboratory Certification #99006) for analysis.

The following sampling matrix contains well development and requested analyses for each well:

| Monitoring Well | Purge | No Purge | Gauge Only | BTEX, Naphthalene, MTBE (EPA Method 8260-B) | EDB (EPA Method 8011) | 1,2 DCA (EPA Method 8260-B) | 8 Oxygenates (EPA Method 8260-B) | Total Lead (EPA Method 6010) | Sulfate (EPA Method 375.2) | Nitrate (EPA Method 353.2) | Methane (RSK Method) | PAH's (EPA Method 8270) | Ferrous Iron (Field Test) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Analyte Sampled | | | | | | | | | |
| **OMW-1** | | X | | X | X | X | X | X | | | | | |
| **MW-1R** | | | X | | | | | | | | | | |
| **MW-2** | | X | | X | X | X | X | X | | | | | |
| **MW-3** | | X | | X | X | X | X | X | | | | | |
| **MW-4** | | X | | X | X | X | X | X | | | | | |
| **MW-5** | | X | | X | X | X | X | X | | | | | |

| Monitoring Well | Purge | No Purge | Gauge Only | BTEX, Naphthalene, MTBE (EPA Method 8260-B) | EDB (EPA Method 8011) | 1,2 DCA (EPA Method 8260-B) | 8 Oxygenates (EPA Method 8260-B) | Total Lead (EPA Method 6010) | Sulfate (EPA Method 375.2) | Nitrate (EPA Method 335.2) | Methane (RSK Method) | PAH's (EPA Method 8270) | Ferrous Iron (Field Test) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Analyte Sampled | | | | | | | | | |
| **MW-7** | | X | | X | X | X | X | X | | | | | |
| **MW-8** | | X | | X | X | X | X | X | | | | | |
| **MW-9** | | X | | X | X | X | X | X | | | | | |
| **MW-10** | | X | | X | X | X | X | X | | | | | |
| **MW-11** | | X | | X | X | X | X | X | | | | | |
| **MW-12** | | X | | X | X | X | X | X | | | | | |
| **MW-13** | | X | | X | X | X | X | X | | | | | |
| **MW-13R** | | X | | X | X | X | X | X | | | | | |
| **MW-14** | X | | | X | X | X | X | X | | | | | |
| **MW-16** | | X | | X | X | X | X | X | | | | | |
| **DMW-17** | X | | | X | X | X | X | X | | | | | |
| **MW-18** | X | | | X | X | X | X | X | | | | | |
| **MW-19** | X | | | X | X | X | X | X | | | | | |
| **MW-20** | X | | | X | X | X | X | X | | | | | |
| **MW-21** | X | | | X | X | X | X | X | | | | | |
| **MW-22** | X | | | X | X | X | X | X | | | | | |
| **MW-23** | X | | | X | X | X | X | X | | | | | |

**Notes: BTEX = benzene, toluene, ethylbenzene, & total xylenes MTBE=methyl tertiary butyl ether 1,2 DCA = 1,2 dicloroethane**
**PAH = polycyclic aromatic hydrocarbons**

The results of the laboratory analyses are summarized in Table 2, Table 3, and presented in the attached laboratory reports.

## WATER SUPPLY WELL SAMPLING AND CHEMICAL ANALYSIS

On May 16, 2011, MECI personnel sampled two (2) water supply wells (CLS-WW and CP-WW2). Water supply well CLS-WW was sampled for BTEX, Naphthalene, MTBE, 1,2-DCA, 8-oxygenates (EPA Method 8260B), and EDB (EPA Method 8011). During sampling of CP-WW2, MECI personnel was unable to properly purge the water supply well due to power to the pump not being connected. MECI was able to obtain one vial during the sampling of CP-WW2 and had the sample analyzed for BTEX, Naphthalene, MTBE, 1,2-DCA and 8-oxygenates (EPA Method 8260B). The following matrix contains well status, owner(s), and tax map identification numbers:

| Water Supply Well Number | Well Owner | Abbeville County Tax Map Number: | Notes: | Well Status |
|---|---|---|---|---|
| CLS-WW | Harold F. Crawford | 046-00-00-080 | 5870 S.C. Highway 28 N | Active |
| CP-WW | H. Franklin Crawford | 046-00-00-049 | 5846 S.C. Highway 28 N | Inactive |
| CP-WW2 | H. Franklin Crawford | 046-00-00-049 | 5846 S.C. Highway 28 N | Inactive |

## GROUNDWATER ANALYTICAL RESULTS

Groundwater samples obtained from the monitoring wells were analyzed for dissolved phase petroleum constituents. During the subject sampling event, free phase petroleum product was detected in MW-1R at a thickness of 0.11 feet. The analytical results indicate petroleum impact to the surficial aquifer, with highest dissolved concentrations being detected in the area of OMW-1 and MW-13R. Dissolved total BTEX concentrations range from levels below detection limits (BDL) to 79,840 micrograms per liter in OMW-1. Dissolved MTBE concentrations range from below detection limits to 15,600 micrograms per liter in monitoring well MW-13R. Dissolved EDB concentrations range from below detection limits to 9.9 micrograms per liter in OMW-1. The results of the analyses for each monitoring well and specific parameters are listed on Table 2, Table 3, and provided in the attached laboratory reports.

## WATER SUPPLY WELL ANALYTICAL RESULTS

The water supply well samples obtained from CLS-WW and CP-WW2 were analyzed by Pace Analytical, Inc. for petroleum constituents. MECI was unable to obtain samples from CP-WW due to the residence being vacant and power currently not being connected to the water supply well. As discussed above, one vial was obtained from CP-WW2. However, MECI personnel noted that the water supply (CP-WW2) was unable to be properly purged due to no power being connected to the well. Analytical results do not indicate petroleum impact to the water supply wells. The results of the analyses are presented on Table 2, Table 3, and in the attached laboratory reports.

## ASSESSMENT SUMMARY

Groundwater elevation data for the May 16, 2011 gauging event was plotted, and points of equal elevation were interpolated between the monitoring wells. A groundwater contour map of the surficial aquifer was thus prepared and is presented on Figure 3. Current groundwater elevation data reveals a groundwater flow direction to the southeast toward Spur Creek.

During the subject sampling event, free phase petroleum product was detected in MW-1R at a thickness of 0.11 feet. The analytical results indicate petroleum impact to the surficial aquifer, with highest dissolved concentrations being detected in the area of OMW-1 and MW-13R. Dissolved total BTEX concentrations range from levels below detection limits (BDL) to 79,840 micrograms per liter in OMW-1. Dissolved MTBE concentrations range from below detection limits to 15,600 micrograms per liter in MW-13R. Dissolved EDB concentrations range from below detection limits to 9.9 micrograms per liter in OMW-1. Figure 4 depicts graphically the concentrations of Total BTEX (indicator for plume migration) dissolved in the groundwater at the site. Figure 5 depicts graphically the concentrations of MTBE dissolved in the groundwater at the site.

The contaminant plume at the subject site is currently not defined. MECI recommends additional field screening and monitoring wells down gradient of MW-22, to the west across S.C. Highway 28, and to south of MW-21. Additionally, MECI recommends conducting a series of AFVR events on OMW-1, MW-1R, MW-2, MW-3, MW-10, and MW-13R to remove free phase petroleum product and to reduce dissolved CoC concentrations.

## QUALIFICATIONS OF REPORT

The activities and evaluative approaches used in this assessment are consistent with those normally employed in hydrogeological assessment and waste management projects of this type. Our

evaluation of site conditions has been based on our understanding of the site, project information provided to us, and data obtained in our exploration. The general subsurface conditions utilized in our evaluation have been based on interpretation of subsurface data between borings. Content of this report is intended for the sole use by the South Carolina Department of Health and Environmental Control, under mutually agreed upon terms and conditions. If other parties wish to rely on this report please contact MECI prior to their use of this information so that a mutual understanding and agreement of the terms and conditions of our services can be established.

Midlands Environmental appreciates the opportunity to offer our professional environmental services to you on this project. Please feel free to contact us at 803-808-2043 if you have any immediate questions or comments.

Sincerely,
**Midlands Environmental Consultants, Inc.**

Jeff L. Coleman
Senior Scientist

Bryan T. Shane, P.G.
Principal Geologist

Attachments

TABLES

# TABLE 1
# PAGE 1 OF 2
# FIELD PARAMETERS
# MAY 16, 2011 SAMPLING EVENT
# CRAWFORD'S COUNTRY STORE
# ABBEVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 11-3327
# SCDHEC SITE ID NUMBER 12335

| Well Number | Sample Date | Dissolved $CO_2$ (mg/l) | Dissolved Oxygen (mg/l) | Temperature ($^{O}$ Celsius) | pH (Initial) | pH (Final) | Conductivity (Initial) | Conductivity (Final) | Screened Interval (ft BGS) | Depth to Product (ft) | Depth to Water (ft) | Product Thickness | Well-head Elevation | Groundwater Elevation |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 05/16/11 | SHEEN | SHEEN | SHEEN | SHEEN | SHEEN | SHEEN | SHEEN | 7-22 | *** | 18.13 | *** | 97.50 | 79.37 |
| MW-1R | 05/16/11 | PROD | PROD | PROD | PROD | PROD | PROD | PROD | 13-25 | 18.06 | 18.17 | 0.11 | 97.51 | 79.35 |
| MW-2 | 05/16/11 | 200+ | 0.87 | 20.8 | 6.36 | NT | 529 | NT | 10-25 | *** | 18.47 | *** | 97.57 | 79.10 |
| MW-3 | 05/16/11 | SHEEN | SHEEN | SHEEN | SHEEN | SHEEN | SHEEN | SHEEN | 10-25 | *** | 18.18 | *** | 97.72 | 79.54 |
| MW-4 | 05/16/11 | 170 | 1.25 | 20.2 | 5.68 | NT | 137.0 | NT | 10-25 | *** | 18.73 | *** | 97.37 | 78.64 |
| MW-5 | 05/16/11 | 200+ | 1.10 | 18.4 | 5.40 | NT | 128.2 | NT | 10-25 | *** | 17.58 | *** | 97.09 | 79.51 |
| MW-6 | 05/16/11 | NL | NL | NL | NL | NL | NL | NL | 10-25 | *** | NL | *** | NL | NL |
| MW-7 | 05/16/11 | 115 | 0.98 | 16.7 | 5.12 | NT | 94.6 | NT | 10-25 | *** | 16.04 | *** | 97.20 | 81.16 |
| MW-8 | 05/16/11 | 175 | 1.25 | 18.3 | 5.37 | NT | 98.8 | NT | 10-25 | *** | 15.27 | *** | 100.09 | 84.82 |
| MW-9 | 05/16/11 | 85 | 0.77 | 20.2 | 5.32 | NT | 59.5 | NT | 10-25 | *** | 17.37 | *** | 98.30 | 80.93 |
| MW-10 | 05/16/11 | 200+ | 2.39 | 21.1 | 5.94 | NT | 191.6 | NT | 10-25 | *** | 18.45 | *** | 97.40 | 78.95 |
| MW-11 | 05/16/11 | 30 | 1.70 | 19.7 | 5.51 | NT | 38.1 | NT | 10-25 | *** | 16.65 | *** | 94.17 | 77.52 |
| MW-12 | 05/16/11 | 60 | 2.20 | 18.0 | 5.57 | NT | 220.4 | NT | 10-25 | *** | 18.13 | *** | 96.32 | 78.19 |

Notes:

1. mg/l = milligrams per liter.
2. Groundwater depths were measured from the top of the PVC riser pipe.
3. Final groundwater levels measured 05/16/11.
4. NT = Not Tested
5. Elevations based on assumed site datum.
6. Dissolved oxygen, dissolved carbon dioxide, initial pH, initial conductivity, and temperature measurements obtained on 05/16/11.
7. SHEEN = Petroleum Sheen Present
8. NL = Not Located
9. Groundwater elevation for MW-1R corrected for the presence of free phase petroleum product, using a specific gravity of 0.85 for fuel.
10. *** = No Free Phase Petroleum Product Encountered in Well.

# TABLE 1
# PAGE 2 OF 2
# FIELD PARAMETERS
# MAY 16, 2011 SAMPLING EVENT
# CRAWFORD'S COUNTRY STORE
# ABBEVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 11-3327
# SCDHEC SITE ID NUMBER 12335

| Well Number | Sample Date | Dissolved $CO_2$ (mg/l) | Dissolved Oxygen (mg/l) | Temperature ($^{O}$ Celsius) | pH (Initial) | pH (Final) | Conductivity (Initial) | Conductivity (Final) | Screened Interval (ft BGS) | Depth to Product (ft) | Depth to Water (ft) | Product Thickness | Well-head Elevation | Groundwater Elevation |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-13 | 05/16/11 | NT | NT | NT | NT | NT | NT | NT | 10-25 | *** | 22.06 | *** | 98.95 | 76.89 |
| MW-13R | 05/16/11 | 55 | 1.38 | 18.1 | 5.28 | NT | 57.1 | NT | 18-30 | *** | 22.25 | *** | 98.74 | 76.49 |
| MW-14 | 05/16/11 | 80 | 1.46 | 15.0 | 5.38 | 5.28 | 272.3 | 317.5 | 10-25 | *** | 8.77 | *** | 87.15 | 78.38 |
| MW-15 | 05/16/11 | NS | NS | NS | NS | NS | NS | NS | 10-25 | *** | NS | *** | NS | NS |
| MW-16 | 05/16/11 | 50 | 2.15 | 15.5 | 5.46 | NT | 62.6 | NT | 10-25 | *** | 11.74 | *** | 91.51 | 79.77 |
| DMW-17 | 05/16/11 | 55 | 1.42 | 20.5 | 6.22 | 6.27 | 109.7 | 102.8 | 70-75 | *** | 17.81 | *** | 97.83 | 80.02 |
| MW-18 | 05/16/11 | 45 | 4.42 | 16.2 | 5.34 | 5.31 | 61.1 | 59.7 | 8-18 | *** | 9.12 | *** | 88.25 | 79.13 |
| MW-19 | 05/16/11 | 60 | 3.98 | 19.9 | 5.36 | 5.28 | 89.9 | 88.7 | 15-25 | *** | 19.14 | *** | 97.30 | 78.16 |
| MW-20 | 05/16/11 | 40 | 4.34 | 19.0 | 5.78 | 5.59 | 50.5 | 53.4 | 17-27 | *** | 22.19 | *** | 99.24 | 77.05 |
| MW-21 | 05/16/11 | 30 | 3.26 | 18.4 | 5.97 | 5.77 | 46.1 | 36.8 | 15-25 | *** | 21.05 | *** | 96.79 | 75.74 |
| MW-22 | 05/16/11 | 55 | 3.63 | 16.7 | 5.42 | 5.13 | 180.0 | 275.9 | 19-29 | *** | 21.93 | *** | 97.63 | 75.70 |
| MW-23 | 05/16/11 | 140 | 2.12 | 16.7 | 5.07 | 5.08 | 227.1 | 219.9 | 13-23 | *** | 15.02 | *** | 92.38 | 77.36 |

Notes:

1. mg/l = milligrams per liter.
2. Groundwater depths were measured from the top of the PVC riser pipe.
3. Final groundwater levels measured 05/16/11.
4. NT = Not Tested
5. Elevations based on assumed site datum.
6. Dissolved oxygen, dissolved carbon dioxide, initial pH, initial conductivity, and temperature measurements obtained on 05/16/11.
7. SHEEN = Petroleum Sheen Present
8. NL = Not Located
9. Groundwater elevation for MW-1R corrected for the presence of free phase petroleum product, using a specific gravity of 0.85 for fuel.
10. *** = No Free Phase Petroleum Product Encountered in Well.

# TABLE 2
# PAGE 1 OF 2
# GROUNDWATER ANALYTICAL RESULTS
# MAY 16, 2011 SAMPLING EVENT
# CRAWFORD'S COUNTRY STORE
# ABBEVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 11-3327
# SCDHEC ID NUMBER 12335

| Well Number | Sample Date | Benzene (µg/l) | Toluene (µg/l) | Ethylbenzene (µg/l) | Total Xylenes (µg/l) | Total BTEX (µg/l) | MTBE (µg/l) | Naphthalene (µg/l) | 1,2 DCA (µg/l) | EDB (µg/l) | Total Lead (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 05/16/11 | **6,110** | **50,000** | **3,130** | **20,600** | **79,840** | **1,420J** | <2,500 | <2,500 | **9.9** | <5.0 |
| MW-1R | 05/16/11 | **PROD** | **PROD** | **PROD** | **PROD** | **PROD** | **PROD** | **PROD** | **PROD** | **PROD** | **PROD** |
| MW-2 | 05/16/11 | **5,210** | **778** | **1,870** | **1,080** | **8,938** | **3,530** | **387** | <5.0 | <0.021 | <5.0 |
| MW-3 | 05/16/11 | **4,000** | **22,700** | **2,730** | **13,900** | **43,330** | **5,830** | **388** | <125 | **1.6** | <5.0 |
| MW-4 | 05/16/11 | **904** | **544** | **1,430** | **263** | **3,141** | **436** | **549** | <50.0 | **0.46** | **6.3** |
| MW-5 | 05/16/11 | **17.2** | **111** | **222** | **167** | **517.2** | **7.0J** | **26.0** | <12.5 | <0.020 | **5.6** |
| MW-6 | 05/16/11 | NL | NL | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | <5.0 |
| MW-8 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | **0.041** | <5.0 |
| MW-9 | 05/16/11 | **2.6J** | **8.8** | **4.1J** | **101** | **116.5J** | **5.2** | **2.1J** | <5.0 | <0.020 | <5.0 |
| MW-10 | 05/16/11 | **12,300** | **28,200** | **3,830** | **20,600** | **64,930** | **13,100** | **610J** | <1,000 | **2.9** | <5.0 |
| MW-11 | 05/16/11 | **32.9** | <5.0 | <5.0 | <10.0 | **32.9** | **855** | **5.3** | <5.0 | <0.020 | <5.0 |
| MW-12 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | **53.0** | <5.0 | <5.0 | **0.051** | <5.0 |
| MW-13 | 05/16/11 | **4.7J** | <5.0 | <5.0 | <10.0 | **4.7J** | **4,220** | <5.0 | <5.0 | <0.020 | **4.0J** |

Notes:

1. BDL = Below Practical Quantitative Limits
2. µg/l = micrograms per liter
3. mg/l = milligrams per liter
4. MTBE = Methyl-Tertiary-Butyl Ether
5. See Appendix for Laboratory Detection Limits
6. 1,2 DCA = 1,2-Dichloroethane
7. NL = Not Located
8. EDB = Ethylene Dibromide
9. "J" Values used in Total BTEX Calculations
10. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
11. PROD = Free phase petroleum product encountered

# TABLE 2
# PAGE 2 OF 2
# GROUNDWATER ANALYTICAL RESULTS
# MAY 16, 2011 SAMPLING EVENT
# CRAWFORD'S COUNTRY STORE
# ABBEVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 11-3327
# SCDHEC ID NUMBER 12335

| Well Number | Sample Date | Benzene (µg/l) | Toluene (µg/l) | Ethylbenzene (µg/l) | Total Xylenes (µg/l) | Total BTEX (µg/l) | MTBE (µg/l) | Naphthalene (µg/l) | 1,2 DCA (µg/l) | EDB (µg/l) | Total Lead (µg/l) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-13R | 05/16/11 | **530** | <5.0 | <5.0 | **27.5** | **557.5** | **15,600** | **32.9** | **15.3** | <0.019 | <5.0 |
| MW-14 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | **1.9J** | <5.0 | <5.0 | <0.019 | <5.0 |
| MW-15 | 05/16/11 | NS | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-16 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | <5.0 |
| DMW-17 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 | **20.4** |
| MW-18 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 | **4.0J** |
| MW-19 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | **405** | <5.0 | <5.0 | **0.15** | **22.9** |
| MW-20 | 05/16/11 | **4.4J** | <5.0 | <5.0 | <10.0 | **4.4J** | **324** | <5.0 | <5.0 | **0.039** | **14.8** |
| MW-21 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | **153** | <5.0 | <5.0 | **0.051** | **108** |
| MW-22 | 05/16/11 | **269** | <5.0 | <5.0 | **21.6** | **290.6** | **4,010** | **8.7** | **4.4J** | **0.22** | **11.2** |
| MW-23 | 05/16/11 | **2.2J** | <5.0 | <5.0 | <10.0 | **2.2J** | **33.1** | <5.0 | <5.0 | <0.019 | <5.0 |
| CLS-WW | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 | NT |
| CP-WW2 | 05/16/11 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | NT | NT |

Notes:

1. BDL = Below Practical Quantitative Limits
2. µg/l = micrograms per liter
3. mg/l = milligrams per liter
4. MTBE = Methyl-Tertiary-Butyl Ether
5. See Appendix for Laboratory Detection Limits
6. 1,2 DCA = 1,2-Dichloroethane
7. NL = Not Located
8. EDB = Ethylene Dibromide
9. "J" Values used in Total BTEX Calculations
10. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).
11. PROD = Free phase petroleum product encountered

# TABLE 3
# PAGE 1 OF 2
# GROUNDWATER ANALYTICAL RESULTS (OXYGENATES)
# MAY 16, 2011 SAMPLING EVENT
# CRAWFORD'S COUNTRY STORE
# ABBEVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 11-3327
# SCDHEC SITE ID NUMBER 12335

| Well Number | Sample Date | tert-Amyl alcohol (µg/l) | tert-Amyl methyl ether (µg/l) | 3,3-Dimethyl-1-butanol (µg/l) | tert Butyl Alcohol (µg/l) | tert-Butyl Formate (µg/l) | Diisopropyl ether (µg/l) | Ethanol (µg/l) | Ethyl tert-butyl ether (µg/l) |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 5/16/2011 | <50,000 | <5,000 | <50,000 | <50,000 | <25,000 | **7,500** | <100,000 | <5,000 |
| MW-1R | 5/16/2011 | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD |
| MW-2 | 5/16/2011 | **5,700** | **532** | <5,000 | <5,000 | <2,500 | **4,990** | <10,000 | <500 |
| MW-3 | 5/16/2011 | **15,200** | **1,250** | <2,500 | <2,500 | <1,250 | **6,070** | <5,000 | <250 |
| MW-4 | 5/16/2011 | **1,920** | <100 | <1,000 | <1,000 | <500 | **582** | <2,000 | <100 |
| MW-5 | 5/16/2011 | **195J** | <25.0 | <250 | <250 | <125 | **6.2J** | <500 | <25.0 |
| MW-6 | 5/16/2011 | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-8 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-9 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | **7.7** | <200 | <10.0 |
| MW-10 | 5/16/2011 | <20,000 | **2,650** | <20,000 | <20,000 | <10,000 | **15,700** | <40,000 | <2,000 |
| MW-11 | 5/16/2011 | **469** | **46.0** | <100 | **160** | <50.0 | **454** | <200 | <10.0 |
| MW-12 | 5/16/2011 | **549** | <10.0 | <100 | **145** | <50.0 | **9.0** | <200 | <10.0 |
| MW-13 | 5/16/2011 | **82.8J** | **95.6** | <100 | <100 | <50.0 | **808** | <200 | <10.0 |

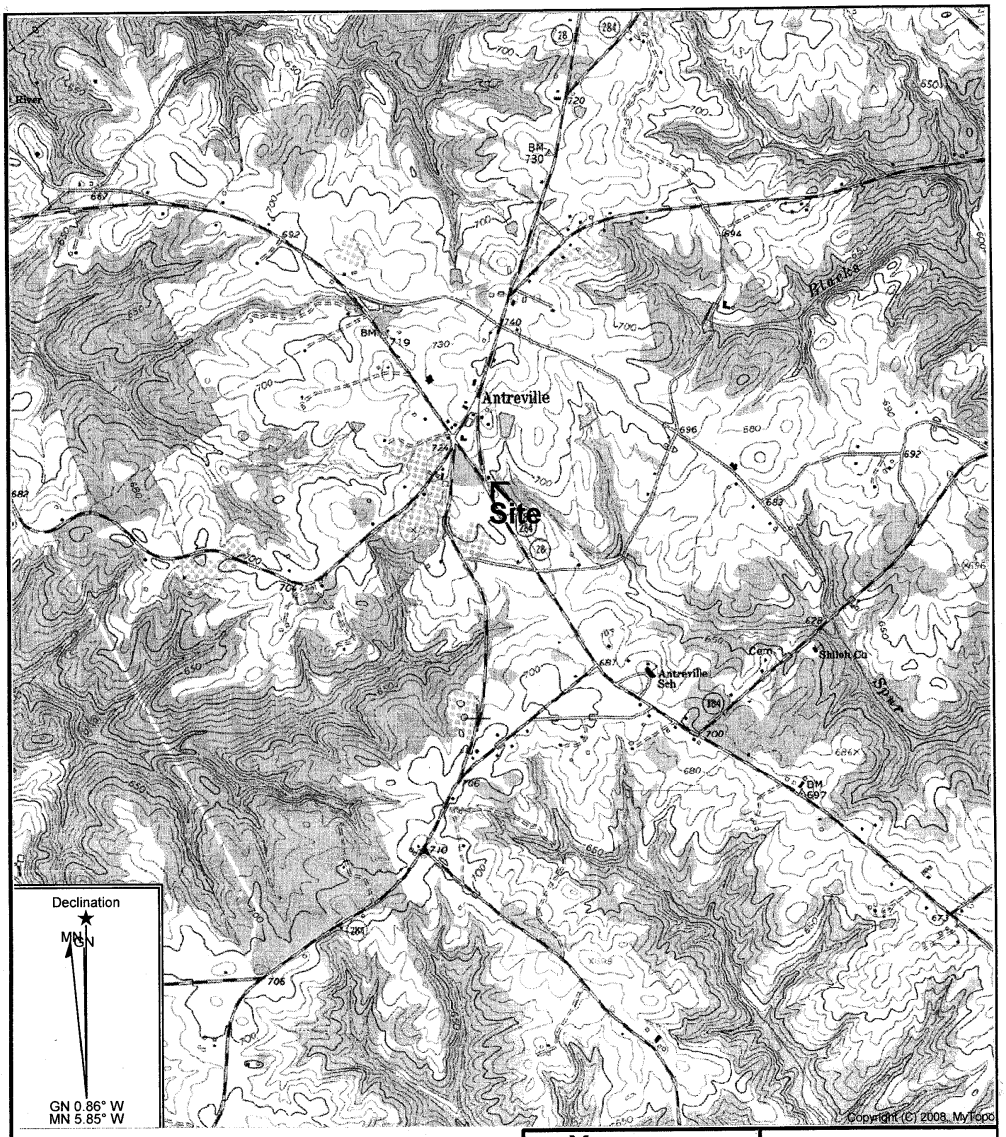
Notes:
1. µg/l = micrograms per liter
2. NL = Not Located
3. PROD = Free Phase Petroleum Product
4. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).

# TABLE 3
# PAGE 2 OF 2
# GROUNDWATER ANALYTICAL RESULTS (OXYGENATES)
# MAY 16, 2011 SAMPLING EVENT
# CRAWFORD'S COUNTRY STORE
# ABBEVILLE, SOUTH CAROLINA
# MECI PROJECT NUMBER 11-3327
# SCDHEC SITE ID NUMBER 12335

| Well Number | Sample Date | tert-Amyl alcohol (µg/l) | tert-Amyl methyl ether (µg/l) | 3,3-Dimethyl-1-butanol (µg/l) | tert Butyl Alcohol (µg/l) | tert-Butyl Formate (µg/l) | Diisopropyl ether (µg/l) | Ethanol (µg/l) | Ethyl tert-butyl ether (µg/l) |
|---|---|---|---|---|---|---|---|---|---|
| MW-13R | 5/16/2011 | **3,110** | **510** | <100 | **1,090** | <50.0 | **4,860** | <200 | <10.0 |
| MW-14 | 5/16/2011 | **570** | <10.0 | <100 | **137** | <50.0 | <5.0 | <200 | <10.0 |
| MW-15 | 5/16/2011 | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-16 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| DMW-17 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-18 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| MW-19 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | **40.2** | <200 | <10.0 |
| MW-20 | 5/16/2011 | **118** | **11.1** | <100 | <100 | <50.0 | **110** | <200 | <10.0 |
| MW-21 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | **9.0** | <200 | <10.0 |
| MW-22 | 5/16/2011 | **629** | **107** | <100 | **444** | <50.0 | **1,350** | <200 | <10.0 |
| MW-23 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | **25.8** | <200 | <10.0 |
| CLS-WW | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |
| CP-WW2 | 5/16/2011 | <100 | <10.0 | <100 | <100 | <50.0 | <5.0 | <200 | <10.0 |

Notes:
1. µg/l = micrograms per liter
2. NL = Not Located
3. PROD = Free Phase Petroleum Product
4. "J" values report concentrations above the method detection limits (MDL) and below actual reporting limit (RL).

**FIGURES**



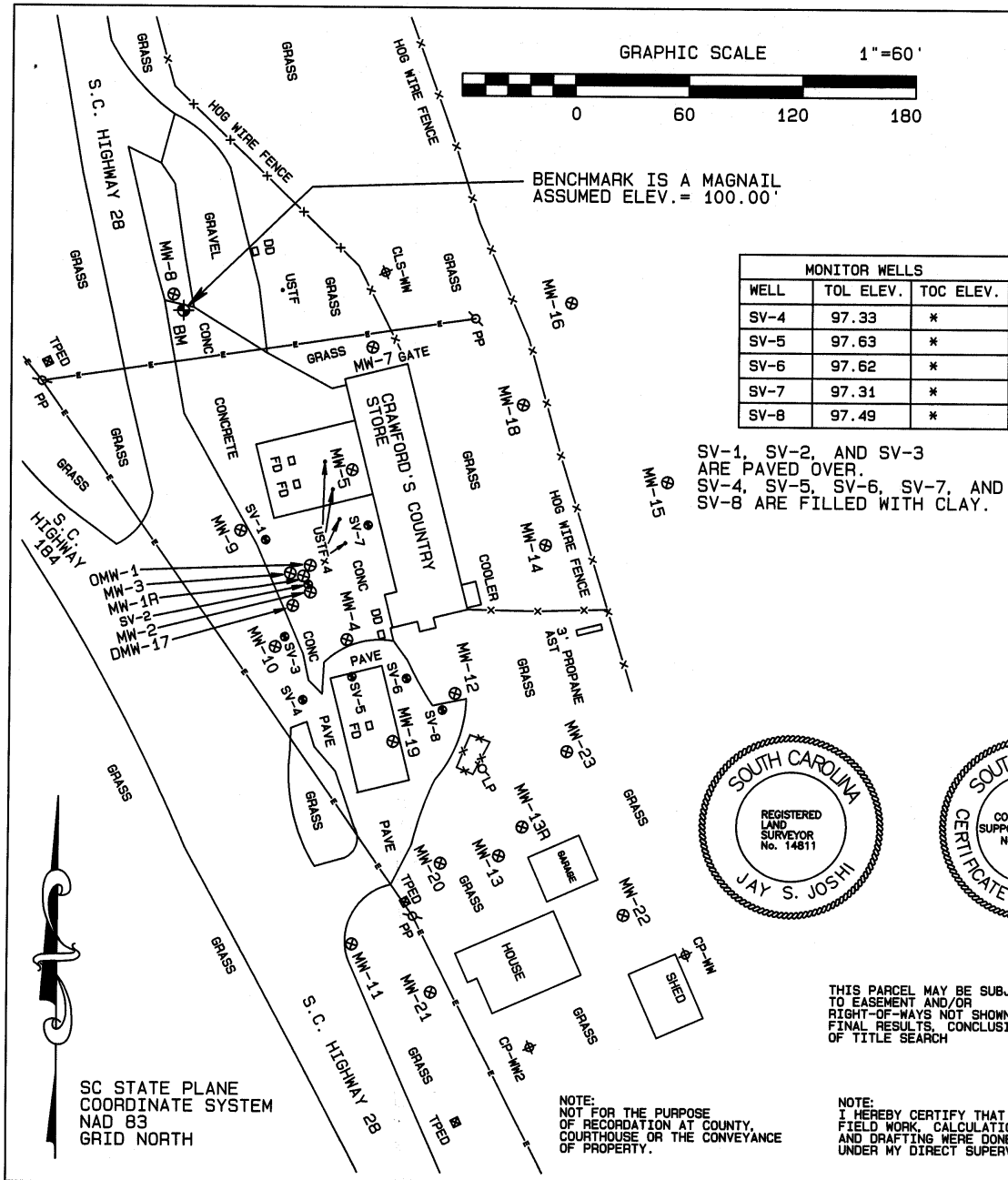

GRAPHIC SCALE

0 1000 2000 4000

1IN = 2000FT

Reference: Antreville, South Carolina
USGS 7.5 Min. Quad
Contour Interval – 10 Feet

| | |
|---|---|
| Midlands Environmental Consultants, Inc. | Site Location |
| Crawford's Country Store<br>5870 South Carolina 28 North, Abbeville, SC<br>SCDHEC Site ID# 12335 | |
| Figure 1 | MECI 11-3327 |




| MONITOR WELLS | | |
|---|---|---|
| WELL | TOL ELEV. | TOC ELEV. |
| SV-4 | 97.33 | * |
| SV-5 | 97.63 | * |
| SV-6 | 97.62 | * |
| SV-7 | 97.31 | * |
| SV-8 | 97.49 | * |

SV-1, SV-2, AND SV-3 ARE PAVED OVER.
SV-4, SV-5, SV-6, SV-7, AND SV-8 ARE FILLED WITH CLAY.

| MONITOR WELLS | | |
|---|---|---|
| WELL | TOL ELEV. | TOC ELEV. |
| OMW-1 | 97.84 | 97.50 |
| MW-1R | 97.76 | 97.51 |
| MW-2 | 97.81 | 97.57 |
| MW-3 | 98.00 | 97.72 |
| MW-4 | 97.61 | 97.37 |
| MW-5 | 97.29 | 97.09 |
| MW-6 | NOT FOUND | |
| MW-7 | 97.35 | 97.20 |
| MW-8 | 100.36 | 100.09 |
| MW-9 | 98.46 | 98.30 |
| MW-10 | 97.62 | 97.40 |
| MW-11 | 94.53 | 94.17 |
| MW-12 | 96.85 | 96.32 |
| MW-13 | 99.39 | 98.95 |
| MW-13R | NO LID | 98.74 |
| MW-14 | 87.32 | 87.15 |
| MW-15 | 85.30 | 84.95 |
| MW-16 | 91.87 | 91.51 |
| DMW-17 | 97.97 | 97.83 |
| MW-18 | 88.90 | 88.25 |
| MW-19 | 97.86 | 97.30 |
| MW-20 | 99.72 | 99.24 |
| MW-21 | 97.28 | 96.79 |
| MW-22 | 98.21 | 97.63 |
| MW-23 | 93.14 | 92.38 |

LEGEND AND ABBREVIATIONS:

- MW = MONITORING WELL
- BM = BENCHMARK
- TPED = TELEPHONE PEDESTAL
- SDMH = STORM DRAIN MAN HOLE
- SSMH = SANITARY SEWER MAN HOLE
- TMH = TELEPHONE MAN HOLE
- WM = WATER METER
- WV = WATER VALVE
- FH = FIRE HYDRANT
- SP = SIGNAL POLE
- PP = POWER POLE
- LP = LIGHT POLE
- GM = GAS METER
- GV = GAS VALVE
- UST = UNDERGROUND STORAGE TANK
- USTF = UNDERGROUND STORAGE TANK FILL
- USTV = UNDERGROUND STORAGE TANK VENT
- GTCB = GRATE TOP CATCH BASIN
- SIGN = SIGN
- RCP = REINFORCED CONCRETE PIPE
- VAC = AIR VACUUM
- WW = WATER SUPPLY WELL
- FD = FUEL DISPENSER
- DD = DIESEL DISPENSER
- KD = KEROSENE DISPENSER
- —E— = OVERHEAD POWER LINE
- —G— = GAS LINE
- —T— = UNDERGROUND TELEPHONE LINE
- —W— = WATER LINE
- = WOOD LINE
- —X— = HOG WIRE FENCE LINE
- —UE— = UNDERGROUND POWER LINE

SOUTH CAROLINA REGISTERED LAND SURVEYOR No. 14811 JAY S. JOSHI

SOUTH CAROLINA CONSTRUCTION SUPPORT SERVICES No. C02425 CERTIFICATE OF AUTHORIZATION

THIS PARCEL MAY BE SUBJECT TO EASEMENT AND/OR RIGHT-OF-WAYS NOT SHOWN. FINAL RESULTS, CONCLUSIVE OF TITLE SEARCH

NOTE:
NOT FOR THE PURPOSE OF RECORDATION AT COUNTY, COURTHOUSE OR THE CONVEYANCE OF PROPERTY.

NOTE:
I HEREBY CERTIFY THAT THE FIELD WORK, CALCULATIONS, AND DRAFTING WERE DONE UNDER MY DIRECT SUPERVISION.

COMPREHENSIVE SITE SKETCH OF

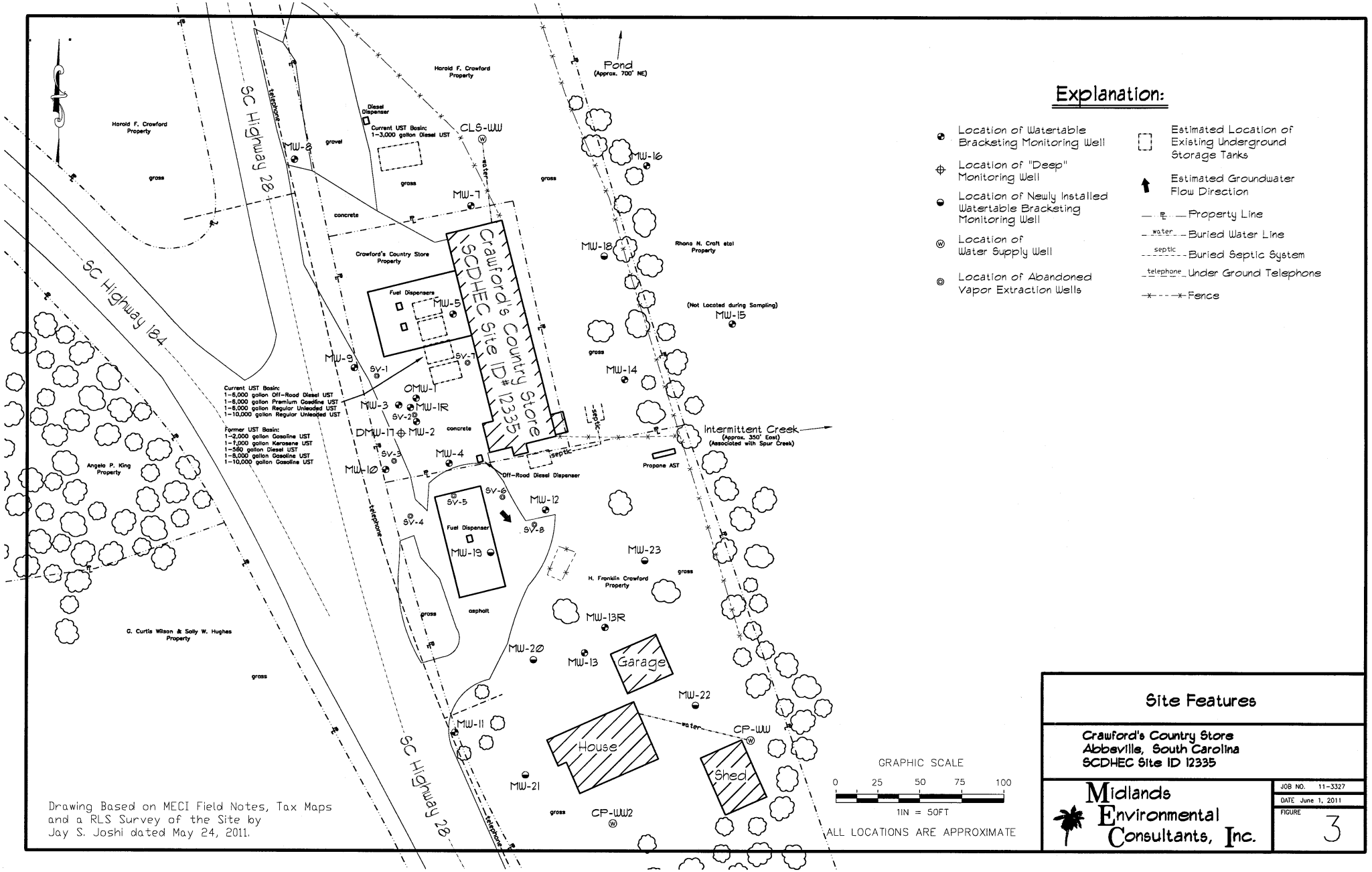
# CRAWFORD'S COUNTRY STORE

5870 S.C. HIGHWAY 28 NORTH
ABBEVILLE, ABBEVILLE COUNTY, SC
SCDHEC SITE ID #12335
PREPARED FOR

## MIDLANDS ENVIRONMENTAL CONSULTANTS, INC.

Figure 2

JAY S. JOSHI PLS # 14811
P.O. BOX 90408, COLUMBIA, SC, 29290 803-776-9909
DATE: MAY 24, 2011 JOB #051911W

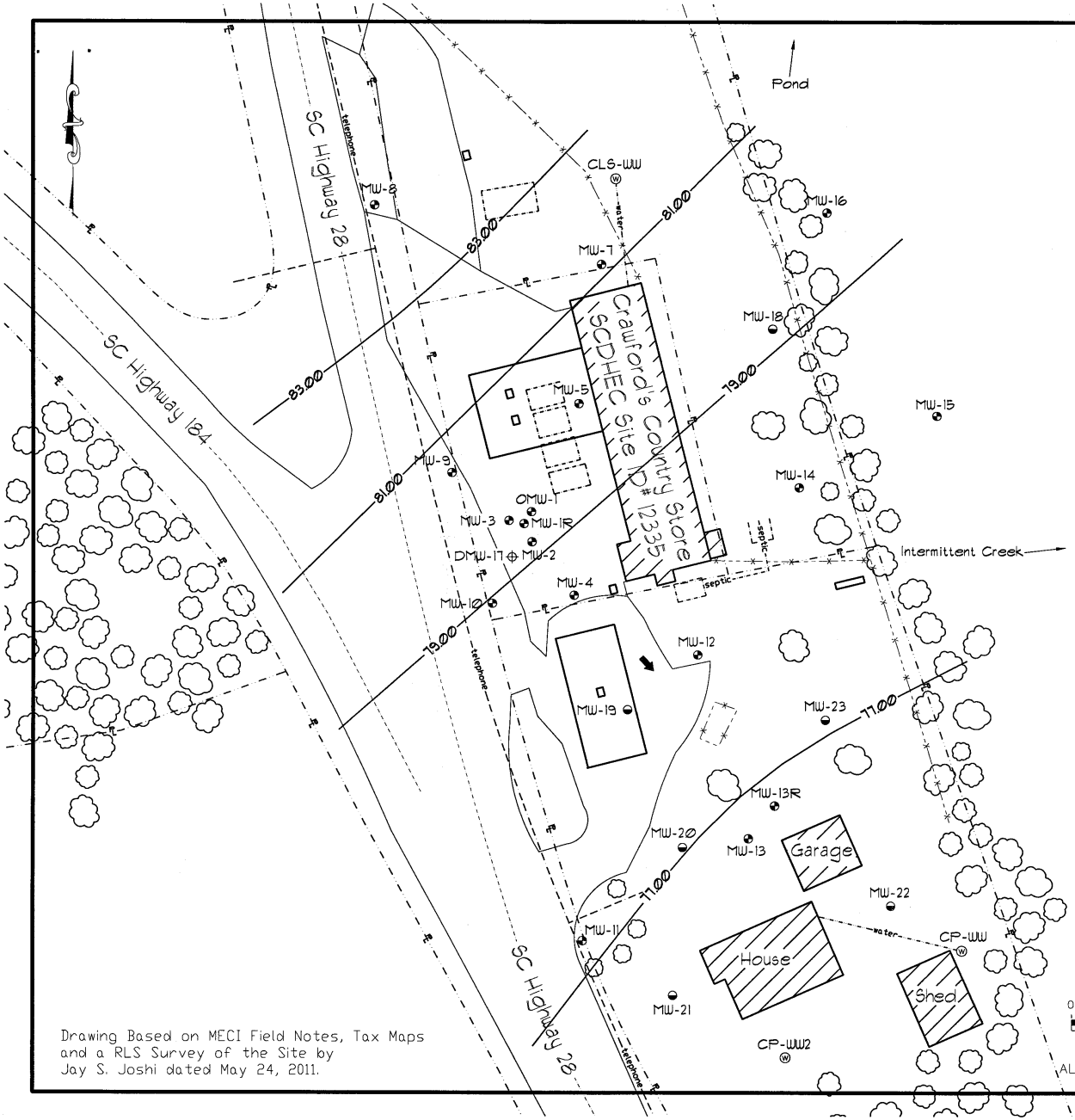



## Site Features

**Crawford's Country Store**
**Abbeville, South Carolina**
**SCDHEC Site ID 12335**

Midlands Environmental Consultants, Inc.

JOB NO. 11-3327
DATE June 1, 2011
FIGURE 3




## Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of "Deep" Monitoring Well
- Location of Newly Installed Watertable Bracketing Monitoring Well
- Location of Water Supply Well
- Estimated Groundwater Flow Direction
- Estimated Location of Existing Underground Storage Tanks
- Groundwater Elevation Contour (feet)

**Groundwater Elevation Data**

| Well # | Screen Interval | Depth to Product (feet) | Depth to Water (feet) | Product Thickness (feet) | Well Head Elevation | Groundwater Elevation |
|---|---|---|---|---|---|---|
| OMW-1 | 7-22 | --- | 18.13 | --- | 97.50 | 79.37 |
| MW-1R | 13-25 | 18.06 | 18.17 | 0.11 | 97.51 | 79.35 |
| MW-2 | 10-25 | --- | 18.47 | --- | 97.57 | 79.10 |
| MW-3 | 10-25 | --- | 18.18 | --- | 97.72 | 79.54 |
| MW-4 | 10-25 | --- | 18.73 | --- | 97.37 | 78.64 |
| MW-5 | 10-25 | --- | 17.58 | --- | 97.09 | 79.51 |
| MW-6 | 10-25 | --- | NL | --- | NL | NL |
| MW-7 | 10-25 | --- | 16.04 | --- | 97.20 | 81.16 |
| MW-8 | 10-25 | --- | 15.27 | --- | 100.09 | 84.82 |
| MW-9 | 10-25 | --- | 17.37 | --- | 98.30 | 80.93 |
| MW-10 | 10-25 | --- | 18.45 | --- | 97.40 | 78.95 |
| MW-11 | 10-25 | --- | 16.65 | --- | 94.17 | 77.52 |
| MW-12 | 10-25 | --- | 18.13 | --- | 96.32 | 78.19 |
| MW-13 | 10-25 | --- | 22.06 | --- | 98.95 | 76.89 |
| MW-13R | 18-30 | --- | 22.25 | --- | 98.74 | 76.49 |
| MW-14 | 10-25 | --- | 8.77 | --- | 87.15 | 78.38 |
| MW-15 | 10-25 | --- | NS | --- | NS | NS |
| MW-16 | 10-25 | --- | 11.74 | --- | 91.51 | 79.77 |
| DMW-17 | 70-75 | --- | 17.81 | --- | 97.83 | 80.02 |
| MW-18 | 8-18 | --- | 9.12 | --- | 88.25 | 79.13 |
| MW-19 | 15-25 | --- | 19.14 | --- | 97.30 | 78.16 |
| MW-20 | 17-27 | --- | 22.19 | --- | 99.24 | 77.05 |
| MW-21 | 15-25 | --- | 21.05 | --- | 96.79 | 75.74 |
| MW-22 | 19-29 | --- | 21.93 | --- | 97.63 | 75.70 |
| MW-23 | 13-23 | --- | 15.02 | --- | 92.38 | 77.36 |

Notes: Depth to groundwater measured on May 11, 2011.

Contour Interval = 2.00 feet

"Deep" Monitoring Well DMW-17 not used in contouring

Site Datum Based on Assumed Spot Elevation.

NL = Not Located

NS = Monitoring well MW-15 was not located during sampling activities, but was located during the comprehensive survey.

Groundwater Contours Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

GRAPHIC SCALE

0 25 50 75 100

1IN = 50FT

ALL LOCATIONS ARE APPROXIMATE

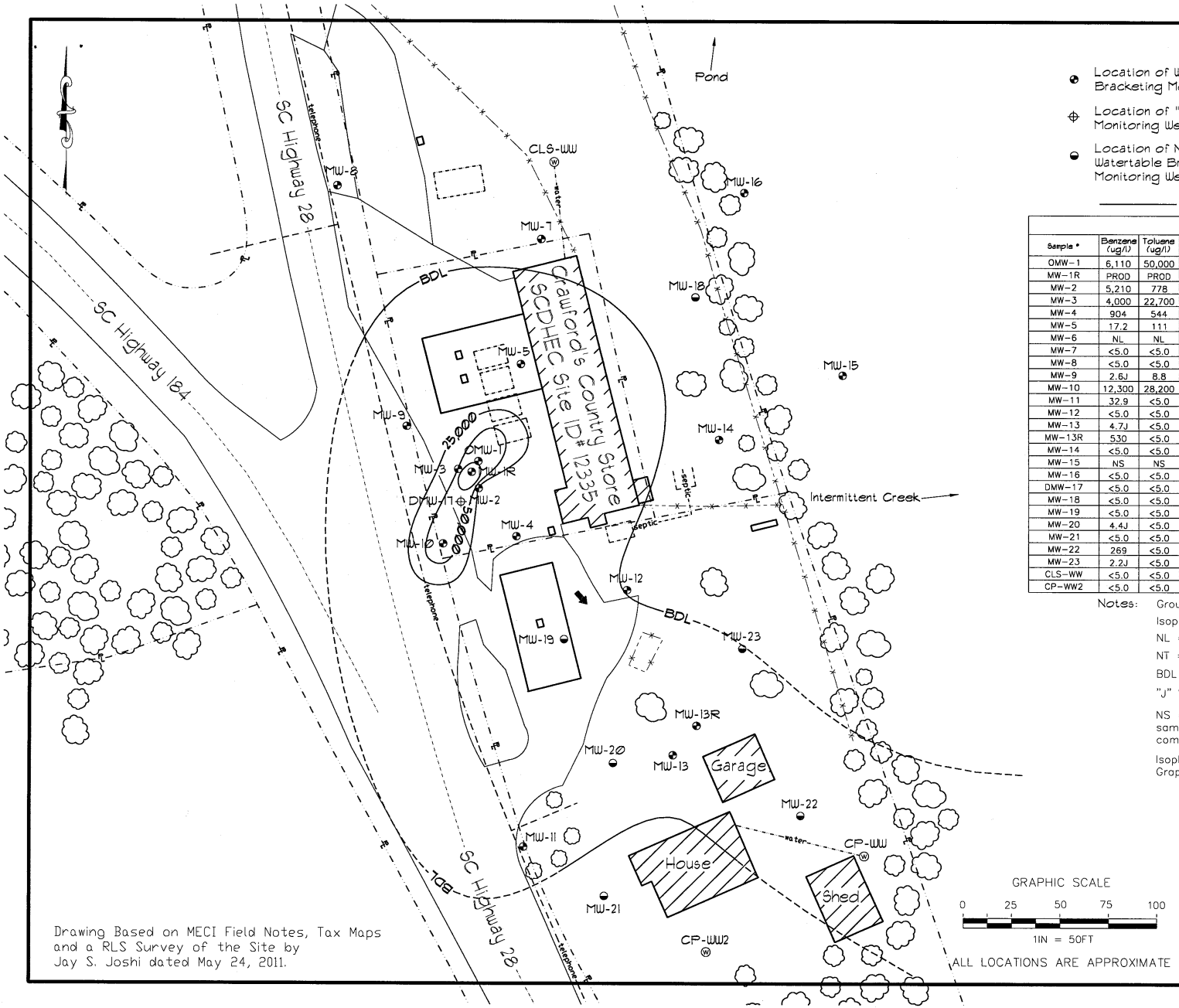
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated May 24, 2011.

# Groundwater Contour Map

**Crawford's Country Store**
**Abbeville, South Carolina**
**SCDHEC Site ID 12335**

Midlands Environmental Consultants, Inc.

JOB NO. 11-3327
DATE June 1, 2011
FIGURE 4




## Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Water Supply Well
- Location of "Deep" Monitoring Well
- Estimated Groundwater Flow Direction
- Location of Newly Installed Watertable Bracketing Monitoring Well
- Estimated Location of Existing Underground Storage Tanks
- Total BTEX Concentration Isopleth (ug/l)

**COC Concentration Data**

| Sample # | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Total Xylenes (ug/l) | Total BTEX (ug/l) | MTBE (ug/l) | Naphthalene (ug/l) | 1,2 DCA (ug/l) | EDB (ug/l) |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 6,110 | 50,000 | 3,130 | 20,600 | 79,840 | 1,420J | <2,500 | <2,500 | 9.9 |
| MW-1R | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD |
| MW-2 | 5,210 | 778 | 1,870 | 1,080 | 8,938 | 3,530 | 387 | <5.0 | <0.021 |
| MW-3 | 4,000 | 22,700 | 2,730 | 13,900 | 43,330 | 5,830 | 388 | <125 | 1.6 |
| MW-4 | 904 | 544 | 1,430 | 263 | 3,141 | 436 | 549 | <50.0 | 0.46 |
| MW-5 | 17.2 | 111 | 222 | 167 | 517.2 | 7.0J | 26.0 | <12.5 | <0.020 |
| MW-6 | NL | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-8 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | 0.041 |
| MW-9 | 2.6J | 8.8 | 4.1J | 101 | 116.5J | 5.2 | 2.1J | <5.0 | <0.020 |
| MW-10 | 12,300 | 28,200 | 3,830 | 20,600 | 64,930 | 13,100 | 610J | <1,000 | 2.9 |
| MW-11 | 32.9 | <5.0 | <5.0 | <10.0 | 32.9 | 855 | 5.3 | <5.0 | <0.020 |
| MW-12 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | 53.0 | <5.0 | <5.0 | 0.051 |
| MW-13 | 4.7J | <5.0 | <5.0 | <10.0 | 4.7J | 4,220 | <5.0 | <5.0 | <0.020 |
| MW-13R | 530 | <5.0 | <5.0 | 27.5 | 557.5 | 15,600 | 32.9 | 15.3 | <0.019 |
| MW-14 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | 1.9J | <5.0 | <5.0 | <0.019 |
| MW-15 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-16 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-17 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-18 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-19 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | 405 | <5.0 | <5.0 | 0.15 |
| MW-20 | 4.4J | <5.0 | <5.0 | <10.0 | 4.4J | 324 | <5.0 | <5.0 | 0.039 |
| MW-21 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | 153 | <5.0 | <5.0 | 0.051 |
| MW-22 | 269 | <5.0 | <5.0 | 21.6 | 290.6 | 4,010 | 8.7 | 4.4J | 0.22 |
| MW-23 | 2.2J | <5.0 | <5.0 | <10.0 | 2.2J | 33.1 | <5.0 | <5.0 | <0.019 |
| CLS-WW | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| CP-WW2 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | NT |

Notes:
- Groundwater samples collected on May 16, 2011.
- Isopleth Interval = 25,000 ug/l
- NL = Not Located
- NT = Not Tested
- BDL = Below Detection Limits
- "J" Values included in Total BTEX Calculations
- NS = Monitoring well MW-15 was not located during sampling activities, but was located during the comprehensive survey.
- Isopleths Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

GRAPHIC SCALE
0 25 50 75 100
1IN = 50FT

ALL LOCATIONS ARE APPROXIMATE

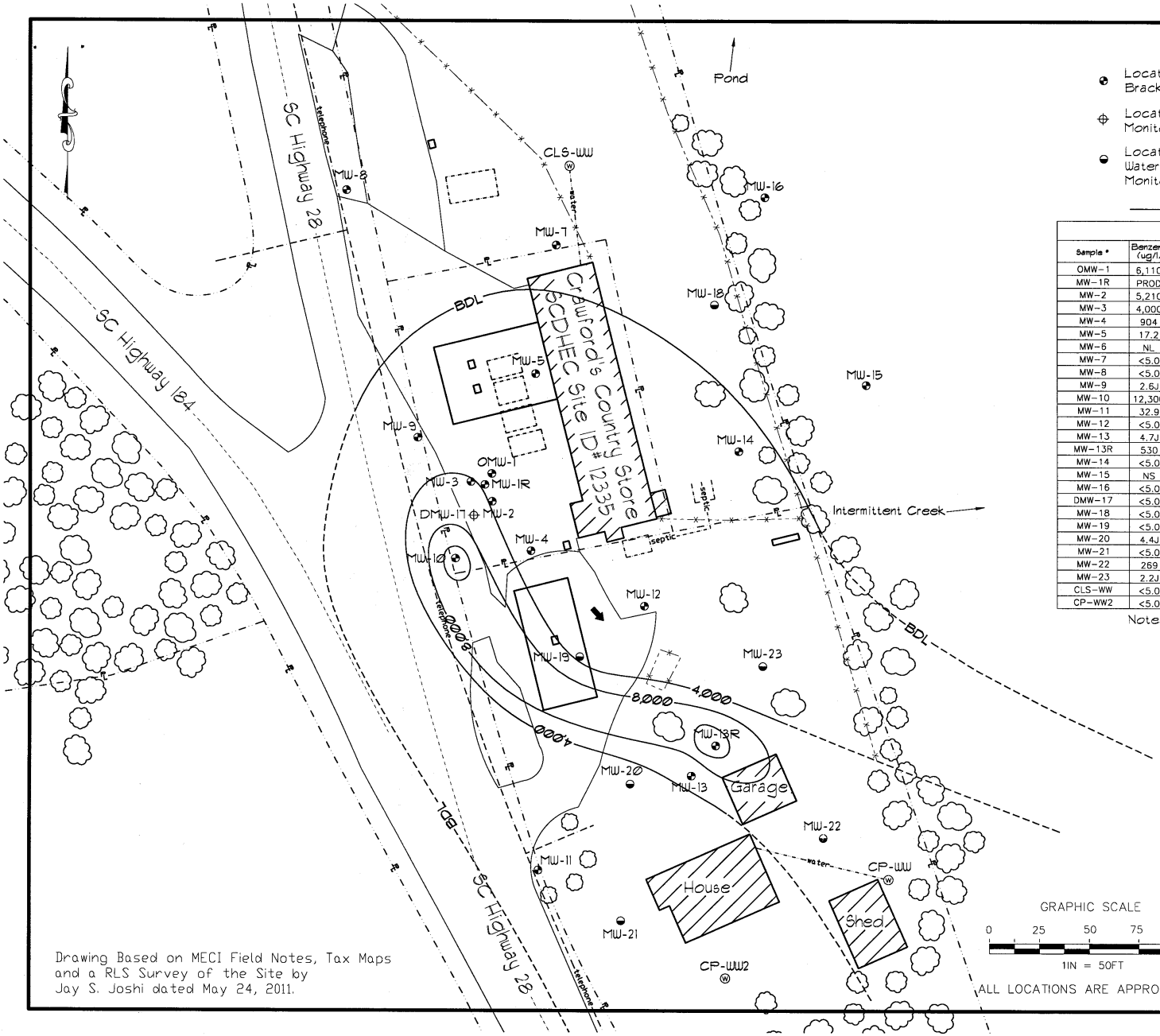
Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated May 24, 2011.

# Total BTEX Isopleth Map

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 11-3327
DATE June 1, 2011
FIGURE 5




Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated May 24, 2011.

## Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of Water Supply Well
- Location of "Deep" Monitoring Well
- Estimated Groundwater Flow Direction
- Location of Newly Installed Watertable Bracketing Monitoring Well
- Estimated Location of Existing Underground Storage Tanks
- MTBE Concentration Isopleth (ug/l)

**COC Concentration Data**

| Sample # | Benzene (ug/l) | Toluene (ug/l) | Ethylbenzene (ug/l) | Total Xylenes (ug/l) | Total BTEX (ug/l) | MTBE (ug/l) | Naphthalene (ug/l) | 12 DCA (ug/l) | EDB (ug/l) |
|---|---|---|---|---|---|---|---|---|---|
| OMW-1 | 6,110 | 50,000 | 3,130 | 20,600 | 79,840 | 1,420J | <2,500 | <2,500 | 9.9 |
| MW-1R | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD | PROD |
| MW-2 | 5,210 | 778 | 1,870 | 1,080 | 8,938 | 3,530 | 387 | <5.0 | <0.021 |
| MW-3 | 4,000 | 22,700 | 2,730 | 13,900 | 43,330 | 5,830 | 388 | <125 | 1.6 |
| MW-4 | 904 | 544 | 1,430 | 263 | 3,141 | 436 | 549 | <50.0 | 0.46 |
| MW-5 | 17.2 | 111 | 222 | 167 | 517.2 | 7.0J | 26.0 | <12.5 | <0.020 |
| MW-6 | NL | NL | NL | NL | NL | NL | NL | NL | NL |
| MW-7 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-8 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | 0.041 |
| MW-9 | 2.6J | 8.8 | 4.1J | 101 | 116.5J | 5.2 | 2.1J | <5.0 | <0.020 |
| MW-10 | 12,300 | 28,200 | 3,830 | 20,600 | 64,930 | 13,100 | 610J | <1,000 | 2.9 |
| MW-11 | 32.9 | <5.0 | <5.0 | <10.0 | 32.9 | 855 | 5.3 | <5.0 | <0.020 |
| MW-12 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | 53.0 | <5.0 | <5.0 | 0.051 |
| MW-13 | 4.7J | <5.0 | <5.0 | <10.0 | 4.7J | 4,220 | <5.0 | <5.0 | <0.020 |
| MW-13R | 530 | <5.0 | <5.0 | 27.5 | 557.5 | 15,600 | 32.9 | 15.3 | <0.019 |
| MW-14 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | 1.9J | <5.0 | <5.0 | <0.019 |
| MW-15 | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| MW-16 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| DMW-17 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.020 |
| MW-18 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| MW-19 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | 405 | <5.0 | <5.0 | 0.15 |
| MW-20 | 4.4J | <5.0 | <5.0 | <10.0 | 4.4J | 324 | <5.0 | <5.0 | 0.039 |
| MW-21 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | 153 | <5.0 | <5.0 | 0.051 |
| MW-22 | 269 | <5.0 | <5.0 | 21.6 | 290.6 | 4,010 | 8.7 | 4.4J | 0.22 |
| MW-23 | 2.2J | <5.0 | <5.0 | <10.0 | 2.2J | 33.1 | <5.0 | <5.0 | <0.019 |
| CLS-WW | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | <0.019 |
| CP-WW2 | <5.0 | <5.0 | <5.0 | <10.0 | BDL | <5.0 | <5.0 | <5.0 | NT |

Notes:
- Groundwater samples collected on May 16, 2011.
- Isopleth Interval = 4,000 ug/l
- NL = Not Located
- NT = Not Tested
- BDL = Below Detection Limits
- "J" Values included in Total BTEX Calculations
- NS = Monitoring well MW-15 was not located during sampling activities, but was located during the comprehensive survey.
- Isopleths Computer Generated using Surfer by Golden Graphics and Modified by MECI Personnel.

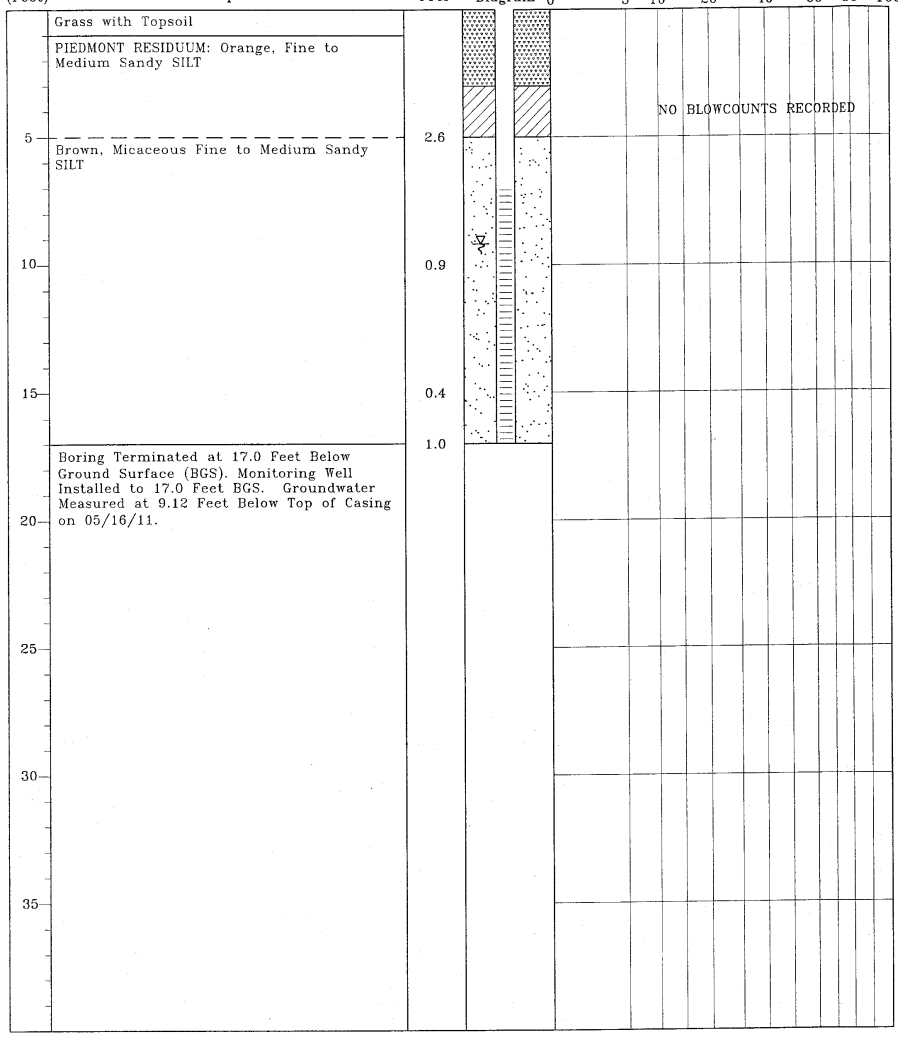
# MTBE Isopleth Map

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 11-3327
DATE June 1, 2011
FIGURE 6

**TEST BORING AND MONITORING WELL INSTALLATION RECORDS**



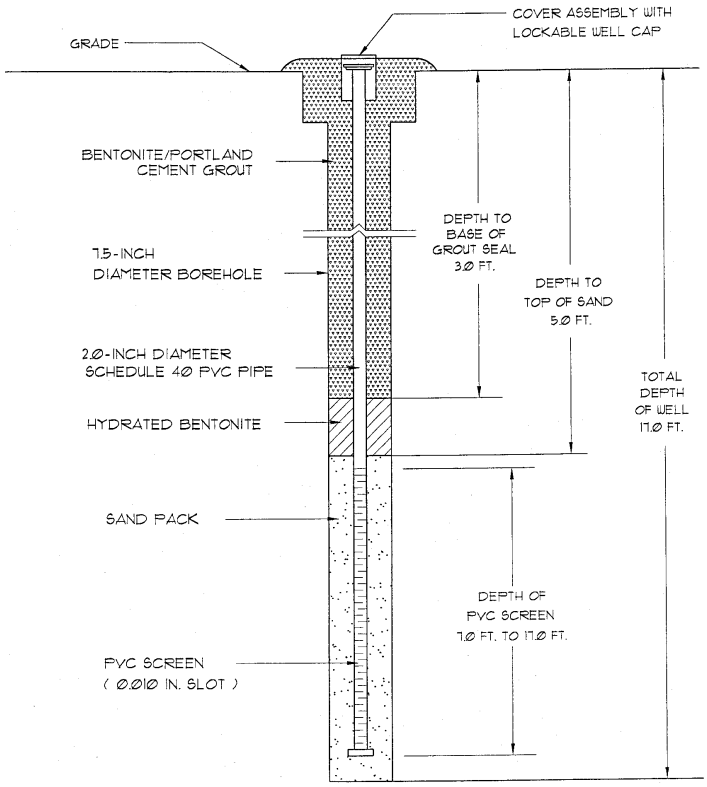

TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 11-3327

| | |
|---|---|
| Boring Number: | MW-18 |
| Date Drilled: | 05/12/11 |
| Drilled By: | Geologic Exploration Inc. |
| Logged By: | R. Ariail |


Prepared By:
Midlands Environmental Consultants, Inc.
235-B Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

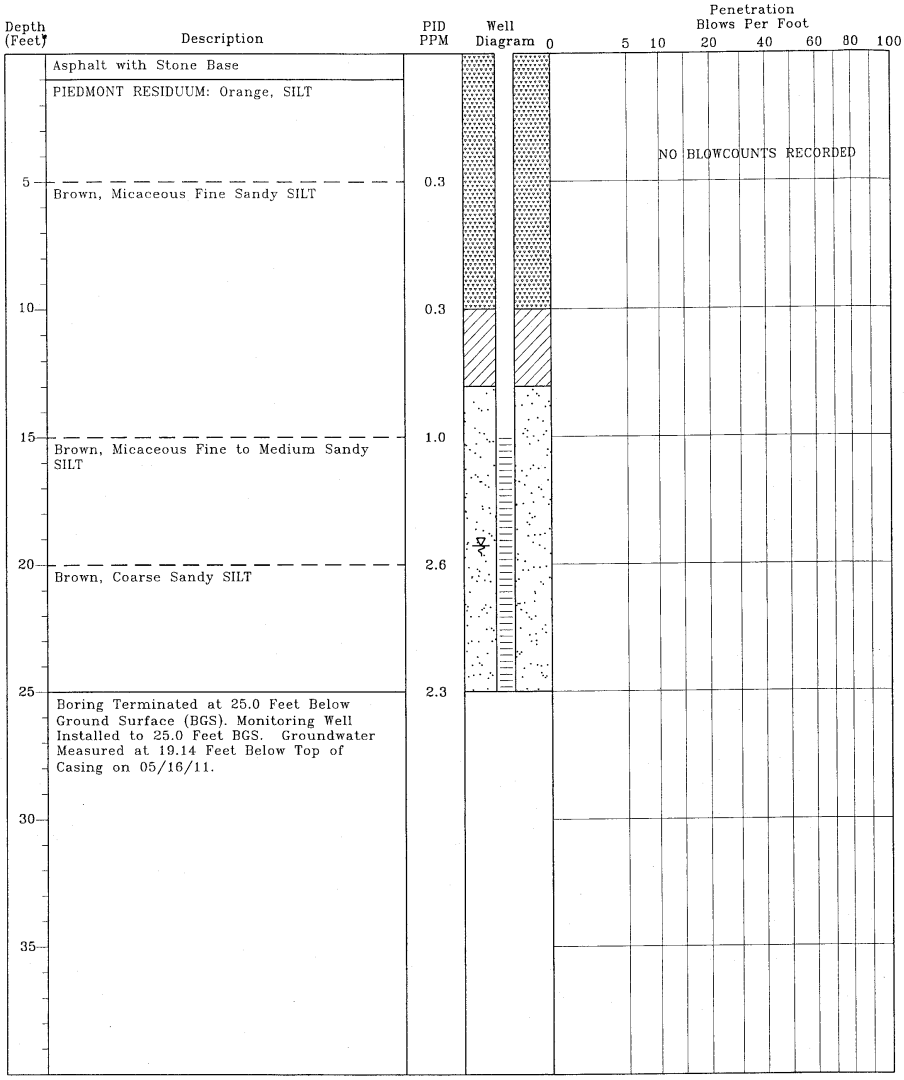
# MONITORING WELL INSTALLATION RECORD

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 11-3327




| | |
|---|---|
| Well Number: | MW-18 |
| Date Drilled: | 05/12/11 |
| Drilled By: | Geologic Exploration Inc. |
| Driller: D. Summers | S.C. I.D.#: B 01430 |
| Logged By: | R. Ariail |


Prepared By:
Midlands Environmental Consultants, Inc.
235-B Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048




TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 11-3327

| | |
|---|---|
| Boring Number: | MW-19 |
| Date Drilled: | 05/12/11 |
| Drilled By: | Geologic Exploration Inc. |
| Logged By: | R. Ariail |


Prepared By:
Midlands Environmental Consultants, Inc.
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Lexington, South Carolina 29073
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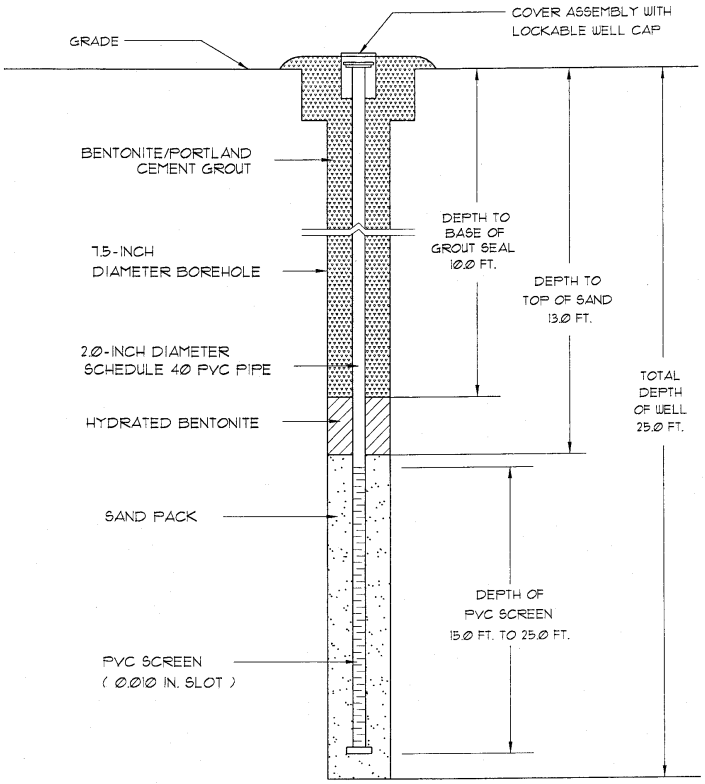
# MONITORING WELL INSTALLATION RECORD

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 11-3327




| | |
|---|---|
| Well Number: | MW-19 |
| Date Drilled: | 05/12/11 |
| Drilled By: | Geologic Exploration Inc. |
| Driller: D. Summers | S.C. I.D.#: B 01430 |
| Logged By: | R. Ariail |


Prepared By:
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Lexington, South Carolina 29073
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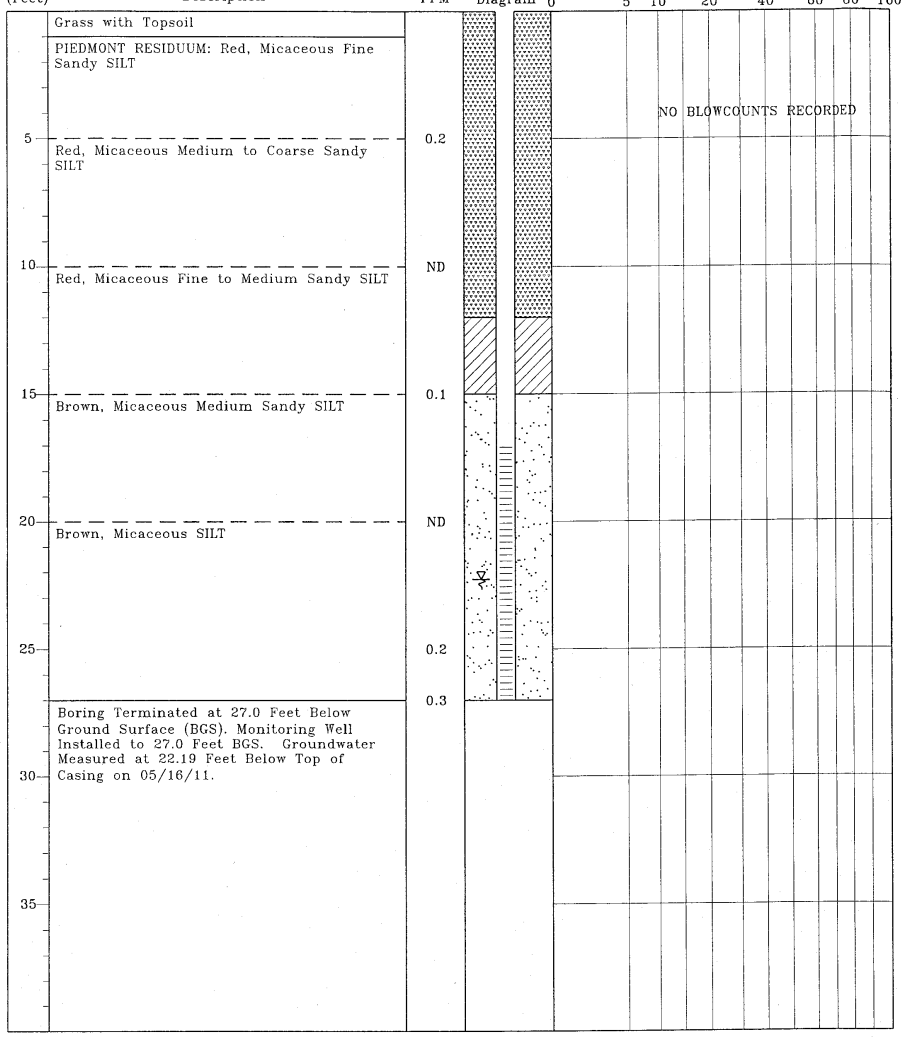


TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 11-3327

| | |
|---|---|
| Boring Number: | MW-20 |
| Date Drilled: | 05/12/11 |
| Drilled By: | Geologic Exploration Inc. |
| Logged By: | R. Ariail |


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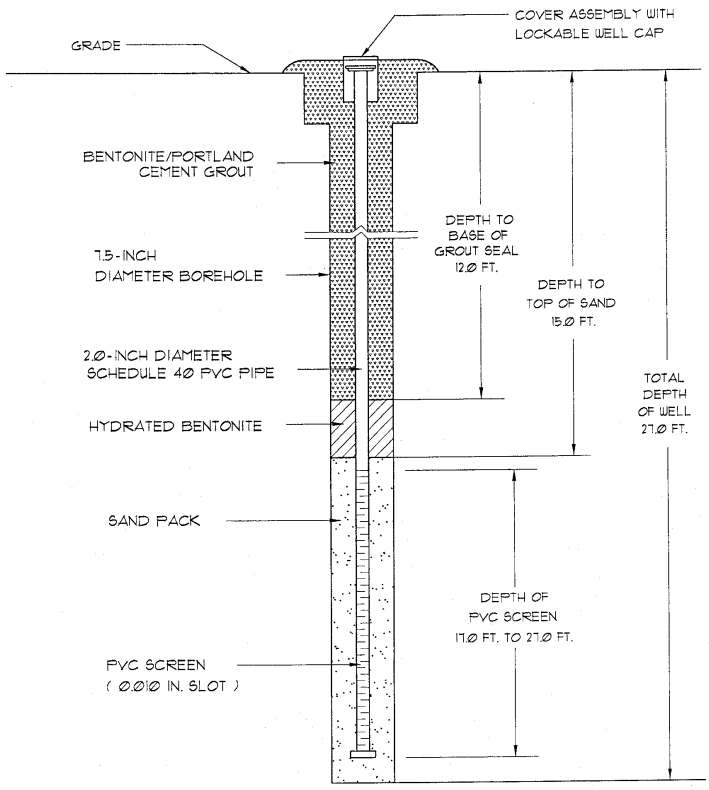
# MONITORING WELL INSTALLATION RECORD

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 11-3327




| | |
|---|---|
| Well Number: | MW-20 |
| Date Drilled: | 05/12/11 |
| Drilled By: | Geologic Exploration Inc. |
| Driller: D. Summers | S.C. I.D.#: B 01430 |
| Logged By: | R. Ariail |


Prepared By:
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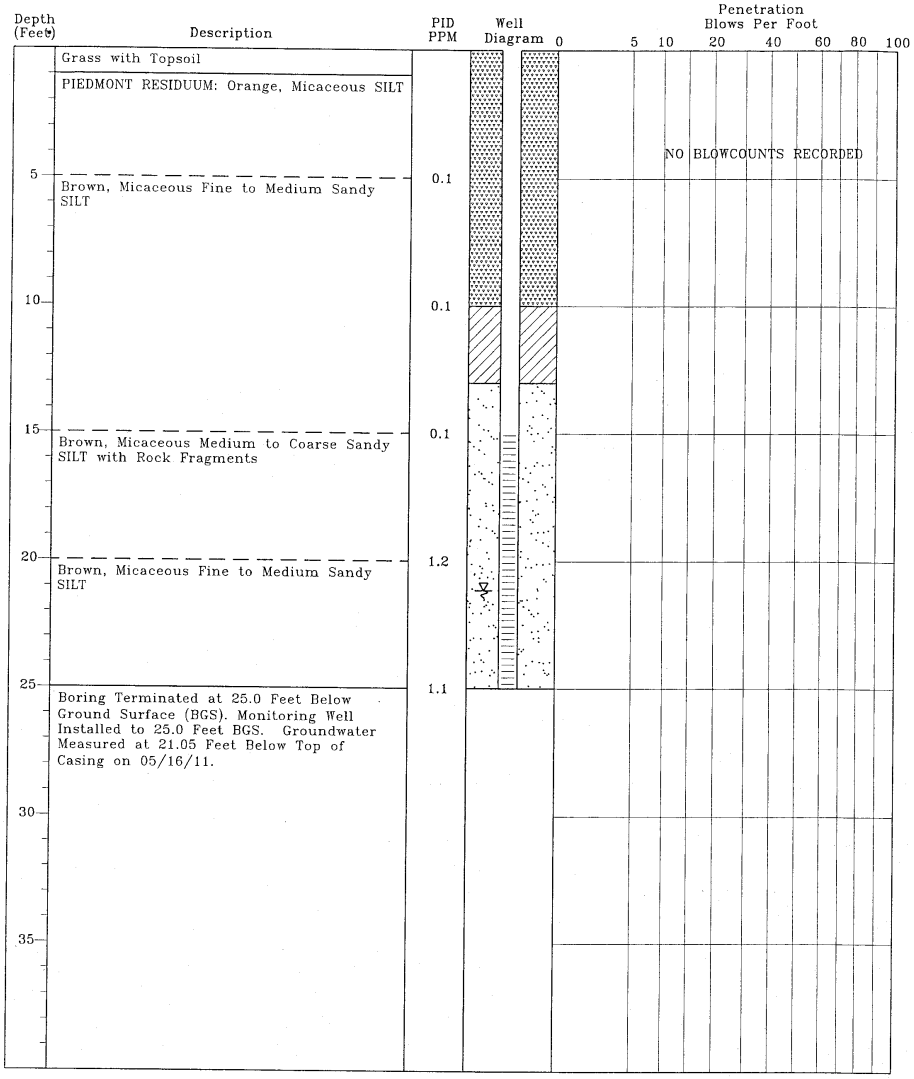
235-B Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048




TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 11-3327

| | |
|---|---|
| Boring Number: | MW-21 |
| Date Drilled: | 05/12/11 |
| Drilled By: | Geologic Exploration Inc. |
| Logged By: | R. Ariail |


Prepared By:
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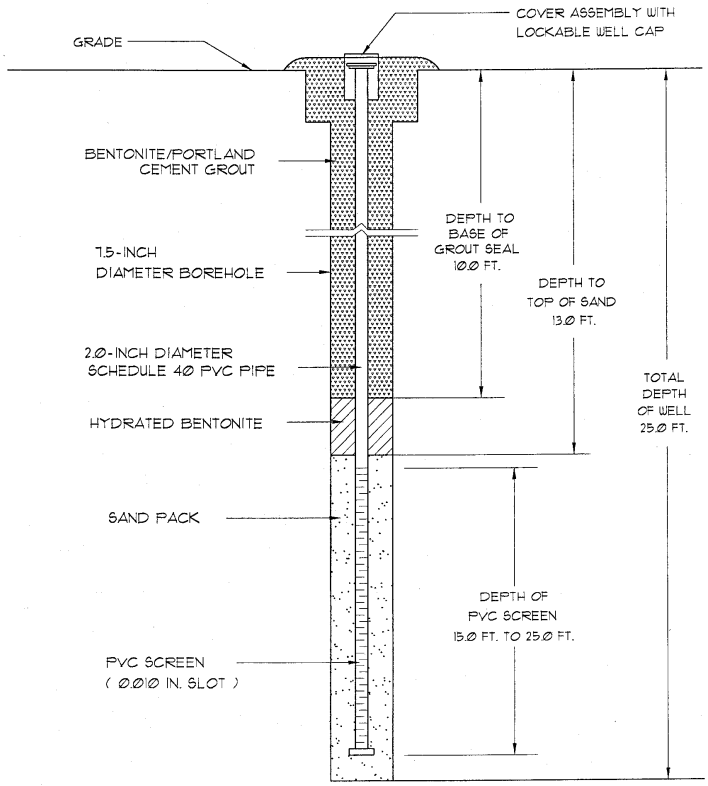
Lexington, South Carolina 29073
(803) 808-2043 Fax: 808-2048

# MONITORING WELL INSTALLATION RECORD

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 11-3327




| | |
|---|---|
| Well Number: | MW-21 |
| Date Drilled: | 05/12/11 |
| Drilled By: | Geologic Exploration Inc. |
| Driller: D. Summers | S.C. I.D.#: B 01430 |
| Logged By: | R. Ariail |


Prepared By:
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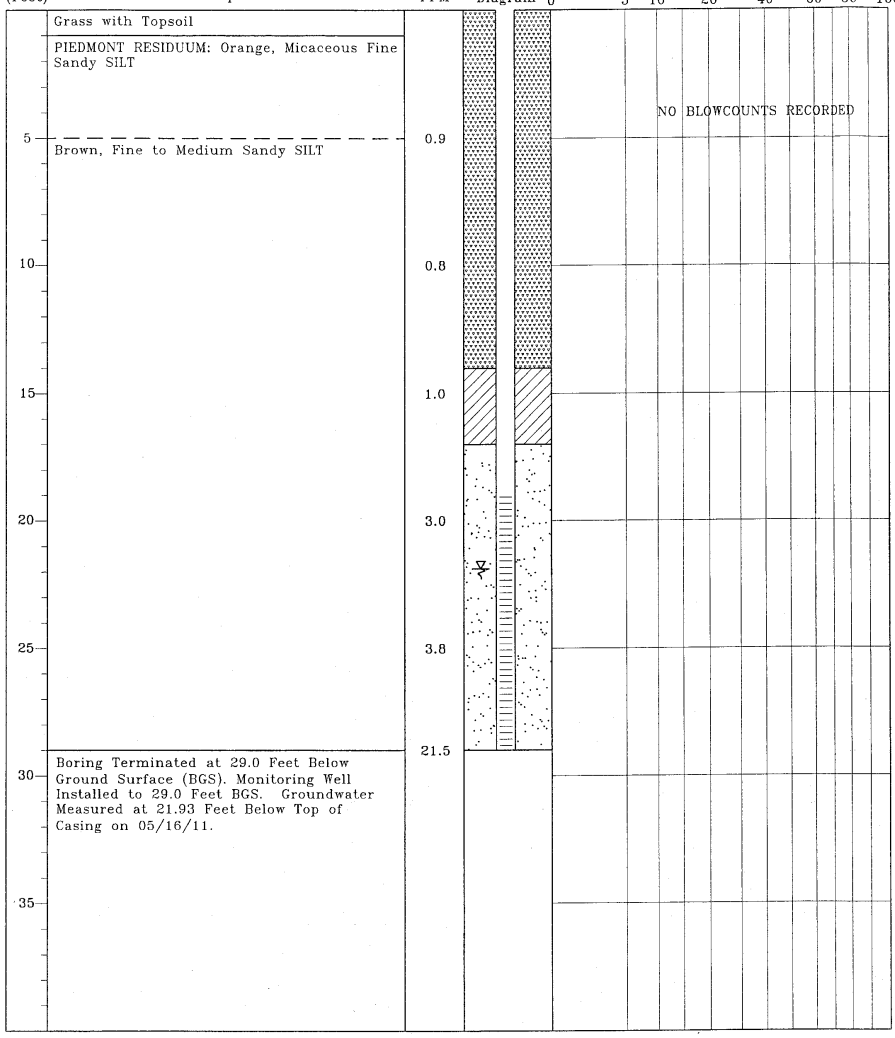


TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 11-3327

| | |
|---|---|
| Boring Number: | MW-22 |
| Date Drilled: | 05/12/11 |
| Drilled By: | Geologic Exploration Inc. |
| Logged By: | R. Ariail |


Prepared By:
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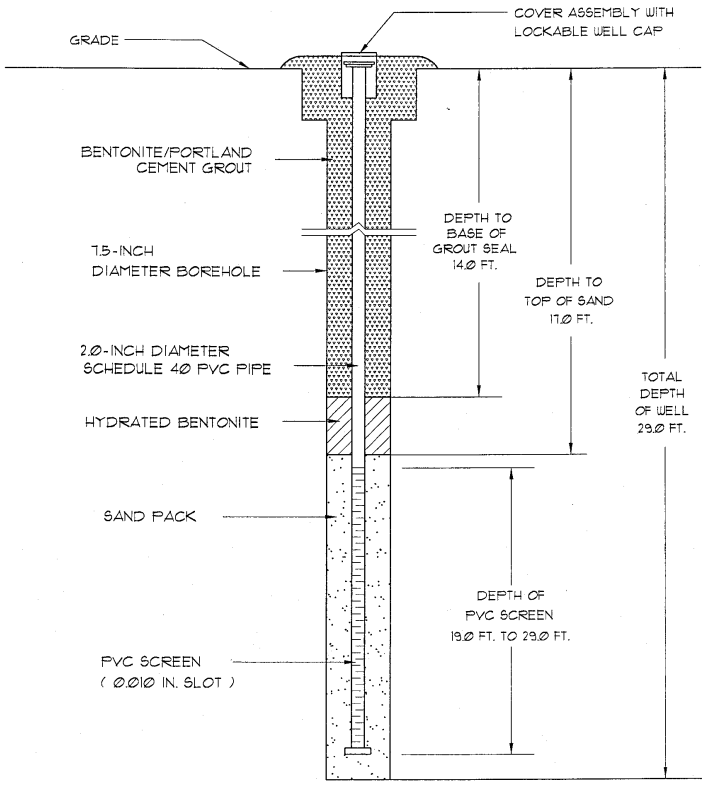
# MONITORING WELL INSTALLATION RECORD

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 11-3327




| | |
|---|---|
| Well Number: | MW-22 |
| Date Drilled: | 05/12/11 |
| Drilled By: | Geologic Exploration Inc. |
| Driller: D. Summers | S.C. I.D.#: B 01430 |
| Logged By: | R. Ariail |


Prepared By:
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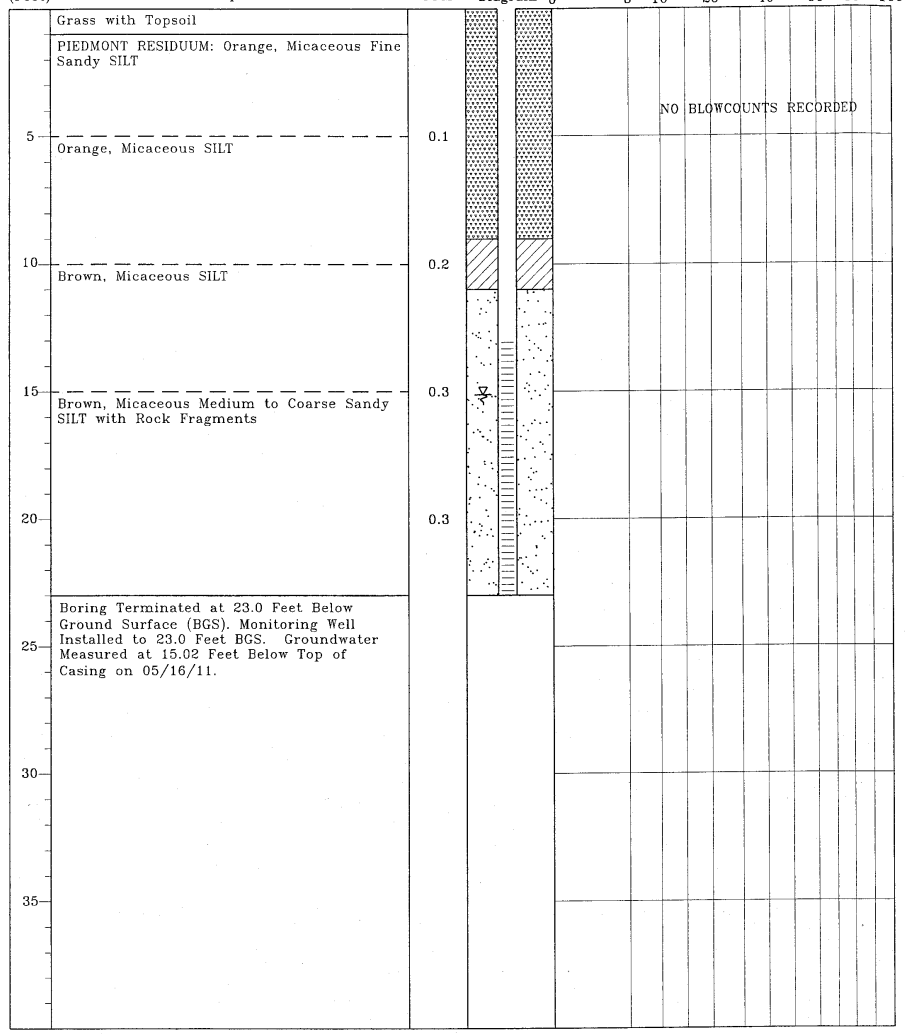


TEST BORING RECORD
Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 11-3327

| | |
|---|---|
| Boring Number: | MW-23 |
| Date Drilled: | 05/12/11 |
| Drilled By: | Geologic Exploration Inc. |
| Logged By: | R. Ariail |

Prepared By:
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Lexington, South Carolina 29073
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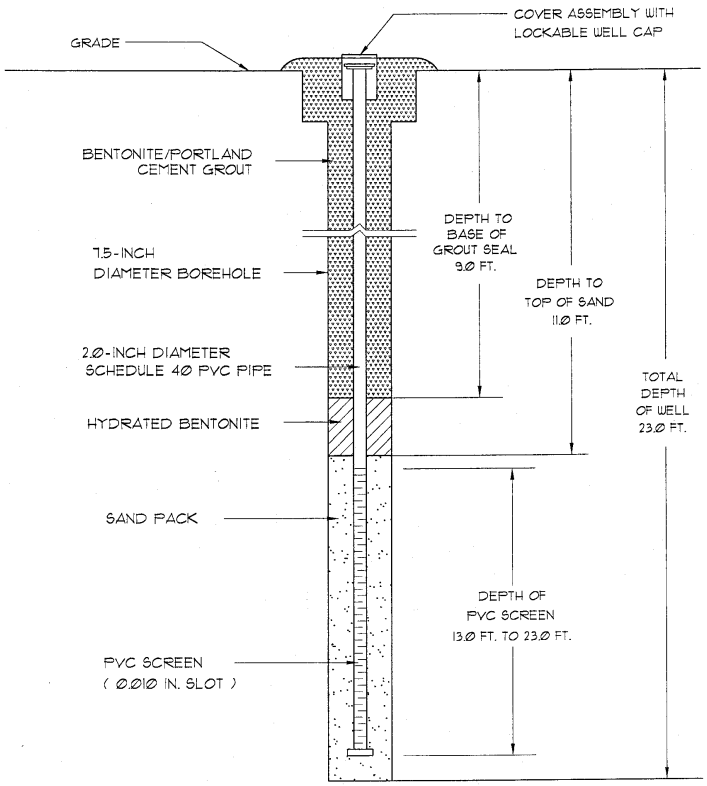
# MONITORING WELL INSTALLATION RECORD

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID# 12335
MECI Project Number 11-3327




| | |
|---|---|
| Well Number: | MW-23 |
| Date Drilled: | 05/12/11 |
| Drilled By: | Geologic Exploration Inc. |
| Driller: D. Summers | S.C. I.D.#: B 01430 |
| Logged By: | R. Ariail |


Prepared By:
Midlands Environmental Consultants, Inc.
235-B Dooley Road
Lexington, South Carolina 29073
(803) 808-2043 fax: 808-2048

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: CRAWFORD, HAROLD FRANK (last) (first)
Address: 31 TURTLE POINT
City: ABBEVILLE State: SC Zip: 29620
Telephone: Work: Home:

**2. LOCATION OF WELL:** SC **COUNTY:** ABBEVILLE
Name: CRAWFORDS COUNTRY STORE
Street Address: 5870 SC HIGHWAY 28
City: ANTREVILLE Zip: 29655
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** **PUBLIC SYSTEM NUMBER:**

**4. ABANDONMENT:** ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| RED CLAYEY SILT | 5.0 | 5.0 |
| TAN SILT | 5.0 | 10.0 |
| TAN SILTY SAND | 7.0 | 17.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-18 BENTONITE SEAL FROM 3.0 TO 5.0 FT.

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other AUGER

**7. PERMIT NUMBER:** 12335

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 05/11/11
17.0 ft. Date Completed: 05/12/11

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 INCH
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 7.0 ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface 0.0 ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: SCH 40 PVC Diam.: 2 INCH
Slot/Gauge: .010 Length: 10.0 FEET
Set Between: 7.0 ft. and 17.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

**12. STATIC WATER LEVEL** 9.0 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 5.0 ft. to 17.0 ft.
Effective size 1.43 Uniformity Coefficient 1.30

**16. WELL GROUTED?** ☑ Yes ☐ No
☑ Neat Cement ☐ Bentonite ☐ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 3.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** DANNY SUMMERS **CERT. NO.:** 01430
Address: (Print) 176 COMMERCE BLVD
STATESVILLE, NC 28625
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 704-872-7686 Fax No.: 704-872-0248

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ Date: 05/13/11
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: CRAWFORD, HAROLD FRANK (last) (first)
Address: 31 TURTLE POINT
City: ABBEVILLE State: SC Zip: 29620
Telephone: Work: Home:

**2. LOCATION OF WELL:** SC **COUNTY:** ABBEVILLE
Name: CRAWFORDS COUNTRY STORE
Street Address: 5870 SC HIGHWAY 28
City: ANTREVILLE Zip: 29655
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** **PUBLIC SYSTEM NUMBER:**

**4. ABANDONMENT:** ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| RED CLAYEY SILT | 10.0 | 10.0 |
| TAN SILT | 5.0 | 15.0 |
| TAN SILTY SAND | 10.0 | 25.0 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-19 BENTONITE SEAL FROM 10.0 TO 13.0 FT.

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other AUGER

**7. PERMIT NUMBER:** 12335

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 05/11/11
25.0 ft. Date Completed: 05/12/11

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 INCH
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 15.0 ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface 0.0 ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: SCH 40 PVC Diam.: 2 INCH
Slot/Gauge: .010 Length: 10.0 FEET
Set Between: 15.0 ft. and 25.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

**12. STATIC WATER LEVEL** 18.0 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 13.0 ft. to 25.0 ft.
Effective size 1.43 Uniformity Coefficient 1.30

**16. WELL GROUTED?** ☑ Yes ☐ No
☑ Neat Cement ☐ Bentonite ☐ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 10.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** DANNY SUMMERS **CERT. NO.:** 01430
Address: (Print) 176 COMMERCE BLVD
STATESVILLE, NC 28625
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 704-872-7686 Fax No.: 704-872-0248

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ Date: 05/13/11
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

DHEC — PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: CRAWFORD, HAROLD FRANK (last) (first)
Address: 31 TURTLE POINT
City: ABBEVILLE State: SC Zip: 29620
Telephone: Work: Home:

**2. LOCATION OF WELL:** SC **COUNTY:** ABBEVILLE
Name: CRAWFORDS COUNTRY STORE
Street Address: 5870 SC HIGHWAY 28
City: ANTREVILLE Zip: 29655
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** **PUBLIC SYSTEM NUMBER:**

**4. ABANDONMENT:** ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| RED CLAYEY SILT | 10.0 | 10.0 |
| TAN SILT | 10.0 | 20.0 |
| TAN SILTY SAND | 7.0 | 27.0 |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-20 BENTONITE SEAL FROM 12.0 TO 15.0 FT.

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other AUGER

**7. PERMIT NUMBER:** 12335

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process
☐ Irrigation ☐ Air Conditioning ☐ Emergency
☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 27.0 ft. Date Started: 05/11/11 Date Completed: 05/12/11

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 INCH
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 17.0 ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface 0.0 ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: SCH 40 PVC Diam.: 2 INCH
Slot/Gauge: .010 Length: 10.0 FEET
Set Between: 17.0 ft. and 27.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

**12. STATIC WATER LEVEL** 22.0 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 15.0 ft. to 27.0 ft.
Effective size 1.43 Uniformity Coefficient 1.30

**16. WELL GROUTED?** ☑ Yes ☐ No
☑ Neat Cement ☐ Bentonite ☐ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 12.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** DANNY SUMMERS CERT. NO.: 01430
Address: (Print) 176 COMMERCE BLVD
STATESVILLE, NC 28625
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 704-872-7686 Fax No.: 704-872-0248

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: _____ Date: 05/13/11
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: CRAWFORD, HAROLD FRANK (last) (first)
Address: 31 TURTLE POINT
City: ABBEVILLE State: SC Zip: 29620
Telephone: Work: Home:

**2. LOCATION OF WELL:** SC **COUNTY:** ABBEVILLE
Name: CRAWFORDS COUNTRY STORE
Street Address: 5870 SC HIGHWAY 28
City: ANTREVILLE Zip: 29655
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** **PUBLIC SYSTEM NUMBER:**

**4. ABANDONMENT:** ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| RED CLAYEY SILT | 10.0 | 10.0 |
| TAN SILT | 5.0 | 15.0 |
| TAN SILTY SAND | 10.0 | 25.0 |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-21 BENTONITE SEAL FROM 10.0 TO 13.0 FT.

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other AUGER

**7. PERMIT NUMBER:** 12335

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) 25.0 ft. Date Started: 05/11/11 Date Completed: 05/12/11

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 INCH
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 15.0 ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface 0.0 ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: SCH 40 PVC Diam.: 2 INCH
Slot/Gauge: .010 Length: 10.0 FEET
Set Between: 15.0 ft. and 25.0 ft.
_____ ft. and _____ ft.
NOTE: MULTIPLE SCREENS USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

**12. STATIC WATER LEVEL** 20.0 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 13.0 ft. to 25.0 ft.
Effective size 1.43 Uniformity Coefficient 1.30

**16. WELL GROUTED?** ☑ Yes ☐ No
☑ Neat Cement ☐ Bentonite ☐ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 10.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** _____ ft. _____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P._____ Volts_____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** DANNY SUMMERS CERT. NO.: 01430
Address: (Print) 176 COMMERCE BLVD Level: A ☐ B ☑ C ☐ D ☐ (circle one)
STATESVILLE, NC 28625
Telephone No.: 704-872-7686 Fax No.: 704-872-0248

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.
Signed: _____ Date: 05/13/11
Well Driller
If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

D H E C
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: CRAWFORD, HAROLD FRANK (last) (first)
Address: 31 TURTLE POINT
City: ABBEVILLE State: SC Zip: 29620
Telephone: Work: Home:

**2. LOCATION OF WELL:** SC **COUNTY:** ABBEVILLE
Name: CRAWFORDS COUNTRY STORE
Street Address: 5870 SC HIGHWAY 28
City: ANTREVILLE Zip: 29655
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** **PUBLIC SYSTEM NUMBER:**

**4. ABANDONMENT:** ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| RED CLAYEY SILT | 15.0 | 15.0 |
| TAN SILT | 10.0 | 25.0 |
| TAN SILTY SAND | 4.0 | 29.0 |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-22 BENTONITE SEAL FROM 14.0 TO 17.0 FT.

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other AUGER

**7. PERMIT NUMBER:** 12335

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 05/11/11
29.0 ft. Date Completed: 05/12/11

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 INCH
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 19.0 ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface 0.0 ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: SCH 40 PVC Diam.: 2 INCH
Slot/Gauge: .010 Length: 10.0 FEET
Set Between: 19.0 ft. and 29.0 ft. NOTE: MULTIPLE SCREENS
_____ ft. and _____ ft. USE SECOND SHEET
Sieve Analysis ☐ Yes (please enclose) ☑ No

**12. STATIC WATER LEVEL** 23.0 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 17.0 ft. to 29.0 ft.
Effective size 1.43 Uniformity Coefficient 1.30

**16. WELL GROUTED?** ☑ Yes ☐ No
☑ Neat Cement ☐ Bentonite ☐ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 14.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** DANNY SUMMERS **CERT. NO.:** 01430
Address: (Print) 176 COMMERCE BLVD
STATESVILLE, NC 28625
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 704-872-7686 Fax No.: 704-872-0248

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ Date: 05/13/11
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

DHEC
PROMOTE PROTECT PROSPER

# Water Well Record
## Bureau of Water
2600 Bull Street, Columbia, SC 29201-1708; (803) 898-4300

**1. WELL OWNER INFORMATION:**
Name: CRAWFORD, HAROLD FRANK (last) (first)
Address: 31 TURTLE POINT
City: ABBEVILLE State: SC Zip: 29620
Telephone: Work: Home:

**2. LOCATION OF WELL:** SC **COUNTY:** ABBEVILLE
Name: CRAWFORDS COUNTRY STORE
Street Address: 5870 SC HIGHWAY 28
City: ANTREVILLE Zip: 29655
Latitude: Longitude:

**3. PUBLIC SYSTEM NAME:** **PUBLIC SYSTEM NUMBER:**

**4. ABANDONMENT:** ☐ Yes ☑ No
Grouted Depth: from _____ ft. to _____ ft.

| Formation Description | *Thickness of Stratum | Depth to Bottom of Stratum |
|---|---|---|
| RED CLAYEY SILT | 10.0 | 10.0 |
| TAN SILT | 5.0 | 15.0 |
| TAN SILTY SAND | 8.0 | 23.0 |
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| *Indicate Water Bearing Zones (Use a 2nd sheet if needed) | | |

**5. REMARKS:**
MW-23 BENTONITE SEAL FROM 9.0 TO 11.0 FT.

**6. TYPE:** ☐ Mud Rotary ☐ Jetted ☐ Bored ☐ Dug ☐ Air Rotary ☐ Driven ☐ Cable tool ☑ Other AUGER

**7. PERMIT NUMBER:** 12335

**8. USE:**
☐ Residential ☐ Public Supply ☐ Process ☐ Irrigation ☐ Air Conditioning ☐ Emergency ☐ Test Well ☑ Monitor Well ☐ Replacement

**9. WELL DEPTH** (completed) Date Started: 05/11/11
23.0 ft. Date Completed: 05/12/11

**10. CASING:** ☑ Threaded ☐ Welded
Diam.: 2 INCH
Type: ☑ PVC ☐ Galvanized ☐ Steel ☐ Other
2.0 in. to 13.0 ft. depth
_____ in. to _____ ft. depth
Height: Above ☐ Below ☐
Surface 0.0 ft.
Weight _____ lb./ft.
Drive Shoe? ☐ Yes ☐ No

**11. SCREEN:**
Type: SCH 40 PVC Diam.: 2 INCH
Slot/Gauge: .010 Length: 10.0 FEET
Set Between: 13.0 ft. and 23.0 ft. **NOTE: MULTIPLE SCREENS**
_____ ft. and _____ ft. **USE SECOND SHEET**
Sieve Analysis ☐ Yes (please enclose) ☑ No

**12. STATIC WATER LEVEL** 16.0 ft. below land surface after 24 hours

**13. PUMPING LEVEL** Below Land Surface.
_____ ft. after _____ hrs. Pumping _____ G.P.M.
Pumping Test: ☐ Yes (please enclose) ☐ No
Yield: _____

**14. WATER QUALITY**
Chemical Analysis ☐ Yes ☐ No Bacterial Analysis ☐ Yes ☐ No
Please enclose lab results.

**15. ARTIFICIAL FILTER** (filter pack) ☑ Yes ☐ No
Installed from 11.0 ft. to 23.0 ft.
Effective size 1.43 Uniformity Coefficient 1.30

**16. WELL GROUTED?** ☑ Yes ☐ No
☑ Neat Cement ☐ Bentonite ☐ Bentonite/Cement ☐ Other _____
Depth: From 0.0 ft. to 9.0 ft.

**17. NEAREST SOURCE OF POSSIBLE CONTAMINATION:** ____ ft. ____ direction
Type _____
Well Disinfected ☐ Yes ☐ No Type: _____ Amount: _____

**18. PUMP:** Date installed: _____ Not installed ☐
Mfr. Name: _____ Model No.: _____
H.P. _____ Volts _____ Length of drop pipe ___ ft. Capacity ___ gpm
TYPE: ☐ Submersible ☐ Jet (shallow) ☐ Turbine ☐ Jet (deep) ☐ Reciprocating ☐ Centrifugal

**19. WELL DRILLER:** DANNY SUMMERS **CERT. NO.:** 01430
Address: (Print) 176 COMMERCE BLVD
STATESVILLE, NC 28625
Level: A ☐ B ☑ C ☐ D ☐ (circle one)
Telephone No.: 704-872-7686 Fax No.: 704-872-0248

**20. WATER WELL DRILLER'S CERTIFICATION:** This well was drilled under my direction and this report is true to the best of my knowledge and belief.

Signed: _____ Date: 05/13/11
Well Driller

If D Level Driller, provide supervising driller's name:

DHEC 1903 (07/2003) COPY 1 MAIL TO: S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL (ADDRESS ABOVE)

**ANALYTICAL RESULTS**

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Asheville, NC 28804
(828)254-7176

**Pace Analytical Services, Inc.**
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

May 24, 2011

Mr. Bryan Shane
Midlands Environmental
PO Box 854
Lexington, SC 29071

RE: Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

Dear Mr. Shane:
Enclosed are the analytical results for sample(s) received by the laboratory on May 17, 2011. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

Analyses were performed at the Pace Analytical Services location indicated on the sample analyte page for analysis unless otherwise footnoted.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Renee Spencer

Renee Spencer

renee.spencer@pacelabs.com
Project Manager

Enclosures

cc: Mr. Jeff Coleman, Midlands Environmental



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Asheville, NC 28804
(828)254-7176

**Pace Analytical Services, Inc.**
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

## CERTIFICATIONS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

**Charlotte Certification IDs**
9800 Kincey Ave. Ste 100, Huntersville, NC 28078
Louisiana/LELAP Certification #: 04034
New Jersey Certification #: NC012
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
Pennsylvania Certification #: 68-00784
South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Virginia Certification #: 00213
Connecticut Certification #: PH-0104
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DHH Drinking Water # LA 100031
West Virginia Certification #: 357

**Asheville Certification IDs**
2225 Riverside Dr., Asheville, NC 28804
Connecticut Certification #: PH-0106
Florida/NELAP Certification #: E87648
Massachusetts Certification #: M-NC030
New Jersey Certification #: NC011
North Carolina Bioassay Certification #: 9
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40
Pennsylvania Certification #: 68-03578
South Carolina Bioassay Certification #: 99030002
South Carolina Certification #: 99030001
Virginia Certification #: 00072
West Virginia Certification #: 356



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Huntersville, NC 28078
(704)875-9092

## SAMPLE SUMMARY

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

| Lab ID | Sample ID | Matrix | Date Collected | Date Received |
|---|---|---|---|---|
| 9294372001 | OMW-1 | Water | 05/16/11 12:29 | 05/17/11 15:30 |
| 9294372002 | MW-2 | Water | 05/16/11 12:10 | 05/17/11 15:30 |
| 9294372003 | MW-3 | Water | 05/16/11 12:40 | 05/17/11 15:30 |
| 9294372004 | MW-4 | Water | 05/16/11 11:50 | 05/17/11 15:30 |
| 9294372005 | MW-5 | Water | 05/16/11 10:20 | 05/17/11 15:30 |
| 9294372006 | MW-7 | Water | 05/16/11 10:03 | 05/17/11 15:30 |
| 9294372007 | MW-8 | Water | 05/16/11 09:55 | 05/17/11 15:30 |
| 9294372008 | MW-9 | Water | 05/16/11 10:30 | 05/17/11 15:30 |
| 9294372009 | MW-10 | Water | 05/16/11 11:55 | 05/17/11 15:30 |
| 9294372010 | MW-11 | Water | 05/16/11 10:55 | 05/17/11 15:30 |
| 9294372011 | MW-12 | Water | 05/16/11 11:42 | 05/17/11 15:30 |
| 9294372012 | MW-13 | Water | 05/16/11 11:27 | 05/17/11 15:30 |
| 9294372013 | MW-13R | Water | 05/16/11 11:18 | 05/17/11 15:30 |
| 9294372014 | MW-14 | Water | 05/16/11 13:10 | 05/17/11 15:30 |
| 9294372015 | MW-16 | Water | 05/16/11 13:18 | 05/17/11 15:30 |
| 9294372016 | DMW-17 | Water | 05/16/11 12:31 | 05/17/11 15:30 |
| 9294372017 | MW-18 | Water | 05/16/11 10:30 | 05/17/11 15:30 |
| 9294372018 | MW-19 | Water | 05/16/11 11:30 | 05/17/11 15:30 |
| 9294372019 | MW-20 | Water | 05/16/11 10:50 | 05/17/11 15:30 |
| 9294372020 | MW-21 | Water | 05/16/11 10:45 | 05/17/11 15:30 |
| 9294372021 | MW-22 | Water | 05/16/11 11:05 | 05/17/11 15:30 |
| 9294372022 | MW-23 | Water | 05/16/11 11:05 | 05/17/11 15:30 |
| 9294372023 | CLS-WW | Water | 05/16/11 10:10 | 05/17/11 15:30 |
| 9294372024 | CP-WW2 | Water | 05/16/11 11:15 | 05/17/11 15:30 |



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## SAMPLE ANALYTE COUNT

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| **9294372001** | **OMW-1** | EPA 8011 | CAH | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| **9294372002** | **MW-2** | EPA 8011 | CAH | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| **9294372003** | **MW-3** | EPA 8011 | CAH | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| **9294372004** | **MW-4** | EPA 8011 | CAH | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| **9294372005** | **MW-5** | EPA 8011 | CAH | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| **9294372006** | **MW-7** | EPA 8011 | CAH | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| **9294372007** | **MW-8** | EPA 8011 | CAH | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| **9294372008** | **MW-9** | EPA 8011 | CAH | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| **9294372009** | **MW-10** | EPA 8011 | RES | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| **9294372010** | **MW-11** | EPA 8011 | RES | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| **9294372011** | **MW-12** | EPA 8011 | RES | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| **9294372012** | **MW-13** | EPA 8011 | RES | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| **9294372013** | **MW-13R** | EPA 8011 | RES | 2 | PASI-C |



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## SAMPLE ANALYTE COUNT

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

| Lab ID | Sample ID | Method | Analysts | Analytes Reported | Laboratory |
|---|---|---|---|---|---|
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| 9294372014 | MW-14 | EPA 8011 | RES | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| 9294372015 | MW-16 | EPA 8011 | RES | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| 9294372016 | DMW-17 | EPA 8011 | RES | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| 9294372017 | MW-18 | EPA 8011 | RES | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| 9294372018 | MW-19 | EPA 8011 | RES | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| 9294372019 | MW-20 | EPA 8011 | RES | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| 9294372020 | MW-21 | EPA 8011 | RES | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| 9294372021 | MW-22 | EPA 8011 | RES | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| 9294372022 | MW-23 | EPA 8011 | RES | 2 | PASI-C |
| | | EPA 6010 | JMW | 1 | PASI-A |
| | | EPA 8260 | KJM | 21 | PASI-C |
| 9294372023 | CLS-WW | EPA 8011 | RES | 2 | PASI-C |
| | | EPA 8260 | KJM | 21 | PASI-C |
| 9294372024 | CP-WW2 | EPA 8260 | KJM | 21 | PASI-C |



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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

**Sample: OMW-1** **Lab ID: 9294372001** Collected: 05/16/11 12:29 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | **9.9** | ug/L | 0.40 | 0.40 | 20 | 05/20/11 16:47 | 05/21/11 12:37 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 0 | % | 60-140 | | 20 | 05/20/11 16:47 | 05/21/11 12:37 | 301-79-56 | S4 |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | ND | ug/L | 5.0 | 4.0 | 1 | 05/18/11 16:45 | 05/19/11 21:12 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 50000 | 38400 | 500 | | 05/20/11 06:38 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 5000 | 1700 | 500 | | 05/20/11 06:38 | 994-05-8 | |
| Benzene | **6110** | ug/L | 2500 | 850 | 500 | | 05/20/11 06:38 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 50000 | 16000 | 500 | | 05/20/11 06:38 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 50000 | 28800 | 500 | | 05/20/11 06:38 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 25000 | 3650 | 500 | | 05/20/11 06:38 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 2500 | 900 | 500 | | 05/20/11 06:38 | 107-06-2 | |
| Diisopropyl ether | **7500** | ug/L | 2500 | 850 | 500 | | 05/20/11 06:38 | 108-20-3 | |
| Ethanol | ND | ug/L | 100000 | 68900 | 500 | | 05/20/11 06:38 | 64-17-5 | |
| Ethylbenzene | **3130** | ug/L | 2500 | 800 | 500 | | 05/20/11 06:38 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 5000 | 1800 | 500 | | 05/20/11 06:38 | 637-92-3 | |
| Methyl-tert-butyl ether | **1420J** | ug/L | 2500 | 850 | 500 | | 05/20/11 06:38 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 2500 | 1000 | 500 | | 05/20/11 06:38 | 91-20-3 | |
| Toluene | **50000** | ug/L | 2500 | 800 | 500 | | 05/20/11 06:38 | 108-88-3 | |
| Xylene (Total) | **20600** | ug/L | 5000 | 1350 | 500 | | 05/20/11 06:38 | 1330-20-7 | |
| m&p-Xylene | **14100** | ug/L | 5000 | 1550 | 500 | | 05/20/11 06:38 | 179601-23-1 | |
| o-Xylene | **6540** | ug/L | 2500 | 800 | 500 | | 05/20/11 06:38 | 95-47-6 | |
| Dibromofluoromethane (S) | 111 | % | 70-130 | | 500 | | 05/20/11 06:38 | 1868-53-7 | |
| Toluene-d8 (S) | 101 | % | 70-130 | | 500 | | 05/20/11 06:38 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 96 | % | 70-130 | | 500 | | 05/20/11 06:38 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 127 | % | 70-130 | | 500 | | 05/20/11 06:38 | 17060-07-0 | |

**Sample: MW-2** **Lab ID: 9294372002** Collected: 05/16/11 12:10 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.021 | 0.021 | 1 | 05/20/11 16:48 | 05/21/11 08:09 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 120 | % | 60-140 | | 1 | 05/20/11 16:48 | 05/21/11 08:09 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | ND | ug/L | 5.0 | 4.0 | 1 | 05/18/11 16:45 | 05/19/11 21:17 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | **5700** | ug/L | 5000 | 3840 | 50 | | 05/19/11 13:01 | 75-85-4 | |
| tert-Amylmethyl ether | **532** | ug/L | 500 | 170 | 50 | | 05/19/11 13:01 | 994-05-8 | |
| Benzene | **5210** | ug/L | 250 | 85.0 | 50 | | 05/19/11 13:01 | 71-43-2 | |



**REPORT OF LABORATORY ANALYSIS**



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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

**Sample: MW-2** **Lab ID: 9294372002** Collected: 05/16/11 12:10 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 5000 | 1600 | 50 | | 05/19/11 13:01 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 5000 | 2880 | 50 | | 05/19/11 13:01 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 2500 | 365 | 50 | | 05/19/11 13:01 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 250 | 90.0 | 50 | | 05/19/11 13:01 | 107-06-2 | |
| Diisopropyl ether | **4990** | ug/L | 250 | 85.0 | 50 | | 05/19/11 13:01 | 108-20-3 | |
| Ethanol | ND | ug/L | 10000 | 6890 | 50 | | 05/19/11 13:01 | 64-17-5 | |
| Ethylbenzene | **1870** | ug/L | 250 | 80.0 | 50 | | 05/19/11 13:01 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 500 | 180 | 50 | | 05/19/11 13:01 | 637-92-3 | |
| Methyl-tert-butyl ether | **3530** | ug/L | 250 | 85.0 | 50 | | 05/19/11 13:01 | 1634-04-4 | |
| Naphthalene | **387** | ug/L | 250 | 100 | 50 | | 05/19/11 13:01 | 91-20-3 | |
| Toluene | **778** | ug/L | 250 | 80.0 | 50 | | 05/19/11 13:01 | 108-88-3 | |
| Xylene (Total) | **1080** | ug/L | 500 | 135 | 50 | | 05/19/11 13:01 | 1330-20-7 | |
| m&p-Xylene | **598** | ug/L | 500 | 155 | 50 | | 05/19/11 13:01 | 179601-23-1 | |
| o-Xylene | **481** | ug/L | 250 | 80.0 | 50 | | 05/19/11 13:01 | 95-47-6 | |
| Dibromofluoromethane (S) | 110 | % | 70-130 | | 50 | | 05/19/11 13:01 | 1868-53-7 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 50 | | 05/19/11 13:01 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 94 | % | 70-130 | | 50 | | 05/19/11 13:01 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 120 | % | 70-130 | | 50 | | 05/19/11 13:01 | 17060-07-0 | |

**Sample: MW-3** **Lab ID: 9294372003** Collected: 05/16/11 12:40 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | **1.6** | ug/L | 0.040 | 0.040 | 2 | 05/20/11 16:48 | 05/21/11 12:55 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 112 | % | 60-140 | | 2 | 05/20/11 16:48 | 05/21/11 12:55 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | ND | ug/L | 5.0 | 4.0 | 1 | 05/18/11 16:45 | 05/19/11 21:33 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | **15200** | ug/L | 2500 | 1920 | 25 | | 05/19/11 13:19 | 75-85-4 | |
| tert-Amylmethyl ether | **1250** | ug/L | 250 | 85.0 | 25 | | 05/19/11 13:19 | 994-05-8 | |
| Benzene | **4000** | ug/L | 2500 | 850 | 500 | | 05/23/11 13:40 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 2500 | 802 | 25 | | 05/19/11 13:19 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 2500 | 1440 | 25 | | 05/19/11 13:19 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 1250 | 182 | 25 | | 05/19/11 13:19 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 125 | 45.0 | 25 | | 05/19/11 13:19 | 107-06-2 | |
| Diisopropyl ether | **6070** | ug/L | 2500 | 850 | 500 | | 05/23/11 13:40 | 108-20-3 | |
| Ethanol | ND | ug/L | 5000 | 3440 | 25 | | 05/19/11 13:19 | 64-17-5 | |
| Ethylbenzene | **2730** | ug/L | 125 | 40.0 | 25 | | 05/19/11 13:19 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 250 | 90.0 | 25 | | 05/19/11 13:19 | 637-92-3 | |
| Methyl-tert-butyl ether | **5830** | ug/L | 2500 | 850 | 500 | | 05/23/11 13:40 | 1634-04-4 | |
| Naphthalene | **388** | ug/L | 125 | 50.0 | 25 | | 05/19/11 13:19 | 91-20-3 | |



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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

**Sample: MW-3** **Lab ID: 9294372003** Collected: 05/16/11 12:40 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| Toluene | **22700** | ug/L | 2500 | 800 | 500 | | 05/23/11 13:40 | 108-88-3 | |
| Xylene (Total) | **13900** | ug/L | 250 | 67.5 | 25 | | 05/19/11 13:19 | 1330-20-7 | |
| m&p-Xylene | **9280** | ug/L | 250 | 77.5 | 25 | | 05/19/11 13:19 | 179601-23-1 | |
| o-Xylene | **4670** | ug/L | 125 | 40.0 | 25 | | 05/19/11 13:19 | 95-47-6 | |
| Dibromofluoromethane (S) | 108 | % | 70-130 | | 25 | | 05/19/11 13:19 | 1868-53-7 | |
| Toluene-d8 (S) | 102 | % | 70-130 | | 25 | | 05/19/11 13:19 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 97 | % | 70-130 | | 25 | | 05/19/11 13:19 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 117 | % | 70-130 | | 25 | | 05/19/11 13:19 | 17060-07-0 | |

**Sample: MW-4** **Lab ID: 9294372004** Collected: 05/16/11 11:50 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | **0.46** | ug/L | 0.020 | 0.020 | 1 | 05/20/11 16:48 | 05/21/11 08:46 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 117 | % | 60-140 | | 1 | 05/20/11 16:48 | 05/21/11 08:46 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | **6.3** | ug/L | 5.0 | 4.0 | 1 | 05/18/11 16:45 | 05/19/11 21:38 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | **1920** | ug/L | 1000 | 768 | 10 | | 05/19/11 13:38 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 100 | 34.0 | 10 | | 05/19/11 13:38 | 994-05-8 | |
| Benzene | **904** | ug/L | 50.0 | 17.0 | 10 | | 05/19/11 13:38 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 1000 | 321 | 10 | | 05/19/11 13:38 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 1000 | 577 | 10 | | 05/19/11 13:38 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 500 | 73.0 | 10 | | 05/19/11 13:38 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 50.0 | 18.0 | 10 | | 05/19/11 13:38 | 107-06-2 | |
| Diisopropyl ether | **582** | ug/L | 50.0 | 17.0 | 10 | | 05/19/11 13:38 | 108-20-3 | |
| Ethanol | ND | ug/L | 2000 | 1380 | 10 | | 05/19/11 13:38 | 64-17-5 | |
| Ethylbenzene | **1430** | ug/L | 50.0 | 16.0 | 10 | | 05/19/11 13:38 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 100 | 36.0 | 10 | | 05/19/11 13:38 | 637-92-3 | |
| Methyl-tert-butyl ether | **436** | ug/L | 50.0 | 17.0 | 10 | | 05/19/11 13:38 | 1634-04-4 | |
| Naphthalene | **549** | ug/L | 50.0 | 20.0 | 10 | | 05/19/11 13:38 | 91-20-3 | |
| Toluene | **544** | ug/L | 50.0 | 16.0 | 10 | | 05/19/11 13:38 | 108-88-3 | |
| Xylene (Total) | **263** | ug/L | 100 | 27.0 | 10 | | 05/19/11 13:38 | 1330-20-7 | |
| m&p-Xylene | **158** | ug/L | 100 | 31.0 | 10 | | 05/19/11 13:38 | 179601-23-1 | |
| o-Xylene | **105** | ug/L | 50.0 | 16.0 | 10 | | 05/19/11 13:38 | 95-47-6 | |
| Dibromofluoromethane (S) | 111 | % | 70-130 | | 10 | | 05/19/11 13:38 | 1868-53-7 | |
| Toluene-d8 (S) | 101 | % | 70-130 | | 10 | | 05/19/11 13:38 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 96 | % | 70-130 | | 10 | | 05/19/11 13:38 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 119 | % | 70-130 | | 10 | | 05/19/11 13:38 | 17060-07-0 | |



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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

**Sample: MW-5** **Lab ID: 9294372005** Collected: 05/16/11 10:20 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 05/20/11 16:48 | 05/21/11 09:23 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 113 | % | 60-140 | | 1 | 05/20/11 16:48 | 05/21/11 09:23 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | **5.6** | ug/L | 5.0 | 4.0 | 1 | 05/18/11 16:45 | 05/19/11 21:42 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | **195J** | ug/L | 250 | 192 | 2.5 | | 05/20/11 07:15 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 25.0 | 8.5 | 2.5 | | 05/20/11 07:15 | 994-05-8 | |
| Benzene | **17.2** | ug/L | 12.5 | 4.2 | 2.5 | | 05/20/11 07:15 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 250 | 80.2 | 2.5 | | 05/20/11 07:15 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 250 | 144 | 2.5 | | 05/20/11 07:15 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 125 | 18.2 | 2.5 | | 05/20/11 07:15 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 12.5 | 4.5 | 2.5 | | 05/20/11 07:15 | 107-06-2 | |
| Diisopropyl ether | **6.2J** | ug/L | 12.5 | 4.2 | 2.5 | | 05/20/11 07:15 | 108-20-3 | |
| Ethanol | ND | ug/L | 500 | 344 | 2.5 | | 05/20/11 07:15 | 64-17-5 | |
| Ethylbenzene | **222** | ug/L | 12.5 | 4.0 | 2.5 | | 05/20/11 07:15 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 25.0 | 9.0 | 2.5 | | 05/20/11 07:15 | 637-92-3 | |
| Methyl-tert-butyl ether | **7.0J** | ug/L | 12.5 | 4.2 | 2.5 | | 05/20/11 07:15 | 1634-04-4 | |
| Naphthalene | **26.0** | ug/L | 12.5 | 5.0 | 2.5 | | 05/20/11 07:15 | 91-20-3 | |
| Toluene | **111** | ug/L | 12.5 | 4.0 | 2.5 | | 05/20/11 07:15 | 108-88-3 | |
| Xylene (Total) | **167** | ug/L | 25.0 | 6.8 | 2.5 | | 05/20/11 07:15 | 1330-20-7 | |
| m&p-Xylene | **125** | ug/L | 25.0 | 7.8 | 2.5 | | 05/20/11 07:15 | 179601-23-1 | |
| o-Xylene | **42.0** | ug/L | 12.5 | 4.0 | 2.5 | | 05/20/11 07:15 | 95-47-6 | |
| Dibromofluoromethane (S) | 111 | % | 70-130 | | 2.5 | | 05/20/11 07:15 | 1868-53-7 | |
| Toluene-d8 (S) | 102 | % | 70-130 | | 2.5 | | 05/20/11 07:15 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 104 | % | 70-130 | | 2.5 | | 05/20/11 07:15 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 127 | % | 70-130 | | 2.5 | | 05/20/11 07:15 | 17060-07-0 | |

**Sample: MW-7** **Lab ID: 9294372006** Collected: 05/16/11 10:03 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 05/20/11 16:49 | 05/21/11 09:41 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 113 | % | 60-140 | | 1 | 05/20/11 16:49 | 05/21/11 09:41 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | ND | ug/L | 5.0 | 4.0 | 1 | 05/18/11 16:45 | 05/19/11 21:46 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 05/19/11 07:10 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 05/19/11 07:10 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 07:10 | 71-43-2 | |



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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

**Sample: MW-7** **Lab ID: 9294372006** Collected: 05/16/11 10:03 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 05/19/11 07:10 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 05/19/11 07:10 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 05/19/11 07:10 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 05/19/11 07:10 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 07:10 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 05/19/11 07:10 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 07:10 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 05/19/11 07:10 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 07:10 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 05/19/11 07:10 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 07:10 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 05/19/11 07:10 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 05/19/11 07:10 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 07:10 | 95-47-6 | |
| Dibromofluoromethane (S) | 111 | % | 70-130 | | 1 | | 05/19/11 07:10 | 1868-53-7 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 05/19/11 07:10 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 94 | % | 70-130 | | 1 | | 05/19/11 07:10 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 124 | % | 70-130 | | 1 | | 05/19/11 07:10 | 17060-07-0 | |

**Sample: MW-8** **Lab ID: 9294372007** Collected: 05/16/11 09:55 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | **0.041** | ug/L | 0.020 | 0.020 | 1 | 05/20/11 16:49 | 05/21/11 09:59 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 108 | % | 60-140 | | 1 | 05/20/11 16:49 | 05/21/11 09:59 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | ND | ug/L | 5.0 | 4.0 | 1 | 05/18/11 16:45 | 05/19/11 21:50 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 05/19/11 07:28 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 05/19/11 07:28 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 07:28 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 05/19/11 07:28 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 05/19/11 07:28 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 05/19/11 07:28 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 05/19/11 07:28 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 07:28 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 05/19/11 07:28 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 07:28 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 05/19/11 07:28 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 07:28 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 05/19/11 07:28 | 91-20-3 | |



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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

**Sample: MW-8** **Lab ID: 9294372007** Collected: 05/16/11 09:55 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 07:28 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 05/19/11 07:28 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 05/19/11 07:28 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 07:28 | 95-47-6 | |
| Dibromofluoromethane (S) | 110 | % | 70-130 | | 1 | | 05/19/11 07:28 | 1868-53-7 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 05/19/11 07:28 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 92 | % | 70-130 | | 1 | | 05/19/11 07:28 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 121 | % | 70-130 | | 1 | | 05/19/11 07:28 | 17060-07-0 | |

**Sample: MW-9** **Lab ID: 9294372008** Collected: 05/16/11 10:30 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 05/20/11 16:50 | 05/21/11 10:18 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 110 | % | 60-140 | | 1 | 05/20/11 16:50 | 05/21/11 10:18 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | ND | ug/L | 5.0 | 4.0 | 1 | 05/18/11 16:45 | 05/19/11 21:53 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 05/19/11 07:46 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 05/19/11 07:46 | 994-05-8 | |
| Benzene | **2.6J** | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 07:46 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 05/19/11 07:46 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 05/19/11 07:46 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 05/19/11 07:46 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 05/19/11 07:46 | 107-06-2 | |
| Diisopropyl ether | **7.7** | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 07:46 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 05/19/11 07:46 | 64-17-5 | |
| Ethylbenzene | **4.1J** | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 07:46 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 05/19/11 07:46 | 637-92-3 | |
| Methyl-tert-butyl ether | **5.2** | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 07:46 | 1634-04-4 | |
| Naphthalene | **2.1J** | ug/L | 5.0 | 2.0 | 1 | | 05/19/11 07:46 | 91-20-3 | |
| Toluene | **8.8** | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 07:46 | 108-88-3 | |
| Xylene (Total) | **101** | ug/L | 10.0 | 2.7 | 1 | | 05/19/11 07:46 | 1330-20-7 | |
| m&p-Xylene | **59.6** | ug/L | 10.0 | 3.1 | 1 | | 05/19/11 07:46 | 179601-23-1 | |
| o-Xylene | **41.6** | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 07:46 | 95-47-6 | |
| Dibromofluoromethane (S) | 111 | % | 70-130 | | 1 | | 05/19/11 07:46 | 1868-53-7 | |
| Toluene-d8 (S) | 102 | % | 70-130 | | 1 | | 05/19/11 07:46 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 97 | % | 70-130 | | 1 | | 05/19/11 07:46 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 123 | % | 70-130 | | 1 | | 05/19/11 07:46 | 17060-07-0 | |



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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

**Sample: MW-10** **Lab ID: 9294372009** Collected: 05/16/11 11:55 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | **2.9** | ug/L | 0.099 | 0.099 | 5 | 05/18/11 17:26 | 05/19/11 12:04 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 0 | % | 60-140 | | 5 | 05/18/11 17:26 | 05/19/11 12:04 | 301-79-56 | S4 |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | ND | ug/L | 5.0 | 4.0 | 1 | 05/18/11 16:45 | 05/19/11 21:56 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 20000 | 15400 | 200 | | 05/20/11 07:33 | 75-85-4 | |
| tert-Amylmethyl ether | **2650** | ug/L | 2000 | 680 | 200 | | 05/20/11 07:33 | 994-05-8 | |
| Benzene | **12300** | ug/L | 1000 | 340 | 200 | | 05/20/11 07:33 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 20000 | 6420 | 200 | | 05/20/11 07:33 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 20000 | 11500 | 200 | | 05/20/11 07:33 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 10000 | 1460 | 200 | | 05/20/11 07:33 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 1000 | 360 | 200 | | 05/20/11 07:33 | 107-06-2 | |
| Diisopropyl ether | **15700** | ug/L | 1000 | 340 | 200 | | 05/20/11 07:33 | 108-20-3 | |
| Ethanol | ND | ug/L | 40000 | 27600 | 200 | | 05/20/11 07:33 | 64-17-5 | |
| Ethylbenzene | **3830** | ug/L | 1000 | 320 | 200 | | 05/20/11 07:33 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 2000 | 720 | 200 | | 05/20/11 07:33 | 637-92-3 | |
| Methyl-tert-butyl ether | **13100** | ug/L | 1000 | 340 | 200 | | 05/20/11 07:33 | 1634-04-4 | |
| Naphthalene | **610J** | ug/L | 1000 | 400 | 200 | | 05/20/11 07:33 | 91-20-3 | |
| Toluene | **28200** | ug/L | 1000 | 320 | 200 | | 05/20/11 07:33 | 108-88-3 | |
| Xylene (Total) | **20600** | ug/L | 2000 | 540 | 200 | | 05/20/11 07:33 | 1330-20-7 | |
| m&p-Xylene | **14500** | ug/L | 2000 | 620 | 200 | | 05/20/11 07:33 | 179601-23-1 | |
| o-Xylene | **6160** | ug/L | 1000 | 320 | 200 | | 05/20/11 07:33 | 95-47-6 | |
| Dibromofluoromethane (S) | 111 | % | 70-130 | | 200 | | 05/20/11 07:33 | 1868-53-7 | |
| Toluene-d8 (S) | 105 | % | 70-130 | | 200 | | 05/20/11 07:33 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 99 | % | 70-130 | | 200 | | 05/20/11 07:33 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 125 | % | 70-130 | | 200 | | 05/20/11 07:33 | 17060-07-0 | |

**Sample: MW-11** **Lab ID: 9294372010** Collected: 05/16/11 10:55 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 05/18/11 17:26 | 05/19/11 03:08 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 107 | % | 60-140 | | 1 | 05/18/11 17:26 | 05/19/11 03:08 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | ND | ug/L | 5.0 | 4.0 | 1 | 05/18/11 16:45 | 05/19/11 22:01 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | **469** | ug/L | 100 | 76.8 | 1 | | 05/19/11 08:05 | 75-85-4 | |
| tert-Amylmethyl ether | **46.0** | ug/L | 10.0 | 3.4 | 1 | | 05/19/11 08:05 | 994-05-8 | |
| Benzene | **32.9** | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 08:05 | 71-43-2 | |



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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

**Sample: MW-11** **Lab ID: 9294372010** Collected: 05/16/11 10:55 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 05/19/11 08:05 | 624-95-3 | |
| tert-Butyl Alcohol | **160** | ug/L | 100 | 57.7 | 1 | | 05/19/11 08:05 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 05/19/11 08:05 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 05/19/11 08:05 | 107-06-2 | |
| Diisopropyl ether | **454** | ug/L | 50.0 | 17.0 | 10 | | 05/19/11 21:15 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 05/19/11 08:05 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 08:05 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 05/19/11 08:05 | 637-92-3 | |
| Methyl-tert-butyl ether | **855** | ug/L | 50.0 | 17.0 | 10 | | 05/19/11 21:15 | 1634-04-4 | |
| Naphthalene | **5.3** | ug/L | 5.0 | 2.0 | 1 | | 05/19/11 08:05 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 08:05 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 05/19/11 08:05 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 05/19/11 08:05 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 08:05 | 95-47-6 | |
| Dibromofluoromethane (S) | 113 | % | 70-130 | | 1 | | 05/19/11 08:05 | 1868-53-7 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 05/19/11 08:05 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 97 | % | 70-130 | | 1 | | 05/19/11 08:05 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 117 | % | 70-130 | | 1 | | 05/19/11 08:05 | 17060-07-0 | |

**Sample: MW-12** **Lab ID: 9294372011** Collected: 05/16/11 11:42 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | **0.051** | ug/L | 0.020 | 0.020 | 1 | 05/18/11 17:26 | 05/19/11 03:27 | 106-93-4 | 1g |
| 1-Chloro-2-bromopropane (S) | 97 | % | 60-140 | | 1 | 05/18/11 17:26 | 05/19/11 03:27 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | ND | ug/L | 5.0 | 4.0 | 1 | 05/18/11 16:45 | 05/19/11 22:04 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | **549** | ug/L | 100 | 76.8 | 1 | | 05/19/11 08:46 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 05/19/11 08:46 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 08:46 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 05/19/11 08:46 | 624-95-3 | |
| tert-Butyl Alcohol | **145** | ug/L | 100 | 57.7 | 1 | | 05/19/11 08:46 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 05/19/11 08:46 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 05/19/11 08:46 | 107-06-2 | |
| Diisopropyl ether | **9.0** | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 08:46 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 05/19/11 08:46 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 08:46 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 05/19/11 08:46 | 637-92-3 | |
| Methyl-tert-butyl ether | **53.0** | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 08:46 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 05/19/11 08:46 | 91-20-3 | |



## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

**Sample: MW-12** **Lab ID: 9294372011** Collected: 05/16/11 11:42 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 08:46 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 05/19/11 08:46 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 05/19/11 08:46 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 08:46 | 95-47-6 | |
| Dibromofluoromethane (S) | 112 | % | 70-130 | | 1 | | 05/19/11 08:46 | 1868-53-7 | |
| Toluene-d8 (S) | 103 | % | 70-130 | | 1 | | 05/19/11 08:46 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 105 | % | 70-130 | | 1 | | 05/19/11 08:46 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 125 | % | 70-130 | | 1 | | 05/19/11 08:46 | 17060-07-0 | |

**Sample: MW-13** **Lab ID: 9294372012** Collected: 05/16/11 11:27 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 05/18/11 17:27 | 05/19/11 03:45 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 111 | % | 60-140 | | 1 | 05/18/11 17:27 | 05/19/11 03:45 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | **4.0J** | ug/L | 5.0 | 4.0 | 1 | 05/18/11 16:45 | 05/19/11 22:07 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | **82.8J** | ug/L | 100 | 76.8 | 1 | | 05/19/11 09:04 | 75-85-4 | |
| tert-Amylmethyl ether | **95.6** | ug/L | 10.0 | 3.4 | 1 | | 05/19/11 09:04 | 994-05-8 | |
| Benzene | **4.7J** | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 09:04 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 05/19/11 09:04 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 05/19/11 09:04 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 05/19/11 09:04 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 05/19/11 09:04 | 107-06-2 | |
| Diisopropyl ether | **808** | ug/L | 250 | 85.0 | 50 | | 05/19/11 21:33 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 05/19/11 09:04 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 09:04 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 05/19/11 09:04 | 637-92-3 | |
| Methyl-tert-butyl ether | **4220** | ug/L | 250 | 85.0 | 50 | | 05/19/11 21:33 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 05/19/11 09:04 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 09:04 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 05/19/11 09:04 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 05/19/11 09:04 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 09:04 | 95-47-6 | |
| Dibromofluoromethane (S) | 109 | % | 70-130 | | 1 | | 05/19/11 09:04 | 1868-53-7 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 05/19/11 09:04 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 94 | % | 70-130 | | 1 | | 05/19/11 09:04 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 119 | % | 70-130 | | 1 | | 05/19/11 09:04 | 17060-07-0 | |



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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

**Sample: MW-13R** **Lab ID: 9294372013** Collected: 05/16/11 11:18 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.019 | 0.019 | 1 | 05/18/11 17:27 | 05/19/11 04:03 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 107 | % | 60-140 | | 1 | 05/18/11 17:27 | 05/19/11 04:03 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | ND | ug/L | 5.0 | 4.0 | 1 | 05/18/11 16:45 | 05/19/11 22:21 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | **3110** | ug/L | 100 | 76.8 | 1 | | 05/19/11 09:22 | 75-85-4 | |
| tert-Amylmethyl ether | **510** | ug/L | 10.0 | 3.4 | 1 | | 05/19/11 09:22 | 994-05-8 | E |
| Benzene | **530** | ug/L | 500 | 170 | 100 | | 05/19/11 21:51 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 05/19/11 09:22 | 624-95-3 | |
| tert-Butyl Alcohol | **1090** | ug/L | 100 | 57.7 | 1 | | 05/19/11 09:22 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 05/19/11 09:22 | 762-75-4 | |
| 1,2-Dichloroethane | **15.3** | ug/L | 5.0 | 1.8 | 1 | | 05/19/11 09:22 | 107-06-2 | |
| Diisopropyl ether | **4860** | ug/L | 500 | 170 | 100 | | 05/19/11 21:51 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 05/19/11 09:22 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 09:22 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 05/19/11 09:22 | 637-92-3 | |
| Methyl-tert-butyl ether | **15600** | ug/L | 500 | 170 | 100 | | 05/19/11 21:51 | 1634-04-4 | |
| Naphthalene | **32.9** | ug/L | 5.0 | 2.0 | 1 | | 05/19/11 09:22 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 09:22 | 108-88-3 | |
| Xylene (Total) | **27.5** | ug/L | 10.0 | 2.7 | 1 | | 05/19/11 09:22 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 05/19/11 09:22 | 179601-23-1 | |
| o-Xylene | **26.0** | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 09:22 | 95-47-6 | |
| Dibromofluoromethane (S) | 108 | % | 70-130 | | 1 | | 05/19/11 09:22 | 1868-53-7 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 05/19/11 09:22 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 100 | % | 70-130 | | 1 | | 05/19/11 09:22 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 111 | % | 70-130 | | 1 | | 05/19/11 09:22 | 17060-07-0 | |

**Sample: MW-14** **Lab ID: 9294372014** Collected: 05/16/11 13:10 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.019 | 0.019 | 1 | 05/18/11 17:27 | 05/19/11 04:22 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 99 | % | 60-140 | | 1 | 05/18/11 17:27 | 05/19/11 04:22 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | ND | ug/L | 5.0 | 4.0 | 1 | 05/18/11 16:45 | 05/19/11 22:25 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | **570** | ug/L | 100 | 76.8 | 1 | | 05/19/11 09:40 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 05/19/11 09:40 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 09:40 | 71-43-2 | |



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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

**Sample: MW-14** **Lab ID: 9294372014** Collected: 05/16/11 13:10 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 05/19/11 09:40 | 624-95-3 | |
| tert-Butyl Alcohol | **137** | ug/L | 100 | 57.7 | 1 | | 05/19/11 09:40 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 05/19/11 09:40 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 05/19/11 09:40 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 09:40 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 05/19/11 09:40 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 09:40 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 05/19/11 09:40 | 637-92-3 | |
| Methyl-tert-butyl ether | **1.9J** | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 09:40 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 05/19/11 09:40 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 09:40 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 05/19/11 09:40 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 05/19/11 09:40 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 09:40 | 95-47-6 | |
| Dibromofluoromethane (S) | 110 | % | 70-130 | | 1 | | 05/19/11 09:40 | 1868-53-7 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 05/19/11 09:40 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 91 | % | 70-130 | | 1 | | 05/19/11 09:40 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 121 | % | 70-130 | | 1 | | 05/19/11 09:40 | 17060-07-0 | |

**Sample: MW-16** **Lab ID: 9294372015** Collected: 05/16/11 13:18 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 05/18/11 17:27 | 05/19/11 04:40 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 84 | % | 60-140 | | 1 | 05/18/11 17:27 | 05/19/11 04:40 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | ND | ug/L | 5.0 | 4.0 | 1 | 05/18/11 16:45 | 05/19/11 22:28 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 05/19/11 09:58 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 05/19/11 09:58 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 09:58 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 05/19/11 09:58 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 05/19/11 09:58 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 05/19/11 09:58 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 05/19/11 09:58 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 09:58 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 05/19/11 09:58 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 09:58 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 05/19/11 09:58 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 09:58 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 05/19/11 09:58 | 91-20-3 | |



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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

**Sample: MW-16** **Lab ID: 9294372015** Collected: 05/16/11 13:18 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 09:58 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 05/19/11 09:58 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 05/19/11 09:58 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 09:58 | 95-47-6 | |
| Dibromofluoromethane (S) | 113 | % | 70-130 | | 1 | | 05/19/11 09:58 | 1868-53-7 | |
| Toluene-d8 (S) | 99 | % | 70-130 | | 1 | | 05/19/11 09:58 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 93 | % | 70-130 | | 1 | | 05/19/11 09:58 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 122 | % | 70-130 | | 1 | | 05/19/11 09:58 | 17060-07-0 | |

**Sample: DMW-17** **Lab ID: 9294372016** Collected: 05/16/11 12:31 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.020 | 0.020 | 1 | 05/18/11 17:29 | 05/19/11 04:59 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 111 | % | 60-140 | | 1 | 05/18/11 17:29 | 05/19/11 04:59 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | **20.4** | ug/L | 5.0 | 4.0 | 1 | 05/19/11 17:00 | 05/20/11 18:50 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 05/19/11 10:16 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 05/19/11 10:16 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 10:16 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 05/19/11 10:16 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 05/19/11 10:16 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 05/19/11 10:16 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 05/19/11 10:16 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 10:16 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 05/19/11 10:16 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 10:16 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 05/19/11 10:16 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 10:16 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 05/19/11 10:16 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 10:16 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 05/19/11 10:16 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 05/19/11 10:16 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 10:16 | 95-47-6 | |
| Dibromofluoromethane (S) | 106 | % | 70-130 | | 1 | | 05/19/11 10:16 | 1868-53-7 | |
| Toluene-d8 (S) | 97 | % | 70-130 | | 1 | | 05/19/11 10:16 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 101 | % | 70-130 | | 1 | | 05/19/11 10:16 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 121 | % | 70-130 | | 1 | | 05/19/11 10:16 | 17060-07-0 | |



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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

**Sample: MW-18** **Lab ID: 9294372017** Collected: 05/16/11 10:30 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.019 | 0.019 | 1 | 05/18/11 17:29 | 05/19/11 05:17 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 115 | % | 60-140 | | 1 | 05/18/11 17:29 | 05/19/11 05:17 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | **4.0J** | ug/L | 5.0 | 4.0 | 1 | 05/19/11 17:00 | 05/20/11 18:57 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 05/19/11 10:34 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 05/19/11 10:34 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 10:34 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 05/19/11 10:34 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 05/19/11 10:34 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 05/19/11 10:34 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 05/19/11 10:34 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 10:34 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 05/19/11 10:34 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 10:34 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 05/19/11 10:34 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 10:34 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 05/19/11 10:34 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 10:34 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 05/19/11 10:34 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 05/19/11 10:34 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 10:34 | 95-47-6 | |
| Dibromofluoromethane (S) | 113 | % | 70-130 | | 1 | | 05/19/11 10:34 | 1868-53-7 | |
| Toluene-d8 (S) | 100 | % | 70-130 | | 1 | | 05/19/11 10:34 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 99 | % | 70-130 | | 1 | | 05/19/11 10:34 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 126 | % | 70-130 | | 1 | | 05/19/11 10:34 | 17060-07-0 | |

**Sample: MW-19** **Lab ID: 9294372018** Collected: 05/16/11 11:30 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | **0.15** | ug/L | 0.025 | 0.025 | 1 | 05/18/11 17:30 | 05/19/11 05:35 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 97 | % | 60-140 | | 1 | 05/18/11 17:30 | 05/19/11 05:35 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | **22.9** | ug/L | 5.0 | 4.0 | 1 | 05/19/11 17:00 | 05/20/11 19:04 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 05/19/11 10:53 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 05/19/11 10:53 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 10:53 | 71-43-2 | |



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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

**Sample: MW-19** **Lab ID: 9294372018** Collected: 05/16/11 11:30 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 05/19/11 10:53 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 05/19/11 10:53 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 05/19/11 10:53 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 05/19/11 10:53 | 107-06-2 | |
| Diisopropyl ether | **40.2** | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 10:53 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 05/19/11 10:53 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 10:53 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 05/19/11 10:53 | 637-92-3 | |
| Methyl-tert-butyl ether | **405** | ug/L | 20.0 | 6.8 | 4 | | 05/19/11 22:09 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 05/19/11 10:53 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 10:53 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 05/19/11 10:53 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 05/19/11 10:53 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 10:53 | 95-47-6 | |
| Dibromofluoromethane (S) | 112 | % | 70-130 | | 1 | | 05/19/11 10:53 | 1868-53-7 | |
| Toluene-d8 (S) | 101 | % | 70-130 | | 1 | | 05/19/11 10:53 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 98 | % | 70-130 | | 1 | | 05/19/11 10:53 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 120 | % | 70-130 | | 1 | | 05/19/11 10:53 | 17060-07-0 | |

**Sample: MW-20** **Lab ID: 9294372019** Collected: 05/16/11 10:50 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | **0.039** | ug/L | 0.019 | 0.019 | 1 | 05/18/11 17:30 | 05/19/11 05:53 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 123 | % | 60-140 | | 1 | 05/18/11 17:30 | 05/19/11 05:53 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | **14.8** | ug/L | 5.0 | 4.0 | 1 | 05/19/11 17:00 | 05/20/11 19:08 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | **118** | ug/L | 100 | 76.8 | 1 | | 05/19/11 11:12 | 75-85-4 | |
| tert-Amylmethyl ether | **11.1** | ug/L | 10.0 | 3.4 | 1 | | 05/19/11 11:12 | 994-05-8 | |
| Benzene | **4.4J** | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 11:12 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 05/19/11 11:12 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 05/19/11 11:12 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 05/19/11 11:12 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 05/19/11 11:12 | 107-06-2 | |
| Diisopropyl ether | **110** | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 11:12 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 05/19/11 11:12 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 11:12 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 05/19/11 11:12 | 637-92-3 | |
| Methyl-tert-butyl ether | **324** | ug/L | 20.0 | 6.8 | 4 | | 05/20/11 06:02 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 05/19/11 11:12 | 91-20-3 | |



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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

**Sample: MW-20** **Lab ID: 9294372019** Collected: 05/16/11 10:50 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 11:12 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 05/19/11 11:12 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 05/19/11 11:12 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 11:12 | 95-47-6 | |
| Dibromofluoromethane (S) | 110 | % | 70-130 | | 1 | | 05/19/11 11:12 | 1868-53-7 | |
| Toluene-d8 (S) | 101 | % | 70-130 | | 1 | | 05/19/11 11:12 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 97 | % | 70-130 | | 1 | | 05/19/11 11:12 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 119 | % | 70-130 | | 1 | | 05/19/11 11:12 | 17060-07-0 | |

**Sample: MW-21** **Lab ID: 9294372020** Collected: 05/16/11 10:45 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | **0.051** | ug/L | 0.020 | 0.020 | 1 | 05/18/11 17:31 | 05/19/11 06:12 | 106-93-4 | 1g |
| 1-Chloro-2-bromopropane (S) | 105 | % | 60-140 | | 1 | 05/18/11 17:31 | 05/19/11 06:12 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | **108** | ug/L | 5.0 | 4.0 | 1 | 05/19/11 17:00 | 05/20/11 19:12 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 05/19/11 11:30 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 05/19/11 11:30 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 11:30 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 05/19/11 11:30 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 05/19/11 11:30 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 05/19/11 11:30 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 05/19/11 11:30 | 107-06-2 | |
| Diisopropyl ether | **9.0** | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 11:30 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 05/19/11 11:30 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 11:30 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 05/19/11 11:30 | 637-92-3 | |
| Methyl-tert-butyl ether | **153** | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 11:30 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 05/19/11 11:30 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 11:30 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 05/19/11 11:30 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 05/19/11 11:30 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 11:30 | 95-47-6 | |
| Dibromofluoromethane (S) | 108 | % | 70-130 | | 1 | | 05/19/11 11:30 | 1868-53-7 | |
| Toluene-d8 (S) | 102 | % | 70-130 | | 1 | | 05/19/11 11:30 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 95 | % | 70-130 | | 1 | | 05/19/11 11:30 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 121 | % | 70-130 | | 1 | | 05/19/11 11:30 | 17060-07-0 | |



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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

**Sample: MW-22** **Lab ID: 9294372021** Collected: 05/16/11 11:05 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | **0.22** | ug/L | 0.019 | 0.019 | 1 | 05/18/11 17:31 | 05/19/11 06:30 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 105 | % | 60-140 | | 1 | 05/18/11 17:31 | 05/19/11 06:30 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | **11.2** | ug/L | 5.0 | 4.0 | 1 | 05/19/11 17:00 | 05/20/11 19:25 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | **629** | ug/L | 100 | 76.8 | 1 | | 05/19/11 11:48 | 75-85-4 | |
| tert-Amylmethyl ether | **107** | ug/L | 10.0 | 3.4 | 1 | | 05/19/11 11:48 | 994-05-8 | |
| Benzene | **269** | ug/L | 125 | 42.5 | 25 | | 05/24/11 15:11 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 05/19/11 11:48 | 624-95-3 | |
| tert-Butyl Alcohol | **444** | ug/L | 100 | 57.7 | 1 | | 05/19/11 11:48 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 05/19/11 11:48 | 762-75-4 | |
| 1,2-Dichloroethane | **4.4J** | ug/L | 5.0 | 1.8 | 1 | | 05/19/11 11:48 | 107-06-2 | |
| Diisopropyl ether | **1350** | ug/L | 125 | 42.5 | 25 | | 05/24/11 15:11 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 05/19/11 11:48 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 11:48 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 05/19/11 11:48 | 637-92-3 | |
| Methyl-tert-butyl ether | **4010** | ug/L | 2500 | 850 | 500 | | 05/20/11 06:20 | 1634-04-4 | |
| Naphthalene | **8.7** | ug/L | 5.0 | 2.0 | 1 | | 05/19/11 11:48 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 11:48 | 108-88-3 | |
| Xylene (Total) | **21.6** | ug/L | 10.0 | 2.7 | 1 | | 05/19/11 11:48 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 05/19/11 11:48 | 179601-23-1 | |
| o-Xylene | **21.2** | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 11:48 | 95-47-6 | |
| Dibromofluoromethane (S) | 110 | % | 70-130 | | 1 | | 05/19/11 11:48 | 1868-53-7 | |
| Toluene-d8 (S) | 104 | % | 70-130 | | 1 | | 05/19/11 11:48 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 96 | % | 70-130 | | 1 | | 05/19/11 11:48 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 120 | % | 70-130 | | 1 | | 05/19/11 11:48 | 17060-07-0 | |

**Sample: MW-23** **Lab ID: 9294372022** Collected: 05/16/11 11:05 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.019 | 0.019 | 1 | 05/18/11 17:31 | 05/19/11 06:49 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 117 | % | 60-140 | | 1 | 05/18/11 17:31 | 05/19/11 06:49 | 301-79-56 | |
| **6010 MET ICP** | Analytical Method: EPA 6010 Preparation Method: EPA 3010 | | | | | | | | |
| Lead | ND | ug/L | 5.0 | 4.0 | 1 | 05/19/11 17:00 | 05/20/11 19:29 | 7439-92-1 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 05/20/11 05:08 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 05/20/11 05:08 | 994-05-8 | |
| Benzene | **2.2J** | ug/L | 5.0 | 1.7 | 1 | | 05/20/11 05:08 | 71-43-2 | |



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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

**Sample: MW-23** **Lab ID: 9294372022** Collected: 05/16/11 11:05 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 05/20/11 05:08 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 05/20/11 05:08 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 05/20/11 05:08 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 05/20/11 05:08 | 107-06-2 | |
| Diisopropyl ether | **25.8** | ug/L | 5.0 | 1.7 | 1 | | 05/20/11 05:08 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 05/20/11 05:08 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/20/11 05:08 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 05/20/11 05:08 | 637-92-3 | |
| Methyl-tert-butyl ether | **33.1** | ug/L | 5.0 | 1.7 | 1 | | 05/20/11 05:08 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 05/20/11 05:08 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/20/11 05:08 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 05/20/11 05:08 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 05/20/11 05:08 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/20/11 05:08 | 95-47-6 | |
| Dibromofluoromethane (S) | 110 | % | 70-130 | | 1 | | 05/20/11 05:08 | 1868-53-7 | |
| Toluene-d8 (S) | 98 | % | 70-130 | | 1 | | 05/20/11 05:08 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 97 | % | 70-130 | | 1 | | 05/20/11 05:08 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 123 | % | 70-130 | | 1 | | 05/20/11 05:08 | 17060-07-0 | |

**Sample: CLS-WW** **Lab ID: 9294372023** Collected: 05/16/11 10:10 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8011 GCS EDB and DBCP** | Analytical Method: EPA 8011 Preparation Method: EPA 8011 | | | | | | | | |
| 1,2-Dibromoethane (EDB) | ND | ug/L | 0.019 | 0.019 | 1 | 05/18/11 17:31 | 05/19/11 07:43 | 106-93-4 | |
| 1-Chloro-2-bromopropane (S) | 103 | % | 60-140 | | 1 | 05/18/11 17:31 | 05/19/11 07:43 | 301-79-56 | |
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 05/19/11 12:25 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 05/19/11 12:25 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 12:25 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 05/19/11 12:25 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 05/19/11 12:25 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 05/19/11 12:25 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 05/19/11 12:25 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 12:25 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 05/19/11 12:25 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 12:25 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 05/19/11 12:25 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 12:25 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 05/19/11 12:25 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 12:25 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 05/19/11 12:25 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 05/19/11 12:25 | 179601-23-1 | |



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## ANALYTICAL RESULTS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

**Sample: CLS-WW** **Lab ID: 9294372023** Collected: 05/16/11 10:10 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 12:25 | 95-47-6 | |
| Dibromofluoromethane (S) | 111 | % | 70-130 | | 1 | | 05/19/11 12:25 | 1868-53-7 | |
| Toluene-d8 (S) | 103 | % | 70-130 | | 1 | | 05/19/11 12:25 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 96 | % | 70-130 | | 1 | | 05/19/11 12:25 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 122 | % | 70-130 | | 1 | | 05/19/11 12:25 | 17060-07-0 | |

**Sample: CP-WW2** **Lab ID: 9294372024** Collected: 05/16/11 11:15 Received: 05/17/11 15:30 Matrix: Water

| Parameters | Results | Units | Report Limit | MDL | DF | Prepared | Analyzed | CAS No. | Qual |
|---|---|---|---|---|---|---|---|---|---|
| **8260 MSV Oxygenates** | Analytical Method: EPA 8260 | | | | | | | | |
| tert-Amyl Alcohol | ND | ug/L | 100 | 76.8 | 1 | | 05/19/11 22:28 | 75-85-4 | |
| tert-Amylmethyl ether | ND | ug/L | 10.0 | 3.4 | 1 | | 05/19/11 22:28 | 994-05-8 | |
| Benzene | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 22:28 | 71-43-2 | |
| 3,3-Dimethyl-1-Butanol | ND | ug/L | 100 | 32.1 | 1 | | 05/19/11 22:28 | 624-95-3 | |
| tert-Butyl Alcohol | ND | ug/L | 100 | 57.7 | 1 | | 05/19/11 22:28 | 75-65-0 | |
| tert-Butyl Formate | ND | ug/L | 50.0 | 7.3 | 1 | | 05/19/11 22:28 | 762-75-4 | |
| 1,2-Dichloroethane | ND | ug/L | 5.0 | 1.8 | 1 | | 05/19/11 22:28 | 107-06-2 | |
| Diisopropyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 22:28 | 108-20-3 | |
| Ethanol | ND | ug/L | 200 | 138 | 1 | | 05/19/11 22:28 | 64-17-5 | |
| Ethylbenzene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 22:28 | 100-41-4 | |
| Ethyl-tert-butyl ether | ND | ug/L | 10.0 | 3.6 | 1 | | 05/19/11 22:28 | 637-92-3 | |
| Methyl-tert-butyl ether | ND | ug/L | 5.0 | 1.7 | 1 | | 05/19/11 22:28 | 1634-04-4 | |
| Naphthalene | ND | ug/L | 5.0 | 2.0 | 1 | | 05/19/11 22:28 | 91-20-3 | |
| Toluene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 22:28 | 108-88-3 | |
| Xylene (Total) | ND | ug/L | 10.0 | 2.7 | 1 | | 05/19/11 22:28 | 1330-20-7 | |
| m&p-Xylene | ND | ug/L | 10.0 | 3.1 | 1 | | 05/19/11 22:28 | 179601-23-1 | |
| o-Xylene | ND | ug/L | 5.0 | 1.6 | 1 | | 05/19/11 22:28 | 95-47-6 | |
| Dibromofluoromethane (S) | 110 | % | 70-130 | | 1 | | 05/19/11 22:28 | 1868-53-7 | |
| Toluene-d8 (S) | 101 | % | 70-130 | | 1 | | 05/19/11 22:28 | 2037-26-5 | |
| 4-Bromofluorobenzene (S) | 100 | % | 70-130 | | 1 | | 05/19/11 22:28 | 460-00-4 | |
| 1,2-Dichloroethane-d4 (S) | 126 | % | 70-130 | | 1 | | 05/19/11 22:28 | 17060-07-0 | |



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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

QC Batch: OEXT/13633 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 9294372009, 9294372010, 9294372011, 9294372012, 9294372013, 9294372014, 9294372015, 9294372016, 9294372017, 9294372018, 9294372019, 9294372020, 9294372021, 9294372022, 9294372023

METHOD BLANK: 607997 Matrix: Water
Associated Lab Samples: 9294372009, 9294372010, 9294372011, 9294372012, 9294372013, 9294372014, 9294372015, 9294372016, 9294372017, 9294372018, 9294372019, 9294372020, 9294372021, 9294372022, 9294372023

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | ND | 0.020 | 05/19/11 01:55 | |
| 1-Chloro-2-bromopropane (S) | % | 118 | 60-140 | 05/19/11 01:55 | |

LABORATORY CONTROL SAMPLE & LCSD: 607998 607999

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | .28 | 0.34 | 0.34 | 122 | 118 | 60-140 | 2 | 20 | |
| 1-Chloro-2-bromopropane (S) | % | | | | 112 | 113 | 60-140 | | | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 608000 608001

| Parameter | Units | 9294372022 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | ND | .28 | .28 | 0.35 | 0.36 | 126 | 130 | 60-140 | 3 | 20 | |
| 1-Chloro-2-bromopropane (S) | % | | | | | | 104 | 107 | 60-140 | | | |

SAMPLE DUPLICATE: 608002

| Parameter | Units | 9294372023 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | ND | ND | | 20 | |
| 1-Chloro-2-bromopropane (S) | % | 103 | 105 | 6 | | |



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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

QC Batch: OEXT/13662 Analysis Method: EPA 8011
QC Batch Method: EPA 8011 Analysis Description: GCS 8011 EDB DBCP
Associated Lab Samples: 9294372001, 9294372002, 9294372003, 9294372004, 9294372005, 9294372006, 9294372007, 9294372008

METHOD BLANK: 609451 Matrix: Water
Associated Lab Samples: 9294372001, 9294372002, 9294372003, 9294372004, 9294372005, 9294372006, 9294372007, 9294372008

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | ND | 0.020 | 05/21/11 02:58 | |
| 1-Chloro-2-bromopropane (S) | % | 111 | 60-140 | 05/21/11 02:58 | |

LABORATORY CONTROL SAMPLE & LCSD: 609452 609453

| Parameter | Units | Spike Conc. | LCS Result | LCSD Result | LCS % Rec | LCSD % Rec | % Rec Limits | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | .28 | 0.33 | 0.32 | 118 | 112 | 60-140 | 4 | 20 | |
| 1-Chloro-2-bromopropane (S) | % | | | | 118 | 111 | 60-140 | | | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 609454 609455

| Parameter | Units | 9293981004 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | ND | .28 | .28 | 0.34 | 0.34 | 118 | 120 | 60-140 | 2 | 20 | |
| 1-Chloro-2-bromopropane (S) | % | | | | | | 110 | 112 | 60-140 | | | |

SAMPLE DUPLICATE: 609456

| Parameter | Units | 9294372004 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dibromoethane (EDB) | ug/L | 0.46 | 0.47 | 1 | 20 | |
| 1-Chloro-2-bromopropane (S) | % | 117 | 119 | 3 | | |



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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

QC Batch: MPRP/8391 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 9294372001, 9294372002, 9294372003, 9294372004, 9294372005, 9294372006, 9294372007, 9294372008, 9294372009, 9294372010, 9294372011, 9294372012, 9294372013, 9294372014, 9294372015

METHOD BLANK: 608028 Matrix: Water
Associated Lab Samples: 9294372001, 9294372002, 9294372003, 9294372004, 9294372005, 9294372006, 9294372007, 9294372008, 9294372009, 9294372010, 9294372011, 9294372012, 9294372013, 9294372014, 9294372015

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Lead | ug/L | ND | 5.0 | 05/19/11 13:47 | |

LABORATORY CONTROL SAMPLE: 608029

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Lead | ug/L | 500 | 451 | 90 | 80-120 | |

MATRIX SPIKE SAMPLE: 608162

| Parameter | Units | 9294300001 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| Lead | ug/L | ND | 500 | 386 | 77 | 75-125 | |

SAMPLE DUPLICATE: 608163

| Parameter | Units | 9294300002 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Lead | ug/L | ND | ND | | 20 | |



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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

QC Batch: MPRP/8396 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 9294372016, 9294372017, 9294372018, 9294372019, 9294372020, 9294372021, 9294372022

METHOD BLANK: 608329 Matrix: Water
Associated Lab Samples: 9294372016, 9294372017, 9294372018, 9294372019, 9294372020, 9294372021, 9294372022

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| Lead | ug/L | ND | 5.0 | 05/20/11 18:26 | |

LABORATORY CONTROL SAMPLE: 608330

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Lead | ug/L | 500 | 450 | 90 | 80-120 | |

MATRIX SPIKE SAMPLE: 608331

| Parameter | Units | 9294372016 Result | Spike Conc. | MS Result | MS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|---|
| Lead | ug/L | 20.4 | 500 | 446 | 85 | 75-125 | |

SAMPLE DUPLICATE: 608332

| Parameter | Units | 9294372017 Result | Dup Result | RPD | Max RPD | Qualifiers |
|---|---|---|---|---|---|---|
| Lead | ug/L | 4.0J | 4.7J | | 20 | |



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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

QC Batch: MSV/15327 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Oxygenates SC
Associated Lab Samples: 9294372006, 9294372007, 9294372008, 9294372010, 9294372011, 9294372012, 9294372013, 9294372014, 9294372015, 9294372016, 9294372017, 9294372018, 9294372019, 9294372020, 9294372021, 9294372023

METHOD BLANK: 608127 Matrix: Water
Associated Lab Samples: 9294372006, 9294372007, 9294372008, 9294372010, 9294372011, 9294372012, 9294372013, 9294372014, 9294372015, 9294372016, 9294372017, 9294372018, 9294372019, 9294372020, 9294372021, 9294372023

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | 5.0 | 05/19/11 05:21 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | 100 | 05/19/11 05:21 | |
| Benzene | ug/L | ND | 5.0 | 05/19/11 05:21 | |
| Diisopropyl ether | ug/L | ND | 5.0 | 05/19/11 05:21 | |
| Ethanol | ug/L | ND | 200 | 05/19/11 05:21 | |
| Ethyl-tert-butyl ether | ug/L | ND | 10.0 | 05/19/11 05:21 | |
| Ethylbenzene | ug/L | ND | 5.0 | 05/19/11 05:21 | |
| m&p-Xylene | ug/L | ND | 10.0 | 05/19/11 05:21 | |
| Methyl-tert-butyl ether | ug/L | ND | 5.0 | 05/19/11 05:21 | |
| Naphthalene | ug/L | ND | 5.0 | 05/19/11 05:21 | |
| o-Xylene | ug/L | ND | 5.0 | 05/19/11 05:21 | |
| tert-Amyl Alcohol | ug/L | ND | 100 | 05/19/11 05:21 | |
| tert-Amylmethyl ether | ug/L | ND | 10.0 | 05/19/11 05:21 | |
| tert-Butyl Alcohol | ug/L | ND | 100 | 05/19/11 05:21 | |
| tert-Butyl Formate | ug/L | ND | 50.0 | 05/19/11 05:21 | |
| Toluene | ug/L | ND | 5.0 | 05/19/11 05:21 | |
| Xylene (Total) | ug/L | ND | 10.0 | 05/19/11 05:21 | |
| 1,2-Dichloroethane-d4 (S) | % | 119 | 70-130 | 05/19/11 05:21 | |
| 4-Bromofluorobenzene (S) | % | 100 | 70-130 | 05/19/11 05:21 | |
| Dibromofluoromethane (S) | % | 108 | 70-130 | 05/19/11 05:21 | |
| Toluene-d8 (S) | % | 95 | 70-130 | 05/19/11 05:21 | |

LABORATORY CONTROL SAMPLE: 608128

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | 50 | 61.6 | 123 | 70-130 | |
| 3,3-Dimethyl-1-Butanol | ug/L | 1000 | 1070 | 107 | 70-130 | |
| Benzene | ug/L | 50 | 50.8 | 102 | 70-130 | |
| Diisopropyl ether | ug/L | 50 | 56.7 | 113 | 70-130 | |
| Ethanol | ug/L | 2000 | 2800 | 140 | 70-130 | L3 |
| Ethyl-tert-butyl ether | ug/L | 100 | 119 | 119 | 70-130 | |
| Ethylbenzene | ug/L | 50 | 50.3 | 101 | 70-130 | |
| m&p-Xylene | ug/L | 100 | 103 | 103 | 70-130 | |
| Methyl-tert-butyl ether | ug/L | 50 | 58.5 | 117 | 70-130 | |
| Naphthalene | ug/L | 50 | 57.6 | 115 | 70-130 | |
| o-Xylene | ug/L | 50 | 50.9 | 102 | 70-130 | |
| tert-Amyl Alcohol | ug/L | 1000 | 1110 | 111 | 70-130 | |
| tert-Amylmethyl ether | ug/L | 100 | 111 | 111 | 70-130 | |
| tert-Butyl Alcohol | ug/L | 500 | 623 | 125 | 70-130 | |
| tert-Butyl Formate | ug/L | 400 | 417 | 104 | 70-130 | |



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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

LABORATORY CONTROL SAMPLE: 608128

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Toluene | ug/L | 50 | 49.7 | 99 | 70-130 | |
| Xylene (Total) | ug/L | 150 | 154 | 102 | 70-130 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 118 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 97 | 70-130 | |
| Dibromofluoromethane (S) | % | | | 107 | 70-130 | |
| Toluene-d8 (S) | % | | | 100 | 70-130 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 608129 608130

| Parameter | Units | 9294372006 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | 50 | 50 | 63.4 | 61.5 | 127 | 123 | 70-130 | 3 | 30 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | 1000 | 1000 | 946 | 993 | 95 | 99 | 70-130 | 5 | 30 | |
| Benzene | ug/L | ND | 50 | 50 | 57.0 | 55.9 | 114 | 112 | 70-130 | 2 | 30 | |
| Diisopropyl ether | ug/L | ND | 50 | 50 | 59.6 | 58.3 | 119 | 117 | 70-130 | 2 | 30 | |
| Ethanol | ug/L | ND | 2000 | 2000 | 1560 | 2600 | 78 | 130 | 70-130 | 50 | 30 | R1 |
| Ethyl-tert-butyl ether | ug/L | ND | 100 | 100 | 122 | 119 | 122 | 119 | 70-130 | 3 | 30 | |
| Ethylbenzene | ug/L | ND | 50 | 50 | 55.7 | 53.7 | 111 | 107 | 70-130 | 4 | 30 | |
| m&p-Xylene | ug/L | ND | 100 | 100 | 114 | 113 | 114 | 113 | 70-130 | 1 | 30 | |
| Methyl-tert-butyl ether | ug/L | ND | 50 | 50 | 61.1 | 58.6 | 120 | 115 | 70-130 | 4 | 30 | |
| Naphthalene | ug/L | ND | 50 | 50 | 52.8 | 52.7 | 106 | 105 | 70-130 | 0 | 30 | |
| o-Xylene | ug/L | ND | 50 | 50 | 54.5 | 54.5 | 109 | 109 | 70-130 | 0 | 30 | |
| tert-Amyl Alcohol | ug/L | ND | 1000 | 1000 | 961 | 1080 | 96 | 108 | 70-130 | 11 | 30 | |
| tert-Amylmethyl ether | ug/L | ND | 100 | 100 | 117 | 115 | 117 | 115 | 70-130 | 2 | 30 | |
| tert-Butyl Alcohol | ug/L | ND | 500 | 500 | 463 | 573 | 93 | 115 | 70-130 | 21 | 30 | |
| tert-Butyl Formate | ug/L | ND | 400 | 400 | ND | ND | 0 | 0 | 70-130 | | 30 | P5 |
| Toluene | ug/L | ND | 50 | 50 | 57.1 | 56.6 | 114 | 113 | 70-130 | 1 | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | | | 114 | 113 | 70-130 | | | |
| 4-Bromofluorobenzene (S) | % | | | | | | 99 | 100 | 70-130 | | | |
| Dibromofluoromethane (S) | % | | | | | | 106 | 102 | 70-130 | | | |
| Toluene-d8 (S) | % | | | | | | 102 | 102 | 70-130 | | | |



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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

QC Batch: MSV/15328 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV Oxygenates SC
Associated Lab Samples: 9294372001, 9294372002, 9294372003, 9294372004, 9294372005, 9294372009

METHOD BLANK: 608131 Matrix: Water
Associated Lab Samples: 9294372001, 9294372002, 9294372003, 9294372004, 9294372005, 9294372009

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | 5.0 | 05/19/11 05:03 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | 100 | 05/19/11 05:03 | |
| Benzene | ug/L | ND | 5.0 | 05/19/11 05:03 | |
| Diisopropyl ether | ug/L | ND | 5.0 | 05/19/11 05:03 | |
| Ethanol | ug/L | ND | 200 | 05/19/11 05:03 | |
| Ethyl-tert-butyl ether | ug/L | ND | 10.0 | 05/19/11 05:03 | |
| Ethylbenzene | ug/L | ND | 5.0 | 05/19/11 05:03 | |
| m&p-Xylene | ug/L | ND | 10.0 | 05/19/11 05:03 | |
| Methyl-tert-butyl ether | ug/L | ND | 5.0 | 05/19/11 05:03 | |
| Naphthalene | ug/L | ND | 5.0 | 05/19/11 05:03 | |
| o-Xylene | ug/L | ND | 5.0 | 05/19/11 05:03 | |
| tert-Amyl Alcohol | ug/L | ND | 100 | 05/19/11 05:03 | |
| tert-Amylmethyl ether | ug/L | ND | 10.0 | 05/19/11 05:03 | |
| tert-Butyl Alcohol | ug/L | ND | 100 | 05/19/11 05:03 | |
| tert-Butyl Formate | ug/L | ND | 50.0 | 05/19/11 05:03 | |
| Toluene | ug/L | ND | 5.0 | 05/19/11 05:03 | |
| Xylene (Total) | ug/L | ND | 10.0 | 05/19/11 05:03 | |
| 1,2-Dichloroethane-d4 (S) | % | 111 | 70-130 | 05/19/11 05:03 | |
| 4-Bromofluorobenzene (S) | % | 87 | 70-130 | 05/19/11 05:03 | |
| Dibromofluoromethane (S) | % | 105 | 70-130 | 05/19/11 05:03 | |
| Toluene-d8 (S) | % | 98 | 70-130 | 05/19/11 05:03 | |

LABORATORY CONTROL SAMPLE: 608132

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | 50 | 59.9 | 120 | 70-130 | |
| 3,3-Dimethyl-1-Butanol | ug/L | 1000 | 1100 | 110 | 70-130 | |
| Benzene | ug/L | 50 | 48.5 | 97 | 70-130 | |
| Diisopropyl ether | ug/L | 50 | 54.5 | 109 | 70-130 | |
| Ethanol | ug/L | 2000 | 2420 | 121 | 70-130 | |
| Ethyl-tert-butyl ether | ug/L | 100 | 111 | 111 | 70-130 | |
| Ethylbenzene | ug/L | 50 | 50.8 | 102 | 70-130 | |
| m&p-Xylene | ug/L | 100 | 101 | 101 | 70-130 | |
| Methyl-tert-butyl ether | ug/L | 50 | 55.8 | 112 | 70-130 | |
| Naphthalene | ug/L | 50 | 58.4 | 117 | 70-130 | |
| o-Xylene | ug/L | 50 | 49.7 | 99 | 70-130 | |
| tert-Amyl Alcohol | ug/L | 1000 | 1160 | 116 | 70-130 | |
| tert-Amylmethyl ether | ug/L | 100 | 111 | 111 | 70-130 | |
| tert-Butyl Alcohol | ug/L | 500 | 607 | 121 | 70-130 | |
| tert-Butyl Formate | ug/L | 400 | 428 | 107 | 70-130 | |
| Toluene | ug/L | 50 | 47.8 | 96 | 70-130 | |



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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

LABORATORY CONTROL SAMPLE: 608132

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Xylene (Total) | ug/L | 150 | 151 | 101 | 70-130 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 115 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 98 | 70-130 | |
| Dibromofluoromethane (S) | % | | | 106 | 70-130 | |
| Toluene-d8 (S) | % | | | 102 | 70-130 | |



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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

QC Batch: MSV/15336
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Oxygenates SC
Associated Lab Samples: 9294372024

METHOD BLANK: 608730
Matrix: Water
Associated Lab Samples: 9294372024

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | 5.0 | 05/19/11 17:18 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | 100 | 05/19/11 17:18 | |
| Benzene | ug/L | ND | 5.0 | 05/19/11 17:18 | |
| Diisopropyl ether | ug/L | ND | 5.0 | 05/19/11 17:18 | |
| Ethanol | ug/L | 229 | 200 | 05/19/11 17:18 | B- |
| Ethyl-tert-butyl ether | ug/L | ND | 10.0 | 05/19/11 17:18 | |
| Ethylbenzene | ug/L | ND | 5.0 | 05/19/11 17:18 | |
| m&p-Xylene | ug/L | ND | 10.0 | 05/19/11 17:18 | |
| Methyl-tert-butyl ether | ug/L | ND | 5.0 | 05/19/11 17:18 | |
| Naphthalene | ug/L | ND | 5.0 | 05/19/11 17:18 | |
| o-Xylene | ug/L | ND | 5.0 | 05/19/11 17:18 | |
| tert-Amyl Alcohol | ug/L | ND | 100 | 05/19/11 17:18 | |
| tert-Amylmethyl ether | ug/L | ND | 10.0 | 05/19/11 17:18 | |
| tert-Butyl Alcohol | ug/L | ND | 100 | 05/19/11 17:18 | |
| tert-Butyl Formate | ug/L | ND | 50.0 | 05/19/11 17:18 | |
| Toluene | ug/L | ND | 5.0 | 05/19/11 17:18 | |
| Xylene (Total) | ug/L | ND | 10.0 | 05/19/11 17:18 | |
| 1,2-Dichloroethane-d4 (S) | % | 112 | 70-130 | 05/19/11 17:18 | |
| 4-Bromofluorobenzene (S) | % | 101 | 70-130 | 05/19/11 17:18 | |
| Dibromofluoromethane (S) | % | 106 | 70-130 | 05/19/11 17:18 | |
| Toluene-d8 (S) | % | 98 | 70-130 | 05/19/11 17:18 | |

LABORATORY CONTROL SAMPLE: 608731

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | 50 | 57.4 | 115 | 70-130 | |
| 3,3-Dimethyl-1-Butanol | ug/L | 1000 | 921 | 92 | 70-130 | |
| Benzene | ug/L | 50 | 47.2 | 94 | 70-130 | |
| Diisopropyl ether | ug/L | 50 | 50.9 | 102 | 70-130 | |
| Ethanol | ug/L | 2000 | 3220 | 161 | 70-130 | L3 |
| Ethyl-tert-butyl ether | ug/L | 100 | 105 | 105 | 70-130 | |
| Ethylbenzene | ug/L | 50 | 47.4 | 95 | 70-130 | |
| m&p-Xylene | ug/L | 100 | 96.8 | 97 | 70-130 | |
| Methyl-tert-butyl ether | ug/L | 50 | 53.3 | 107 | 70-130 | |
| Naphthalene | ug/L | 50 | 54.0 | 108 | 70-130 | |
| o-Xylene | ug/L | 50 | 45.4 | 91 | 70-130 | |
| tert-Amyl Alcohol | ug/L | 1000 | 967 | 97 | 70-130 | |
| tert-Amylmethyl ether | ug/L | 100 | 106 | 106 | 70-130 | |
| tert-Butyl Alcohol | ug/L | 500 | 533 | 107 | 70-130 | |
| tert-Butyl Formate | ug/L | 400 | 381 | 95 | 70-130 | |
| Toluene | ug/L | 50 | 49.0 | 98 | 70-130 | |



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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

LABORATORY CONTROL SAMPLE: 608731

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Xylene (Total) | ug/L | 150 | 142 | 95 | 70-130 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 110 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 95 | 70-130 | |
| Dibromofluoromethane (S) | % | | | 105 | 70-130 | |
| Toluene-d8 (S) | % | | | 98 | 70-130 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 608732 608733

| Parameter | Units | 9294467003 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | 50 | 50 | 68.5 | 64.9 | 137 | 130 | 70-130 | 5 | 30 | M0 |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | 1000 | 1000 | 1020 | 1130 | 102 | 113 | 70-130 | 10 | 30 | |
| Benzene | ug/L | ND | 50 | 50 | 56.1 | 57.4 | 112 | 115 | 70-130 | 2 | 30 | |
| Diisopropyl ether | ug/L | ND | 50 | 50 | 61.5 | 61.2 | 123 | 122 | 70-130 | 1 | 30 | |
| Ethanol | ug/L | ND | 2000 | 2000 | 1810 | 2980 | 90 | 149 | 70-130 | 49 | 30 | M0,R1 |
| Ethyl-tert-butyl ether | ug/L | ND | 100 | 100 | 129 | 119 | 129 | 119 | 70-130 | 8 | 30 | |
| Ethylbenzene | ug/L | ND | 50 | 50 | 54.7 | 53.8 | 109 | 108 | 70-130 | 2 | 30 | |
| m&p-Xylene | ug/L | ND | 100 | 100 | 112 | 110 | 112 | 110 | 70-130 | 2 | 30 | |
| Methyl-tert-butyl ether | ug/L | ND | 50 | 50 | 62.7 | 61.2 | 125 | 122 | 70-130 | 2 | 30 | |
| Naphthalene | ug/L | ND | 50 | 50 | 53.4 | 52.6 | 107 | 105 | 70-130 | 2 | 30 | |
| o-Xylene | ug/L | ND | 50 | 50 | 52.9 | 53.3 | 106 | 107 | 70-130 | 1 | 30 | |
| tert-Amyl Alcohol | ug/L | ND | 1000 | 1000 | 1140 | 1330 | 114 | 133 | 70-130 | 16 | 30 | M0 |
| tert-Amylmethyl ether | ug/L | ND | 100 | 100 | 121 | 124 | 121 | 124 | 70-130 | 3 | 30 | |
| tert-Butyl Alcohol | ug/L | ND | 500 | 500 | 621 | 694 | 124 | 139 | 70-130 | 11 | 30 | M0 |
| tert-Butyl Formate | ug/L | ND | 400 | 400 | ND | ND | 0 | 0 | 70-130 | | 30 | P5 |
| Toluene | ug/L | ND | 50 | 50 | 57.7 | 58.4 | 115 | 117 | 70-130 | 1 | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | | | 122 | 117 | 70-130 | | | |
| 4-Bromofluorobenzene (S) | % | | | | | | 96 | 98 | 70-130 | | | |
| Dibromofluoromethane (S) | % | | | | | | 109 | 108 | 70-130 | | | |
| Toluene-d8 (S) | % | | | | | | 102 | 107 | 70-130 | | | |



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## QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

QC Batch: MSV/15346
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV Oxygenates SC
Associated Lab Samples: 9294372022

METHOD BLANK: 608858
Matrix: Water
Associated Lab Samples: 9294372022

| Parameter | Units | Blank Result | Reporting Limit | Analyzed | Qualifiers |
|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | 5.0 | 05/20/11 04:31 | |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | 100 | 05/20/11 04:31 | |
| Benzene | ug/L | ND | 5.0 | 05/20/11 04:31 | |
| Diisopropyl ether | ug/L | ND | 5.0 | 05/20/11 04:31 | |
| Ethanol | ug/L | ND | 200 | 05/20/11 04:31 | |
| Ethyl-tert-butyl ether | ug/L | ND | 10.0 | 05/20/11 04:31 | |
| Ethylbenzene | ug/L | ND | 5.0 | 05/20/11 04:31 | |
| m&p-Xylene | ug/L | ND | 10.0 | 05/20/11 04:31 | |
| Methyl-tert-butyl ether | ug/L | ND | 5.0 | 05/20/11 04:31 | |
| Naphthalene | ug/L | ND | 5.0 | 05/20/11 04:31 | |
| o-Xylene | ug/L | ND | 5.0 | 05/20/11 04:31 | |
| tert-Amyl Alcohol | ug/L | ND | 100 | 05/20/11 04:31 | |
| tert-Amylmethyl ether | ug/L | ND | 10.0 | 05/20/11 04:31 | |
| tert-Butyl Alcohol | ug/L | ND | 100 | 05/20/11 04:31 | |
| tert-Butyl Formate | ug/L | ND | 50.0 | 05/20/11 04:31 | |
| Toluene | ug/L | ND | 5.0 | 05/20/11 04:31 | |
| Xylene (Total) | ug/L | ND | 10.0 | 05/20/11 04:31 | |
| 1,2-Dichloroethane-d4 (S) | % | 119 | 70-130 | 05/20/11 04:31 | |
| 4-Bromofluorobenzene (S) | % | 99 | 70-130 | 05/20/11 04:31 | |
| Dibromofluoromethane (S) | % | 104 | 70-130 | 05/20/11 04:31 | |
| Toluene-d8 (S) | % | 100 | 70-130 | 05/20/11 04:31 | |

LABORATORY CONTROL SAMPLE: 608859

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | 50 | 61.9 | 124 | 70-130 | |
| 3,3-Dimethyl-1-Butanol | ug/L | 1000 | 1130 | 113 | 70-130 | |
| Benzene | ug/L | 50 | 49.4 | 99 | 70-130 | |
| Diisopropyl ether | ug/L | 50 | 55.6 | 111 | 70-130 | |
| Ethanol | ug/L | 2000 | 2960 | 148 | 70-130 | L3 |
| Ethyl-tert-butyl ether | ug/L | 100 | 117 | 117 | 70-130 | |
| Ethylbenzene | ug/L | 50 | 51.3 | 103 | 70-130 | |
| m&p-Xylene | ug/L | 100 | 103 | 103 | 70-130 | |
| Methyl-tert-butyl ether | ug/L | 50 | 58.9 | 118 | 70-130 | |
| Naphthalene | ug/L | 50 | 54.1 | 108 | 70-130 | |
| o-Xylene | ug/L | 50 | 50.4 | 101 | 70-130 | |
| tert-Amyl Alcohol | ug/L | 1000 | 1270 | 127 | 70-130 | |
| tert-Amylmethyl ether | ug/L | 100 | 113 | 113 | 70-130 | |
| tert-Butyl Alcohol | ug/L | 500 | 662 | 132 | 70-130 | L3 |
| tert-Butyl Formate | ug/L | 400 | 427 | 107 | 70-130 | |
| Toluene | ug/L | 50 | 52.0 | 104 | 70-130 | |



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# QUALITY CONTROL DATA

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

LABORATORY CONTROL SAMPLE: 608859

| Parameter | Units | Spike Conc. | LCS Result | LCS % Rec | % Rec Limits | Qualifiers |
|---|---|---|---|---|---|---|
| Xylene (Total) | ug/L | 150 | 153 | 102 | 70-130 | |
| 1,2-Dichloroethane-d4 (S) | % | | | 118 | 70-130 | |
| 4-Bromofluorobenzene (S) | % | | | 91 | 70-130 | |
| Dibromofluoromethane (S) | % | | | 108 | 70-130 | |
| Toluene-d8 (S) | % | | | 103 | 70-130 | |

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 608860 608861

| Parameter | Units | 9294467015 Result | MS Spike Conc. | MSD Spike Conc. | MS Result | MSD Result | MS % Rec | MSD % Rec | % Rec Limits | RPD | Max RPD | Qual |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1,2-Dichloroethane | ug/L | ND | 50 | 50 | 72.8 | 66.4 | 146 | 133 | 70-130 | 9 | 30 | M0 |
| 3,3-Dimethyl-1-Butanol | ug/L | ND | 1000 | 1000 | 1080 | 1060 | 108 | 106 | 70-130 | 2 | 30 | |
| Benzene | ug/L | ND | 50 | 50 | 64.0 | 56.0 | 128 | 112 | 70-130 | 13 | 30 | |
| Diisopropyl ether | ug/L | ND | 50 | 50 | 65.7 | 56.9 | 131 | 114 | 70-130 | 14 | 30 | M0 |
| Ethanol | ug/L | ND | 2000 | 2000 | 1870 | 2710 | 93 | 135 | 70-130 | 37 | 30 | M0,R1 |
| Ethyl-tert-butyl ether | ug/L | ND | 100 | 100 | 138 | 122 | 138 | 122 | 70-130 | 12 | 30 | M0 |
| Ethylbenzene | ug/L | ND | 50 | 50 | 62.4 | 55.1 | 125 | 110 | 70-130 | 12 | 30 | |
| m&p-Xylene | ug/L | ND | 100 | 100 | 126 | 111 | 126 | 111 | 70-130 | 13 | 30 | |
| Methyl-tert-butyl ether | ug/L | ND | 50 | 50 | 67.5 | 60.0 | 134 | 119 | 70-130 | 12 | 30 | M0 |
| Naphthalene | ug/L | ND | 50 | 50 | 53.8 | 48.2 | 108 | 96 | 70-130 | 11 | 30 | |
| o-Xylene | ug/L | ND | 50 | 50 | 58.7 | 53.7 | 117 | 107 | 70-130 | 9 | 30 | |
| tert-Amyl Alcohol | ug/L | ND | 1000 | 1000 | 1260 | 1210 | 126 | 121 | 70-130 | 4 | 30 | |
| tert-Amylmethyl ether | ug/L | ND | 100 | 100 | 130 | 117 | 130 | 117 | 70-130 | 10 | 30 | |
| tert-Butyl Alcohol | ug/L | ND | 500 | 500 | 622 | 622 | 124 | 124 | 70-130 | 0 | 30 | |
| tert-Butyl Formate | ug/L | ND | 400 | 400 | ND | ND | 0 | 0 | 70-130 | | 30 | P5 |
| Toluene | ug/L | ND | 50 | 50 | 61.6 | 57.0 | 123 | 114 | 70-130 | 8 | 30 | |
| 1,2-Dichloroethane-d4 (S) | % | | | | | | 118 | 114 | 70-130 | | | |
| 4-Bromofluorobenzene (S) | % | | | | | | 101 | 98 | 70-130 | | | |
| Dibromofluoromethane (S) | % | | | | | | 105 | 107 | 70-130 | | | |
| Toluene-d8 (S) | % | | | | | | 102 | 103 | 70-130 | | | |



Date: 05/24/2011 04:46 PM

## REPORT OF LABORATORY ANALYSIS

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Asheville, NC 28804
(828)254-7176

**Pace Analytical Services, Inc.**
9800 Kincey Ave. Suite 100
Huntersville, NC 28078
(704)875-9092

## QUALIFIERS

Project: CRAWFORD'S COUNTRY STORE
Pace Project No.: 9294372

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is NELAP accredited. Contact your Pace PM for the current list of accredited analytes.

### LABORATORIES

| | |
|---|---|
| PASI-A | Pace Analytical Services - Asheville |
| PASI-C | Pace Analytical Services - Charlotte |

### ANALYTE QUALIFIERS

| | |
|---|---|
| 1g | Relative percent difference between results from each column was greater than 40% due to matrix interference. The higher of the two results was reported. |
| B- | Analyte detected in method blank but was not detected in the associated samples. |
| E | Analyte concentration exceeded the calibration range. The reported result is estimated. |
| L3 | Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias. |
| M0 | Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits. |
| P5 | The EPA or method required sample preservation degrades this compound, therefore acceptable recoveries may not be achieved in sample matrix spikes. |
| R1 | RPD value was outside control limits. |
| S4 | Surrogate recovery not evaluated against control limits due to sample dilution. |



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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 of 2

1474918

| Section A Required Client Information: | Section B Required Project Information: | Section C Invoice Information: |
|---|---|---|
| Company: MECL | Report To: B. Shaw | Attention: |
| Address: 235-B Dooley Rd. Lexington, SC 29073 | Copy To: | Company Name: |
| Email To: JLC@mci.net | Purchase Order No.: | Address: |
| Phone: 808-2048 Fax: 808-2048 | Project Name: Crawford's Country Store | Pace Quote Reference: |
| Requested Due Date/TAT: | Project Number: | Pace Project Manager: R. Spencer |
| | | Pace Profile #: 836-5 |

REGULATORY AGENCY: ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER ☒ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: SC

Requested Analysis Filtered (Y/N)

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

| ITEM # | SAMPLE ID (A-Z, 0-9 / , -) Sample IDs MUST BE UNIQUE | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COLLECTED COMPOSITE START DATE | COMPOSITE START TIME | COMPOSITE END/GRAB DATE | COMPOSITE END/GRAB TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Preservatives: Unpreserved | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | $Na_2S_2O_3$ | Methanol | Other | Analysis Test Y/N | Btx, Mtbe, Naph | 1,2-DCA, 8260B | 8-Oxygenate | EDB 8011 | Total Lead | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-1 | WT | G | | | 5/16/11 | 12:29 | | 7 | | | 1 | 6 | | | | | | X | X | X | X | X | | 9214372 001 |
| 2 | MW-2 | | | | | | 12:10 | | | | | | | | | | | | | | | | | | | 002 |
| 3 | MW-3 | | | | | | 12:40 | | | | | | | | | | | | | | | | | | | 003 |
| 4 | MW-4 | | | | | | 11:50 | | | | | | | | | | | | | | | | | | | 004 |
| 5 | MW-5 | | | | | | 10:20 | | | | | | | | | | | | | | | | | | | 005 |
| 6 | MW-7 | | | | | | 10:03 | | | | | | | | | | | | | | | | | | | 006 |
| 7 | MW-8 | | | | | | 9:55 | | | | | | | | | | | | | | | | | | | 007 |
| 8 | MW-9 | | | | | | 10:30 | | | | | | | | | | | | | | | | | | | 008 |
| 9 | MW-10 | | | | | | 11:55 | | | | | | | | | | | | | | | | | | | 009 |
| 10 | MW-11 | | | | | | 10:55 | | | | | | | | | | | | | | | | | | | 010 |
| 11 | MW-12 | | | | | | 11:42 | | | | | | | | | | | | | | | | | | | 011 |
| 12 | MW-13 | WT | G | | | 5/16/11 | 11:27 | | 7 | | | | 6 | | | | | | X | X | X | X | X | | | 012 |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS: Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |
|---|---|---|---|---|---|---|---|---|---|---|
| Report "J" values | MECL | 5/16 | 3:30 | | 5/17 | 8:14:30 | | | | |
| | | 5/17/11 | 1530 | Jewell Ohd Pace | 5/17/11 | 1530 | 5.2 | Y | N | Y |

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Brandon Kelly

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 5/16/11

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

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# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 2 of 2

1477930

**Section A** Required Client Information:
Company: MECI
Address: 235-B Dooley Rd. Lexington, SC 29073
Email To: slc@meci.net
Phone: 808-2043 Fax: 608-2048
Requested Due Date/TAT:

**Section B** Required Project Information:
Report To: B. Shane
Copy To:
Purchase Order No.:
Project Name: Crawford's Country Store
Project Number:

**Section C** Invoice Information:
Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: R. Spencer
Pace Profile #:

**REGULATORY AGENCY**
☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☒ UST ☐ RCRA ☐ OTHER ______
Site Location STATE: SC

**Section D** Required Client Information

Matrix Codes MATRIX / CODE: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Tissue TS, Other OT

Requested Analysis Filtered (Y/N)

Pace Project No./ Lab I.D.: 92914372

| ITEM # | SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE | MATRIX CODE (see valid codes to left) | SAMPLE TYPE (G=GRAB C=COMP) | COMPOSITE START DATE | COMPOSITE START TIME | COMPOSITE END/GRAB DATE | COMPOSITE END/GRAB TIME | SAMPLE TEMP AT COLLECTION | # OF CONTAINERS | Unpreserved | $H_2SO_4$ | $HNO_3$ | HCl | NaOH | $Na_2S_2O_3$ | Methanol | Other | Analysis Test Y/N | Btex, Mtbe, Naph. | 1,2-DCA, 8260B | 8-Oxygenates | EDB 8011 | Total Lead | Residual Chlorine (Y/N) | Pace Project No./ Lab I.D. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | MW-13R | WT | G | | | 5/16/11 | 11:18 | | 7 | | | 1 | 6 | | | | | | X | X | X | X | X | | 013 |
| 2 | MW-14 | ↓ | ↓ | | | ↓ | 13:10 | | ↓ | | | ↓ | ↓ | | | | | | ↓ | ↓ | ↓ | ↓ | ↓ | | 014 |
| 3 | MW-16 | ↓ | ↓ | | | ↓ | 13:18 | | ↓ | | | ↓ | ↓ | | | | | | ↓ | ↓ | ↓ | ↓ | ↓ | | 015 |
| 4 | DMW-17 | ↓ | ↓ | | | ↓ | 12:31 | | ↓ | | | ↓ | ↓ | | | | | | ↓ | ↓ | ↓ | ↓ | ↓ | | 016 |
| 5 | MW-18 | ↓ | ↓ | | | ↓ | 10:30 | | ↓ | | | ↓ | ↓ | | | | | | ↓ | ↓ | ↓ | ↓ | ↓ | | 017 |
| 6 | MW-19 | ↓ | ↓ | | | ↓ | 11:30 | | ↓ | | | ↓ | ↓ | | | | | | ↓ | ↓ | ↓ | ↓ | ↓ | | 018 |
| 7 | MW-20 | ↓ | ↓ | | | ↓ | 10:50 | | ↓ | | | ↓ | ↓ | | | | | | ↓ | ↓ | ↓ | ↓ | ↓ | | 019 |
| 8 | MW-21 | ↓ | ↓ | | | ↓ | 10:45 | | ↓ | | | ↓ | ↓ | | | | | | ↓ | ↓ | ↓ | ↓ | ↓ | | 020 |
| 9 | MW-22 | ↓ | ↓ | | | ↓ | 11:05 | | ↓ | | | ↓ | ↓ | | | | | | ↓ | ↓ | ↓ | ↓ | ↓ | | 021 |
| 10 | MW-23 | ↓ | ↓ | | | ↓ | 11:05 | | 7 | | | 1 | 6 | | | | | | ↓ | ↓ | ↓ | ↓ | X | | 022 |
| 11 | CLS-WW | ↓ | ↓ | | | ↓ | 10:10 | | 6 | | | | 6 | | | | | | ↓ | ↓ | ↓ | X | | | 023 |
| 12 | CP-WW2 | WT | G | | | 5/16/11 | 11:15 | | 1 | | | | 1 | | | | | | X | X | X | | | | 024 |

| ADDITIONAL COMMENTS | RELINQUISHED BY / AFFILIATION | DATE | TIME | ACCEPTED BY / AFFILIATION | DATE | TIME | SAMPLE CONDITIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Report "J" Values | [signature], MECI | 5/16 | 3:30 | [signature] | 5/17/11 | 14:36 | | | | |
| | [signature] | 5/17/11 | 15:30 | [signature] Pace | 5/17/11 | 15:30 | 5.2 | Y | N | Y |
| | | | | | | | | | | |
| | | | | | | | Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N) |

ORIGINAL

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Brandon Kelly
SIGNATURE of SAMPLER: [signature]
DATE Signed (MM/DD/YY): 5/16/11

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

**FIELD DATA INFORMATION SHEETS**

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 5/16/2011
**Field Personnel:** B. Kelly, R. Ariail, G. Globensky
**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 28.0 °C

Quality Assurance

| | | | |
|---|---|---|---|
| pH Meter | YSI Model 550A | Conductivity Meter | |
| serial no. | 02A0831 | serial no. | 02A0831 |
| pH=4.0 | | standard | X |
| pH=7.0 | X | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store
**Site ID#:** 12335 **Monitoring Well #** MW-14
**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 8.77 | | | feet |
| Total Well Depth (TWD) | 25 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 16.23 | feet |
| 1 casing volume (CV=LWC X C)= | ____ X | 0.163 | 2.65 | gallons |
| 3 casing volume (3 X CV)= | | 3 | 7.94 | gallons |

Total Volume of Water Purged Before Sampling 8 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 13:00 | 13:03 | 13:07 | 13:10 | | | | |
| pH (s.u.) | 5.38 | 5.2 | 5.24 | 5.28 | | | | |
| Specific Conductivity (µmhos/cm) | 272.3 | 347.2 | 321.6 | 317.5 | | | | |
| Water Temperature (°C) | 15.0 | 14.9 | 15.1 | 15.2 | | | | |
| Dissolved Oxygen | 1.46 | 1.90 | 3.29 | 4.41 | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 13:10

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 5/16/2011
**Field Personnel:** B. Kelly, R. Ariail, G. Globensky
**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 28.0 °C

Quality Assurance

| | | | |
|---|---|---|---|
| pH Meter | YSI Model 550A | Conductivity Meter | |
| serial no. | 02A0831 | serial no. | 02A0831 |
| pH=4.0 | | standard | X |
| pH=7.0 | X | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store
**Site ID#:** 12335 **Monitoring Well #** DMW-17
**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 17.81 | | | feet |
| Total Well Depth (TWD) | 75 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 57.19 | feet |
| 1 casing volume (CV=LWC X C)= | ____ X | 0.163 | 9.32 | gallons |
| 3 casing volume (3 X CV)= | | 3 | 27.97 | gallons |

Total Volume of Water Purged Before Sampling 19 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:58 | 12:12 | 12:31 | | | | | |
| pH (s.u.) | 6.22 | 6.34 | 6.27 | | | | | |
| Specific Conductivity (µmhos/cm) | 109.7 | 115.5 | 102.8 | | | | | |
| Water Temperature (°C) | 20.5 | 19.6 | 19.0 | | | | | |
| Dissolved Oxygen | 1.42 | 1.50 | 3.36 | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 12:31 Dry @ 19.0 gallons

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 5/16/2011
**Field Personnel:** B. Kelly, R. Ariail, G. Globensky
**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 28.0 °C

Quality Assurance

| | | | |
|---|---|---|---|
| pH Meter | YSI Model 550A | Conductivity Meter | |
| serial no. | 02A0831 | serial no. | 02A0831 |
| pH=4.0 | | standard | X |
| pH=7.0 | X | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store
**Site ID#:** 12335 **Monitoring Well #** MW-18
**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 9.12 | | feet |
| Total Well Depth (TWD) | 18 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 8.88 | feet |
| 1 casing volume (CV=LWC X C)= ____ X | 0.163 | 1.45 | gallons |
| 3 casing volume (3 X CV)= | 3 | 4.34 | gallons |

Total Volume of Water Purged Before Sampling 2 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 10:25 | 10:30 | | | | | | |
| pH (s.u.) | 5.34 | 5.31 | | | | | | |
| Specific Conductivity (µmhos/cm) | 61.1 | 59.7 | | | | | | |
| Water Temperature (°C) | 16.2 | 15.8 | | | | | | |
| Dissolved Oxygen | 4.42 | 4.98 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 10:30 Dry @ 2.0 gallons

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 5/16/2011
**Field Personnel:** B. Kelly, R. Ariail, G. Globensky
**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 28.0 °C

Quality Assurance

| | | | |
|---|---|---|---|
| pH Meter | YSI Model 550A | Conductivity Meter | |
| serial no. | 02A0831 | serial no. | 02A0831 |
| pH=4.0 | | standard | X |
| pH=7.0 | X | standard | |
| pH=10.0 | | standard | |

Chain of Custody

Relinquished by Date/Time Received by Date/Time

**Facility Name:** Crawford's Country Store
**Site ID#:** 12335 **Monitoring Well #** MW-19
**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 19.14 | | | feet |
| Total Well Depth (TWD) | 25 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 5.86 | feet |
| 1 casing volume (CV=LWC X C)= | ____ X | 0.163 | 0.96 | gallons |
| 3 casing volume (3 X CV)= | | 3 | 2.87 | gallons |

Total Volume of Water Purged Before Sampling 0.5 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:25 | 11:30 | | | | | | |
| pH (s.u.) | 5.36 | 5.28 | | | | | | |
| Specific Conductivity (µmhos/cm) | 89.9 | 88.7 | | | | | | |
| Water Temperature (°C) | 19.9 | 19.9 | | | | | | |
| Dissolved Oxygen | 3.98 | 3.69 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:30 Dry @ 0.5 gallons

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 5/16/2011
**Field Personnel:** B. Kelly, R. Ariail, G. Globensky
**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 28.0 °C

Quality Assurance

| | | | |
|---|---|---|---|
| pH Meter | YSI Model 550A | Conductivity Meter | |
| serial no. | 02A0831 | serial no. | 02A0831 |
| pH=4.0 | | standard | X |
| pH=7.0 | X | standard | |
| pH=10.0 | | standard | |

Chain of Custody

Relinquished by Date/Time Received by Date/Time

**Facility Name:** Crawford's Country Store
**Site ID#:** 12335 **Monitoring Well #** MW-20
**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | | |
|---|---|---|---|---|
| * Free Product Thickness: | | | | feet |
| Depth to Free Product (DFP) | | | | feet |
| Depth to Ground Water (DGW) | 22.19 | | | feet |
| Total Well Depth (TWD) | 27 | | | feet |
| Length of the water column (LWC=TWD-DGW) | | | 4.81 | feet |
| 1 casing volume (CV=LWC X C)= | ____ X | 0.163 | 0.78 | gallons |
| 3 casing volume (3 X CV)= | | 3 | 2.35 | gallons |

Total Volume of Water Purged Before Sampling 0.5 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 10:47 | 10:50 | | | | | | |
| pH (s.u.) | 5.78 | 5.59 | | | | | | |
| Specific Conductivity (µmhos/cm) | 50.5 | 53.4 | | | | | | |
| Water Temperature (°C) | 19.0 | 19.1 | | | | | | |
| Dissolved Oxygen | 4.34 | 4.84 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 10:50 Dry @ 0.5 gallons

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 5/16/2011
**Field Personnel:** B. Kelly, R. Ariail, G. Globensky
**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 28.0 °C

Quality Assurance

| | | | |
|---|---|---|---|
| pH Meter | YSI Model 550A | Conductivity Meter | |
| serial no. | 02A0831 | serial no. | 02A0831 |
| pH=4.0 | | standard | X |
| pH=7.0 | X | standard | |
| pH=10.0 | | standard | |

Chain of Custody

Relinquished by Date/Time Received by Date/Time

**Facility Name:** Crawford's Country Store
**Site ID#:** 12335 **Monitoring Well #** MW-21
**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 21.05 | | feet |
| Total Well Depth (TWD) | 25 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 3.95 | feet |
| 1 casing volume (CV=LWC X C)= ____ X | 0.163 | 0.64 | gallons |
| 3 casing volume (3 X CV)= | 3 | 1.93 | gallons |

Total Volume of Water Purged Before Sampling 0.5 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 10:42 | 10:45 | | | | | | |
| pH (s.u.) | 5.97 | 5.77 | | | | | | |
| Specific Conductivity (µmhos/cm) | 46.1 | 36.8 | | | | | | |
| Water Temperature (°C) | 18.4 | 18.4 | | | | | | |
| Dissolved Oxygen | 3.26 | 5.58 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 10:45 Dry @ 0.5 gallons

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 5/16/2011
**Field Personnel:** B. Kelly, R. Ariail, G. Globensky
**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 28.0 °C

Quality Assurance

| | | | |
|---|---|---|---|
| pH Meter | YSI Model 550A | Conductivity Meter | |
| serial no. | 02A0831 | serial no. | 02A0831 |
| pH=4.0 | | standard | X |
| pH=7.0 | X | standard | |
| pH=10.0 | | standard | |

Chain of Custody

Relinquished by Date/Time Received by Date/Time

**Facility Name:** Crawford's Country Store
**Site ID#:** 12335 **Monitoring Well #** MW-22
**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 21.93 | | feet |
| Total Well Depth (TWD) | 29 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 7.07 | feet |
| 1 casing volume (CV=LWC X C)= ____ X | 0.163 | 1.15 | gallons |
| 3 casing volume (3 X CV)= | 3 | 3.46 | gallons |

Total Volume of Water Purged Before Sampling 1 gals.
*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:00 | 11:05 | | | | | | |
| pH (s.u.) | 5.42 | 5.13 | | | | | | |
| Specific Conductivity (µmhos/cm) | 180.0 | 275.9 | | | | | | |
| Water Temperature (°C) | 16.7 | 16.3 | | | | | | |
| Dissolved Oxygen | 3.63 | 5.29 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:05 Dry @ 1.0 gallons

**South Carolina Department of Health and Environmental Control**
**Bureau of Land and Waste Management Underground Storage Tank Program**

## Field Data Information Sheet for Groundwater Sampling

**Date (mm/dd/yy):** 5/16/2011

**Field Personnel:** B. Kelly, R. Ariail, G. Globensky

**General Weather Conditions:** Sunny

**Ambient Air Temperature:** 28.0 °C

Quality Assurance

| | | | |
|---|---|---|---|
| pH Meter | YSI Model 550A | Conductivity Meter | |
| serial no. | 02A0831 | serial no. | 02A0831 |
| pH=4.0 | | standard | X |
| pH=7.0 | X | standard | |
| pH=10.0 | | standard | |

Chain of Custody

| Relinquished by | Date/Time | Received by | Date/Time |
|---|---|---|---|
| | | | |

**Facility Name:** Crawford's Country Store

**Site ID#:** 12335 **Monitoring Well #** MW-23

**Water Supply Well** **Public** _____ **Private** _____

Monitoring Well Diameter (D): 2 inches

Conversion Factor (C): 3.14 x $(D/2)^2$ for a 2 inch well C=0.163
for a 4 inch well C=0.652

| | | | |
|---|---|---|---|
| * Free Product Thickness: | | | feet |
| Depth to Free Product (DFP) | | | feet |
| Depth to Ground Water (DGW) | 15.02 | | feet |
| Total Well Depth (TWD) | 23 | | feet |
| Length of the water column (LWC=TWD-DGW) | | 7.98 | feet |
| 1 casing volume (CV=LWC X C)= ____ X | 0.163 | 1.30 | gallons |
| 3 casing volume (3 X CV)= | 3 | 3.90 | gallons |

Total Volume of Water Purged Before Sampling 2 gals.

*If free product is present over 1/8 inch, sampling will not be required.

| Cumulative Volume Purged (gallons) | Inital | 1st Vol | 2nd Vol | 3rd Vol | 4th Vol | 5th Vol | Post Sampling | |
|---|---|---|---|---|---|---|---|---|
| Time (military) | 11:00 | 11:05 | | | | | | |
| pH (s.u.) | 5.07 | 5.08 | | | | | | |
| Specific Conductivity (µmhos/cm) | 227.1 | 219.9 | | | | | | |
| Water Temperature (°C) | 16.7 | 16.6 | | | | | | |
| Dissolved Oxygen | 2.12 | 3.29 | | | | | | |
| PID readings, if required | | | | | | | | |

Remarks: Sample Time: 11:05 Dry @ 2.0 gallons

**WASTE DISPOSAL MANIFESTS**

Midlands
Environmental
Consultants, Inc.

June 1, 2011

Re: Treatment of Purge Water
Crawford's Country Store
Antreville, South Carolina
SCDHEC Site ID Number 12335
MECI Project Number 11-3327

To Whom it May Concern;

Midlands Environmental Consultants, Inc. is providing the following letter as certification that treatment of the referenced purge water complied with the conditions of "Proposed Conditions for Use of Portable Activated Carbon Units for the Treatment of Small Volumes of Petroleum Hydrocarbon Contaminated Groundwater", as described in the following:

Applicability:

Groundwater treated was obtained as a result development of wells and sampling.

Conditions:

1. The purge/bail water from all wells is mixed before usage of the Activated Carbon Unit.
2. No free-product was detected in any of the purge water drums.
3. Analytical results of from well sampling show average concentrations of petroleum hydrocarbon constituents less than 5000 parts per billion (ppb) Benzene and less than 20,000 ppb total BTEX.
4. The existing carbon pack will be replaced/reactivated every 5,000 gallons.
5. Record of usage is maintained by Contractor.
6. Any and all recommendations and conditions issued by the Manufacturer have been adhered to.
7. Any and all recommendations and conditions (even on a site by site basis) issued by the SCDHEC must be adhered to.

Post Office Box 854, Lexington SC 29071 • 235-B Dooley Road, Lexington, SC 29073
Telephone: (803) 808-2043 • fax: (803) 808-2048

All purge waters were treated on-site using an up-flow treatment drum loaded with 30 pounds of activated carbon. Carbon will be loaded to a maximum of 3 pounds of total organic compounds or 5,000 gallons of development/purge water, whichever occurs first.

**One 55-gallon drum was treated on May 16, 2011 at the referenced site.**

**A total of one (1) 55-gallon drum was treated at the referenced site.**

Midlands Environmental also tracks cumulative organic compounds adsorbed on the activated carbon to ensure the capacity of carbon mass is not over-charged. This data is available upon request.

Should you have any questions or comments, please contact the undersigned.

Sincerely,
Midlands Environmental Consultants, Inc.

Courtney M. Sanders
Staff Biologist

WASTE MANAGEMENT

Richland County LF
1047 Highway Church Road
Elgin, SC, 29045
Ph: (803) 788-3054

Original
Ticket# 1100628

Customer Name MIDLANDSENVIRON MIDLANDS ENVI
Ticket Date 05/13/2011
Payment Type Credit Account
Manual Ticket#
Hauling Ticket#
Route
State Waste Code
Manifest 0
Destination
PO
Profile VA2718 (SOIL FROM UST ASSESSMENT)
Generator 126-MIDLANDSENVIRONMENTAL MIDLANDS ENVIRONMENTAL

Carrier MIDLANDSENVIRON MIDLANDS ENVIRONMENT
Vehicle# 1
Container
Driver
Check#
Billing # 0000469
Gen EPA ID

Volume

| | Time | Scale | ScaleMaster |
|---|---|---|---|
| In | 05/13/2011 15:11:48 | Scale1 | joyce |
| Out | 05/13/2011 15:23:48 | Scale2 | joyce |

| | |
|---|---|
| Gross | 13660 lb |
| Tare | 8940 lb |
| Net | 4720 lb |
| Tons | 2.36 |

Comments

| | Product | LD% | Qty | UOM | Rate | Fee | Amount | Origin |
|---|---|---|---|---|---|---|---|---|
| 1 | SOIL-Cont. Soil - | 100 | 2.36 | Tons | | | | 14-CLAREND |
| 2 | FUEL-Fuel Surcharg | 100 | | % | | | | 14-CLAREND |
| 3 | EVF-P-Standard Env | 100 | | % | | | | 14-CLAREND |

Total Fees
Total Ticket

SIGNATURE

Crawfords

403WM

# *SPECIAL WASTE MANIFEST*

| | |
|---|---|
| WASTE ID NUMBER<br>VA2718 | *Richland Landfill*<br>1047 Highway Church Road<br>Elgin, SC 29045 |
| EXPIRATION DATE<br>November 17, 2013 | Special Waste Phone: 803-744-3346<br>Fax: 866-904-7194 |
| Prepared by: | Karen Truett/Carol Weldon |

GENERATOR OF WASTE: Midlands Env. Consultants, Inc. - Various

CUSTOMER Midlands Env. Consultants — ACCOUNT NUMBER: 820-469

LOCATION OF WASTE: Site Address:

CITY: COUNTY:

PHONE NUM 803-808-2043 — CONTACT: Bryan Shane

FAX NUMBER:

GENERATOR'S SIGNATURE [signature] DATE: 5/13/11

TRANSPORTER OF WASTE: Meci

DATE: 5/13/11 TRUCK NUMBER: 1

DRIVER'S SIGNATURE [signature]

**** TO BE COMPLETED BY RICHLAND LANDFILL******

DISPOSAL SITE: RICHLAND LANDFILL ELGIN, SC

Waste Class: Soil

DESCRIPTION OF WASTE: Soil from UST Assessment

TICKET NUMBER: 1100628 2.36

RECEIVED BY: [signature]

Crawfords

D H E C

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C. Earl Hunter, Commissioner

*Promoting and protecting the health of the public and the environment.*

JUN 0 8 2011

stech UST DOCKET

MR H FRANKLIN CRAWFORD
5846 SC-28 N
ANTREVILLE SC 29620

Re: Water supply well inquiry
Crawford's County Store, 5870 SC-28 North, Antreville, SC
UST Permit #12335
Release reported December 3, 1991
Abbeville County

Dear Mr. Crawford:

As you are aware, petroleum chemicals of concern (CoC) were detected in your water supply well designated CP-WW in 1998. As a result, the Division fit the well with a granulated activated carbon (GAC) filter as an interim measure to reduce CoC to acceptable levels. In October 2000, the Division replaced CP-WW with CP-WW2. CP-WW was taken out of service but was not properly abandoned.

According to a recent sampling event conducted by your contractor, CP-WW2 does not contain any detectable CoC. However, CP-WW could not be sampled due to no power being connected to the pump. Several monitoring wells located immediately upgradient from CP-WW (MW-13, MW-13R, and MW-22) show highly elevated CoC levels. Accordingly, there is a high potential that the well remains impacted by CoC. Since the inactive well is still considered to be a receptor, your plans for future use are a critical factor in cleanup of the release at Crawford's Store. Therefore, please complete the attached form and return it to my attention as soon as possible. Your cooperation is greatly appreciated.

On all correspondence regarding this site, please reference UST Permit #12335. If you have any questions, please feel free to contact me by telephone at (803) 896-6398, by fax at (803) 896-6245, or by e-mail at padgetjp@dhec.sc.gov.

Sincerely,

Joel P. Padgett, P.G., Geologist/Hydrologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

JPP/jpp
12335.1

enc: Water supply well inquiry form
Site map
cc: Technical file (w/enc)

DHEC/UST/JPP/060811

UST Permit #: 12335

Facility Name: Crawford's Country Store

Facility Address: 5870 SC-28 North

City and Zip Code: Antreville, SC 29620 County: Abbeville

The Underground Storage Tank Management Division is currently directing cleanup of petroleum chemicals of concern (CoC) in groundwater at the referenced facility. Information regarding your inactive water supply well (CP-WW) is needed as part of the cleanup. Please check the appropriate response and return this form to the address listed below:

_____ An inactive water supply well is currently located on my property. I do not intend to use the well again and wish to have it properly abandoned by a SC-certified well driller. I understand that the Underground Storage Tank Management Division will provide all funding for the abandonment.

_____ An inactive water supply well is currently located on my property. I intend to keep the well for future use.

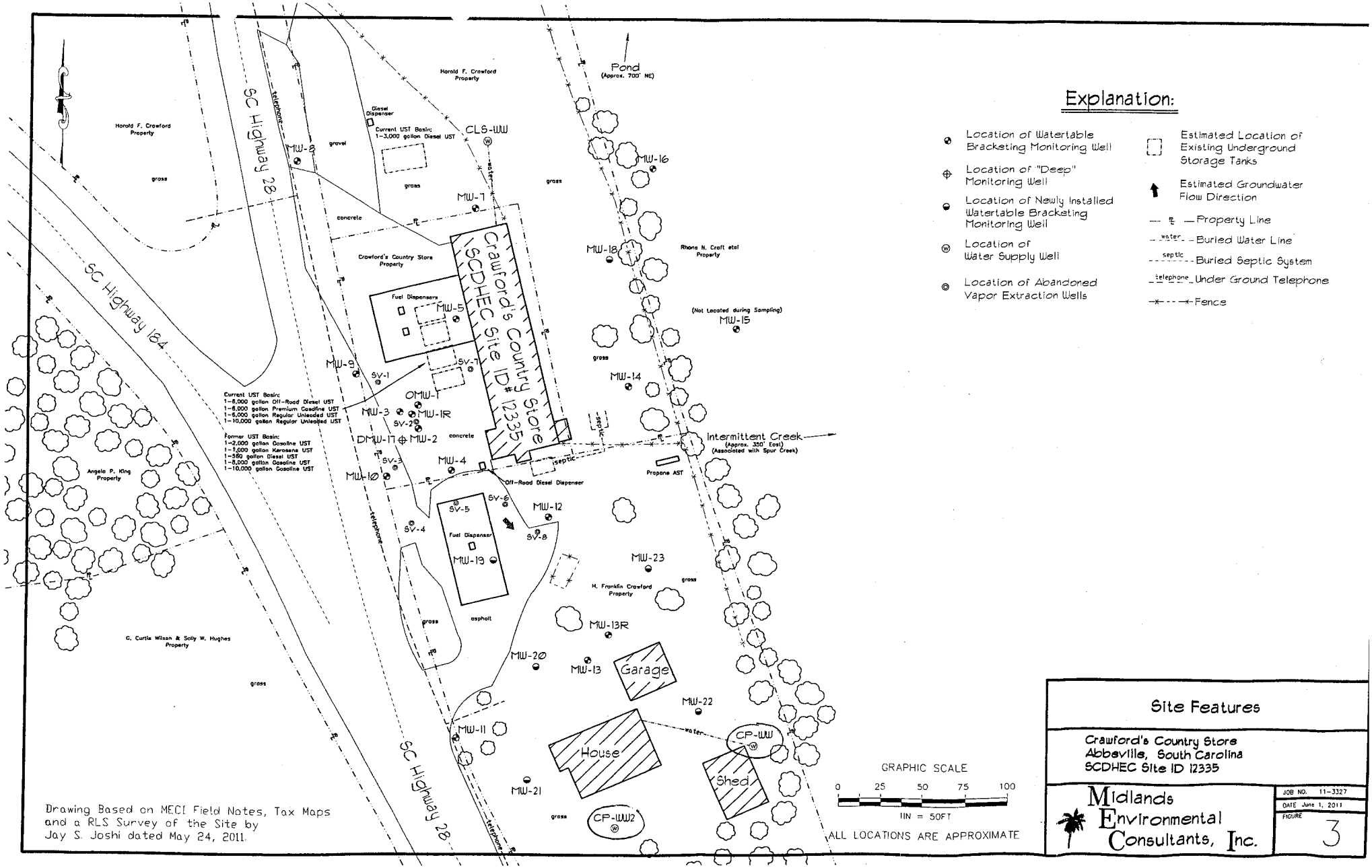
_____ _____

Name (Please Print) Date

_____ _____

Signature Telephone Number

Please return this form to: Joel P. Padgett, P.G., SCDHEC
Underground Storage Tank Management Division
2600 Bull Street
Columbia, SC 29201




## Explanation:

- Location of Watertable Bracketing Monitoring Well
- Location of "Deep" Monitoring Well
- Location of Newly Installed Watertable Bracketing Monitoring Well
- Location of Water Supply Well
- Location of Abandoned Vapor Extraction Wells
- Estimated Location of Existing Underground Storage Tanks
- Estimated Groundwater Flow Direction
- —℄— Property Line
- —water— Buried Water Line
- ---septic--- Buried Septic System
- —telephone— Under Ground Telephone
- —×---×— Fence

GRAPHIC SCALE
0 25 50 75 100
IIN = 50FT

ALL LOCATIONS ARE APPROXIMATE

Drawing Based on MECI Field Notes, Tax Maps and a RLS Survey of the Site by Jay S. Joshi dated May 24, 2011.

# Site Features

Crawford's Country Store
Abbeville, South Carolina
SCDHEC Site ID 12335

Midlands Environmental Consultants, Inc.

JOB NO. 11-3327
DATE June 1, 2011
FIGURE 3

D H E C
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JUN 1 6 2011

MR H FRANKLIN CRAWFORD
5870 SC-28 N
ANTREVILLE SC 29620

UST DOCKET 9 Tech

Re: Aggressive fluid and vapor recovery (AFVR) directive
Crawford's Country Store, 5870 SC-28 North, Antreville, SC
UST Permit #12335; CA #41829
Release reported December 3, 1991
Abbeville County

Dear Mr. Crawford:

The Underground Storage Tank (UST) Management Division of the South Carolina Department of Health and Environmental Control (SCDHEC) recognizes your commitment to continue work at this site using Midlands Environmental Consultants, Inc. as your contractor. The next scope of work is to conduct two aggressive fluid and vapor recovery (AFVR) events on monitoring wells MW-1R, MW-3, and OMW-1 (manifolded together) to remove free-phase product (FP) and reduce concentrations of chemicals of concern (CoC) in groundwater. The events should be spaced a minimum of one month apart to allow equilibrium conditions to reestablish. Off-gas treatment will be necessary.

Cost Agreement (CA) #41829 has been approved in the amount shown on the enclosed cost agreement form for the AFVR events. AFVR activities may proceed immediately upon receipt of this letter. The report submitted at the completion of the event should include the following items:

- A narrative portion that documents the contractor name, field personnel present, general site conditions, general weather conditions including ambient air temperature, date, and start/stop times.
- A brief description of the completed work scope and any relevant descriptions pertaining to the data tables.
- A table summarizing the airflow (in CFM) and volatile air emissions concentrations collected from the stack of the truck **before off-gas treatment** on thirty-minute time intervals through each eight-hour each event or through an eight-hour period per day for each extended event. The table will also identify the recovery well or wells.
- A table summarizing magnehelic gauge measurements on thirty-minute time intervals through each eight-hour event or through an eight-hour period per day for each extended event. The gauges must be installed on the recovery well or wells and on immediately surrounding wells.
- The total volume of water recovered in gallons.

- The total volume of free-phase product recovered in gallons (typically measured with a product/water interface device inserted into the top of the tanker at the completion of the event and then converted to an approximate volume).
- The total weight of petroleum removed as vapor in pounds. This is calculated based on the airflow rate and the concentration of vapor.
- A table documenting the free-product thickness in each well before and after each AFVR event.
- A scaled base map depicting the location of the recovery well or wells and immediately surrounding wells equipped with magnehelic gauges.

The drop tube or "stinger" should initially be installed six inches below the free-phase product or installed at the water table interface if free-phase product is not present. After the first two hours of the AFVR event, the depth of the stinger should be adjusted to obtain the highest petroleum vapor recovery. The depth should be periodically readjusted throughout the event to maintain maximum vapor recovery. Groundwater recovery should not exceed four gallons per minute at any time during the event. The overall goal is to maximize the recovery of free-phase product and petroleum vapors in the capillary fringe and minimize the recovery of groundwater.

Midlands can submit an invoice for direct billing from the State Underground Petroleum Environmental Response Bank (SUPERB) Account. Please note that all applicable South Carolina certification requirements apply to the AFVR activities and report preparation. All site rehabilitation activities must be performed and submitted by a South Carolina-Certified Underground Storage Tank Site Rehabilitation Contractor.

An AFVR report and invoice are due within 90 days from the date of this letter. Interim invoices may not be submitted for this scope of work. If the invoice is not submitted within 120 days from the date of this letter, monies allocated to pay this invoice will be uncommitted. This means that the invoice will not be processed for payment until all other committed funds are paid or monies become available.

Please note that Sections 44-2-110(4) and 44-2-130 of the SUPERB Statute state that no costs will be allowed unless prior approval from the SCDHEC is obtained. If for any reason additional tasks will be completed, these additional tasks and the associated cost must be pre-approved by the Department for the cost to be paid. SCDHEC reserves the authority to pay only for work properly performed and/or technically justified and will only pay rates in accordance with established criteria. Further, SCDHEC reserves the right to question and/or reject costs if deemed unreasonable and the right to audit project records at any time during the project or after completion of work.

The Division grants pre-approval for transportation of up to 5,000 gallons of free-phase product and petroleum-contaminated groundwater from the referenced facility to a permitted treatment facility. The product and groundwater must be properly stored in labeled containers and must be accepted by the approved treatment facility. There can be no spillage or leakage in transport. A copy of the disposal manifest or acceptance letter from the receiving facility that clearly designates the quantity received must be included with the report.

On all correspondence concerning this facility, please reference UST Permit #12335. If there are any questions concerning this project, feel free to contact me by telephone at (803) 896-6398, by fax at (803) 896-6245, or by e-mail at padgetjp@dhec.sc.gov.

Sincerely,

Joel P. Padgett, P.G., Geologist/Hydrologist
Corrective Action Section
Underground Storage Tank Management Division
Bureau of Land and Waste Management

JPP/jpp
12335.2

enc: Approved cost agreement form

cc: Midlands Environmental Consultants, Inc., P.O. Box 854, Lexington, SC 29071 (w/enc)
Technical file (w/enc)

# Approved Cost Agreement 41829

Facility: 12335 CRAWFORDS STORE
PADGETJP
PO Number:

| Task / Description | Categories | Item | Description | Qty / Pct | Unit Price | Amount |
|---|---|---|---|---|---|---|
| 04 MOB/DEMOB | | | | | | |
| | | A | EQUIPMENT | 2.0000 | 575.00 | 1,150.00 |
| 17 DISPOSAL | | | | | | |
| | | A2 | WASTEWATER - PUMPING TEST | 2,000.0000 | 0.60 | 1,200.00 |
| 19 RPT/PROJECT MNGT & COORDINATIO | | | | | | |
| | | PCT | PERCENT | 0.1500 | 8,910.00 | 1,336.50 |
| 23 EFR | | | | | | |
| | | A | 8 HOUR EVENT | 2.0000 | 3,000.00 | 6,000.00 |
| | | C | OFF GAS TREATMENT | 16.0000 | 35.00 | 560.00 |
| | | | | **Total Amount** | | 10,246.50 |

D H E C

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JAN 1 1 2008

MR RICHARD GILLESPIE
H2O ENVIRONMENTAL INC
130 CENTRUM DR STE 3B
IRMO, SC 29063

Re: System and Well Abandonment
Pay for Performance Projects at Sites 00781, 02382, 04102, 06851, 09413, 12335, 15971, 16090
$H_2O$ Environmental, Inc.

Dear Mr. Gillespie:

In correspondence from the Department dated March 2, 2007, Groundwater & Environmental Services (GES) was directed to remove and abandon the remediation systems at the sites listed below.

| Permit # | Site Name | Remove and Abandon Treatment System | Abandon Monitoring Wells |
|---|---|---|---|
| 04102 | City of Greenville | X | X |
| 00781 | SCDOT Bamberg Maintenance | X | |
| 02382 | Black's 66 | X* | X |
| 06851 | Spinx | X | |
| 09413 | Gaulden's Grocery | X | X |
| 15971 | Nesmith Well Contamination | X | |
| 16090 | Fmr Ellison's (Owens Well) | X | |
| 12335 | Crawford's Store | X | |

* Contact Mr. Tommy Keels at G&K Tank Services (803-799-0054) to pick up this trailer.

In accordance with the terms and conditions of the PfP contracts, you were to remove your equipment from the listed facilities, abandon the remediation well, piping, electrical service, etc., and restore the sites to the conditions prior to corrective action (e.g., asphalt paved areas will be repaved with asphalt, concrete areas will be replaced with concrete, grass areas will have soil replaced to the original grade and reseeded or sodded with grass, etc.). The monitoring wells were also to be abandoned in accordance with the contract terms and conditions at the facilities indicated in the table above.

UST PROGRAM
DOCKETING # _____

In response to your letter dated September 27, 2007 Department staff have conducted site inspections at the listed sites to verify compliance with the abandonment directive. As a result of these inspections the following deficiencies were noted:

| Permit # | Site Name | |
|---|---|---|
| 04102 | City of Greenville | Well pads/covers left in place |
| 00781 | SCDOT Bamberg Maintenance | Well pads left in place |
| 02382 | Black's 66 | Well pads/covers left in place |
| 06851 | Spinx | Well pads left in place |
| 09413 | Gaulden's Grocery | Well pads left in place (MW-1, -1R, -4, -4R, DW-1)<br>Well covers left in place (MW-8, -8R) |
| 16090 | Fmr Ellison's (Owens Well) | Well pads left in place |
| 12335 | Crawford's Store | Well pads left in place |

Your performance bonds will be returned as soon as completion of these activities has been verified by DHEC staff.

Please feel free to contact me at (803) 8966249 if you have any questions or need additional information.

Sincerely,

Christopher S. Doll, P.G., Manager
Northeastern SC Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management

cc: Technical Files
Matt Winslow, Bureau of Business Management

DHEC/UST/011008

D H E C

PROMOTE PROTECT PROSPER

C. Earl Hunter, Commissioner

*Promoting and protecting the health of the public and the environment.*

OCT 02 2008

MR RICHARD GILLESPIE
H2O ENVIRONMENTAL INC
130 CENTRUM DR STE 3B
IRMO, SC 29063

Re: System and Well Abandonment
Pay for Performance Projects at Sites 00781, 02382, 04102, 06851, 09413, 12335, 15971, 16090
$H_2O$ Environmental, Inc.

Dear Mr. Gillespie:

In correspondence from the Department dated March 2, 2007, Groundwater & Environmental Services (GES) was directed to remove and abandon the remediation systems at the sites listed below.

| Permit # | Site Name | Remove and Abandon Treatment System | Abandon Monitoring Wells |
|---|---|---|---|
| 04102 | City of Greenville | X | X |
| 00781 | SCDOT Bamberg Maintenance | X | |
| 02382 | Black's 66 | X* | X |
| 06851 | Spinx | X | |
| 09413 | Gaulden's Grocery | X | X |
| 15971 | Nesmith Well Contamination | X | |
| 16090 | Fmr Ellison's (Owens Well) | X | |
| 12335 | Crawford's Store | X | |

* Contact Mr. Tommy Keels at G&K Tank Services (803-799-0054) to pick up this trailer.

Completion of these activities has been verified by Department staff. In accordance with the terms outlined in Department correspondence dated January 11, 2008, you will find enclosed the performance bonds for the referenced projects. Please acknowledge receipt of these documents by email to **dollcs@dhec.sc.gov**.

UST DOCKET

Please feel free to contact me at (803) 896-6249 if you have any questions or need additional information.

Sincerely,

Christopher S. Doll, P.G., Manager
Northeastern SC Corrective Action Section
Assessment and Corrective Action Division
Underground Storage Tank Program
Bureau of Land and Waste Management

cc: Technical Files (w/o enc.)
Matt Winslow, Bureau of Business Management (w/o enc.)
Craig Hurst, Groundwater & Environmental Services, 380 Northlake Blvd.,
Altamonte Springs, FL 32701

enc: Perf. Bonds Nos. 5943703, Y201064, 5953458, 6130576, Y201464, 5943712, Y201492, 6149406

DHEC/UST/100208