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SITE ASSESSMENT,  
REMEDICATION &  
REVITALIZATION

February 28, 2011

Ms. Addie Walker  
South Carolina Department of Health and Environmental Control  
2600 Bull Street  
Columbia, SC 29201

628 9431

Dear Ms. Walker,

**Subject: DMT Area Supplemental Monitoring  
December 2010  
INVISTA, Spartanburg Facility (fka KoSa)  
BoW Site ID# 00225  
AECOM Project No. 60135440**

This technical memorandum presents the data collected during December 2010 at the INVISTA Spartanburg facility. This monitoring event was a supplement to the site characterization event completed in June 2010. The sampling completed in December was focused on the former DMT Area and the reductive dechlorination activities which have been completed there. Monitoring locations at the facility are shown in Figure 1.

Detailed assessments of current site conditions and site remedial effectiveness were presented in the June 2010 Site Assessment Report submitted in September 2010 and the Remedial Effectiveness Report submitted in November 2010. The site conditions for the DMT area reported in December 2010 support the conclusions of these reports.

The December event was completed as described in the Sampling and Analysis Plan (SAP), which was submitted to the South Carolina Department of Health and Environmental Control (DHEC) in April 2010 and approved on June 1, 2010. Groundwater data collected in December is summarized in Table 1, and surface water data collected from location SW-12 is summarized in Table 2 (attachments to this memorandum). Only parameters detected in at least one sample are included in Tables 1 and 2.

The effectiveness of the reductive dechlorination activity was summarized in Table 3 of the Remedial Effectiveness Report. This table has been updated with data collected in December 2010 and is presented as Table 3 attached to this memorandum. The results are similar to the June 2010 data.

As shown in Table 3, more than two-thirds of the locations in the Former DMT Area are reporting non-detect results for chloroform (<0.005 milligrams per liter (mg/L)). Four saprolite locations have chloroform detections which exceed the maximum contaminant level (MCL) of 0.080 mg/L (MCL for total trihalomethanes). These are the same four locations identified in June 2010. They include three wells located on the southern edge of the property and MW-109, which is located across I-85.

Chloroform was not detected in any of the bedrock wells analyzed in the former DMT area.

The concentration of chloroform at one of these locations, MW-106, increased in comparison to the June 2010 analytical result; however, the concentration remains below historic detections noted at this well. Fluctuations have been noted at a few wells since the treatment was completed, and increasing trends have not resulted.

Concentrations in recent years had been increasing at well MW-109. In December 2010, the result was stabilized with a reported concentration slightly below the June 2010 result. This result may indicate that the increasing trend has ended. This location will be sampled again in June 2011 and will remain on the sampling plan for continued assessment.

Chloroform continues to be detected at surface water location SW-12. Historic sampling at SW-12 has demonstrated that some portion of the chloroform plume is captured by this stream. Concentrations in this stream at location SW-12 have ranged from <0.005 mg/L to 0.0281 mg/L. The December 2010 result was 0.019 mg/L. These concentrations are below the total trihalomethane MCL of 0.080 mg/L.

The results of the December event support the data and conclusions presented in the recent reports. The reductive dechlorination activities completed at the site have been effective in reducing the extent and magnitude of chloroform. Chloroform is not detected in bedrock wells at concentrations exceeding the MCL. In saprolite wells, chloroform is expected to drain to the surface creek or directly to the deeply incised Pacolet River.

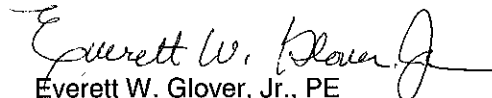
The next site-wide event is scheduled for completion in June 2011. The sampling plan for this event will be as described in the Remedial Effectiveness Report. A report summarizing the results of this event will be submitted by September 30, 2011.

If you have questions, please contact us at 404.965.9600.

Sincerely,



Bryon Dahlgren  
Project Manager



Everett W. Glover, Jr., PE  
Senior Program Manager

Attachments: Table 1 Summary of Groundwater Analytical Results, December 2010  
Table 2 Summary of SW-12 Surface Water Analytical Results, December 2010  
Table 3 Summary of ERD Treatment Effectiveness  
Figure 1 Sampling Locations

Table 1  
 Summary of Groundwater Analytical Results  
 December 2010  
 INVISTA Spartanburg Facility  
 AECOM Project No. 60135440

Parameter	Unit	EW-31 12/14/2010	EW-37 12/13/2010	EW-41 12/14/2010	EW-41 Dup 12/14/2010	EW-49 12/14/2010	EW-52 12/14/2010	EW-53 12/14/2010	MW-99 12/13/2010	MW-103 12/14/2010	MW-105 12/14/2010	MW-106 12/14/2010
<b>Volatile Organics</b>												
chloroform	mg/L	<0.005	<0.005	0.0471	0.0541	<0.005	<0.005	0.0127	0.00748	<0.005	0.16	0.581
cis-1,2-dichloroethene	mg/L	<0.005	<0.005	<0.005	<0.005	0.00858	0.0495	<0.005	0.111	<0.005	0.0167	<0.02
1,1,2,2-tetrachloroethane	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.00509	<0.005	<0.01	<0.02
tetrachloroethene	mg/L	<0.005	0.00921	<0.005	<0.005	<0.005	<0.005	<0.005	0.182	<0.005	<0.01	<0.02
trichloroethene	mg/L	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.0336	<0.005	<0.01	<0.02
<b>Field and Natural Attenuation Parameters</b>												
alkalinity	mg/L	137	30.3	38.8	39.8	79.6	40.8	67.7	2.49	3.98	9.45	<1
chloride	mg/L	8.39	13	3.42	3.41	1.98	3.01	11.7	1.81	3.06	6.22	13.8
dissolved oxygen	mg/L	0.3	0.9	0.2	0.2	0.7	0.6	0.6	3.07	7.8	4.84	6.89
ferrous iron	mg/L	2.4	0.6	2.4	2.4	1	4	2.2	<0.2	<0.2	<0.2	<0.2
groundwater elevation	feet MSL	668.92	718.68	668.86	668.86	725.02	721.86	694.95	730.23	689.28	716.06	1716.47
manganese (dissolved)	mg/L	1.63	1.14	1.28	1.28	0.06	0.215	2.11	0.051	0.049	<0.01	0.02
ORP	mV	-194	101	24	24	-81	-17	-20	199	319	147	135
pH	su	6.81	5.99	5.9	5.89	7.92	6.39	6.33	5	4.7	5.55	5.14
specific conductance	umhos/cm	320	143	123	123	205	154	194	25	52	60	58
temperature	degrees C	16	16	17	17	15	13	17	18	18	16	16
total organic carbon	mg/L	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
turbidity	NTU	<1	9	48	48	4	32	84	12	5	1	4

NA - Not Analyzed  
 degrees C - degrees Celsius  
 feet MSL - feet above mean sea level  
 mg/L - milligrams per liter  
 mV - millivolts  
 NTU = nephelometric turbidity units  
 su - standard units  
 umhos/cm - micromhos/cm

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Table 1  
 Summary of Groundwater Analytical Results  
 December 2010  
 INVISTA Spartanburg Facility  
 AECOM Project No. 60135440

Parameter	Unit	MW-107 12/14/2010	MW-109 12/13/2010	RW-29 12/13/2010	RW-29 Dup 12/13/2010	RW-48 12/14/2010	RW-65 12/14/2010	RW-108 12/13/2010
<b>Volatile Organics</b>								
chloroform	mg/L	0.231	0.456	<0.005	<0.005	<0.005	<0.005	<0.005
cis-1,2-dichloroethene	mg/L	<0.02	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005
1,1,2,2-tetrachloroethane	mg/L	<0.02	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005
tetrachloroethene	mg/L	<0.02	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005
trichloroethene	mg/L	<0.02	<0.025	<0.005	<0.005	<0.005	<0.005	<0.005
<b>Field and Natural Attenuation Parameters</b>								
alkalinity	mg/L	25.9	24.4	62.7	63.7	211	105	413
chloride	mg/L	1.81	2.62	1.41	1.41	18.7	13.9	4.2
dissolved oxygen	mg/L	6	6	0.9	0.8	1	0.2	0.5
ferrous iron	mg/L	<0.2	<0.2	<0.2	<0.2	2.5	<0.2	1
groundwater elevation	feet MSL	685.24	674.22	772.06	772.06	707.19	682.44	673.8
manganese (dissolved)	mg/L	<0.01	<0.01	0.03	0.029	0.152	1.98	0.655
ORP	mV	196	162	-29	-31	-123	-2.5	-112
pH	su	5.69	5.83	8.53	8.53	7.65	7.38	7.1
specific conductance	umhos/cm	70	66	166	167	533	272	749
temperature	degrees C	18	13	16	16	16	16	13
total organic carbon	mg/L	<1	<1	<1	<1	<1	<1	2.32
turbidity	NTU	3	47	3	3	10	<1	3

NA - Not Analyzed  
 degrees C - degrees Celsius  
 feet MSL - feet above mean sea level  
 mg/L - milligrams per liter  
 mV - millivolts  
 NTU = nephelometric turbidity units  
 su - standard units  
 umhos/cm - micromhos/cm

Table 2  
 Summary of SW-12 Surface Water Analytical Results  
 December 2010  
 INVISTA Spartanburg Facility  
 AECOM Project No. 60135440

Parameter	Unit	SW-12 12/14/2010
chloroform	mg/L	0.019
dissolved oxygen	mg/L	9.5
ORP	mV	19
pH	su	7.25
specific conductance	umhos/cm	112
temperature	degrees C	6
turbidity	NTU	4

NA - Not Analyzed  
 degrees C - degrees Celsius  
 mg/L - milligrams per liter  
 mV - millivolts  
 NTU = nephelometric turbidity units  
 su - standard units  
 umhos/cm - micromhos/cm

**Table 3**  
**Summary of ERD Treatment Effectiveness**  
**December 2010**  
**INVISTA Spartanburg Facility**  
**AECOM Project No. 60135440**

Chloroform data in mg/L	
Pre-Injection Concentration	December 2010 Concentration
<b>Injection Locations</b>	
EW-30	2.36
EW-31	1.57
EW-37	4.6
EW-39	8.36
EW-40	3.21
EW-41	1.74
EW-44	4.0
EW-49	0.93
EW-50	0.463
EW-53	4.02
RW-47	1.16
RW-48	15.0
RW-65	4.19
<b>Monitoring Locations</b>	
EW-36	0.217
EW-52	0.0135
MW-45	0.014
MW-99	0.014
MW-103	0.376
MW-105	0.349
MW-106	0.461
MW-107	0.0063
MW-109	0.14
RW-108	0.358

\* - December 2008 result, most recent sample from this location

\*\* - December 2008 result, most recent sample from this location, EW-40 and RW-47 <0.005 mg/L in June 2008