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August 29, 2008

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Environmental Division  
South Carolina Electric and Gas Company  
Mail Code 049  
Columbia SC 29218

**RE: Draft Remedial Investigation Report  
SCE&G Huger Street Former MGP Site**

Dear Mr. Apple:

The Department has reviewed the Draft supplemental delineation work plan for the SCE&G Huger Street Site. The Department approves the work plan dated August 15, 2008. Please notify the Department at least 5 days before the start of field activities. If you have any questions or comments please contact Lucas Berresford at (803)896-4071 or Konstantin Akhvlediani at (803)896-4045.

Sincerely

Lucas Berresford, Project Manager  
State Remediation Section  
Bureau of Land and Waste Management

Konstantin Akhvlediani at (803)896-4045  
Superfund Hydrogeology  
Bureau of Land and Waste Management

CC: Gary Stewart  
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DRAFT

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**SUPPLEMENTAL DELINEATION WORK PLAN**

**HUGER STREET FORMER MGP SITE  
SOUTH CAROLINA ELECTRIC & GAS COMPANY  
COLUMBIA, SOUTH CAROLINA**

237

August 2008

*Prepared for:*

**SCANA Services, Inc.**  
Palmetto Center  
1426 Main Street  
Columbia, South Carolina 29201

*Prepared by:*

**Management and Technical Resources, Inc.**

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## **1.0 INTRODUCTION**

This Draft Supplemental Delineation Work Plan (SDWP) was prepared on behalf of South Carolina Electric & Gas Company (SCE&G) to provide details regarding additional subsurface delineation activities at the SCE&G Huger Street former manufactured gas plant (MGP) site located at 1409 Huger Street in Columbia, South Carolina. The site is currently being managed under the South Carolina Department of Health and Environmental Control (SCDHEC) Responsible Party Voluntary Cleanup Contract (VCC) #02-5295-RP.

## **2.0 SITE BACKGROUND**

A thorough description of the Huger Street Site and its operational history has been submitted to the agency in previous documents. The current regulatory and overall project status of the site is summarized below.

Remedial investigation activities have been ongoing at the site since 1995 and were culminated in the submittal of the Final Draft Remedial Investigation Report (RI Report) on June 4, 2007. Following submittal of the RI report, SCE&G submitted the July 27, 2007 request for approval to complete an Interim Removal Action (IRA) (Appendix A). SCE&G provided justification that an IRA was appropriate given the factors outlined in the request and the agency concurred. The request to conduct an IRA was approved via e-mail on January 14, 2008 (Appendix A). As currently anticipated, the RI Report will be approved by SCDHEC after the delineation activities, as described herein, have been completed.

Since receiving the IRA approval, SCE&G has been working with the previous site tenants, the Columbia Area Regional Transit Authority (CARTA), in order to assist them in moving the bus maintenance operations from the Huger Street site to a newly constructed facility. CARTA finished relocation activities in June 2008 and SCE&G has recently begun to demolish the existing site structures in preparation for the additional delineation activities described below and the subsequent IRA.

## **3.0 PLANNED DELINEATION LOCATIONS**

### **3.1 Overview**

A general site map showing previous MGP and bus terminal related structures is provided as Figure 1. After the demolition activities are completed, only the radio service building located in the northwestern portion of the site will remain intact. The radio building is not in the planned remediation areas and will be utilized for storage by remediation personnel during completion of the project. The other above ground structures will be removed from the site. Portions or the concrete foundations of the buildings located within the planned excavation areas will be broken up and left in place. The broken concrete foundations will facilitate test pit excavation. Leaving the concrete floors intact will also provide ground cover until full-scale remediation activities commence.

### **3.2 Methods**

Test pit excavation has been chosen as the method for completing the supplemental delineation activities for the following reasons:

- Test pits can be readily excavated using typical construction excavation equipment;
- They provide a clear view of subsurface conditions and potential obstructions;
- They provide valuable insight into the potential for groundwater infiltration into the planned excavation areas; and
- They can be widened or extended as necessary in order to obtain additional information.

The test pits are intended to close some of the data gaps identified by SCDHEC and SCE&G, which were primarily a result of the former structures precluding previous investigative efforts. Figure 2 provides the soil borings, test pits and monitoring well locations completed during previous investigative activities. Also included on Figure 2 are the planned locations of the supplemental delineation test pits.

### 3.3 Objectives

A total of fifteen (15) test pits are currently planned. Additional test pits may be completed at the discretion of field personnel dependent upon observed subsurface conditions and/or the need to further refine the extent of impacts in a certain area. Each of the fifteen locations were chosen in order to satisfy one or more of the objectives listed below:

- Provide additional information for areas identified in Comment #30 of SCDHEC's March 13, 2007 comments on the RI Report (Appendix B);
- Further delineate potential impacts in areas previously inaccessible due to the presence of the former structures;
- Define the planned extent of removal operations in order to produce more accurate plans and remediation contractor bid specifications;
- Gather information on the potential need for excavation water management during removal operations; and
- Collect representative samples for disposal facility characterization.

### 3.4 Test Pit Locations and Rationale

Table 1 provides a list of the test pit locations and the corresponding rationale for completing each one. Figure 3 shows the planned test pit locations in relation to the planned IRA excavation areas, which were provided to SCDHEC in the IRA Request. The heavy dashed lines also present on Figure 3 represent the areas identified in SCDHEC's comments on the RI Report. Specifically, SCDHEC requested additional assessment in the following six areas of the site. The test pit(s) that are intended to satisfy the request for each area are listed in parenthesis next to the description.

1. Former gas holder number 1 (TP-2 and TP3);
2. Data gaps should be filled in between M17, M39, M19 and the storm drain (TP-10, TP-11 and TP13);
3. Under the existing building near the tar wells and oil tanks (TP-5, TP-6 and TP-7);
4. Between M31 and the southwest property line (TP-15);
5. Between M37 and M29 (TP-12 and TP-14); and
6. Between M9, M7, M8, and M6 (TP-3 and TP-4).

It is important to note that the specific area in request number 4 above (between M31 and the southwest property line) is very close in proximity to a buried fiber optic cable. As a result, the TP-15 location is oriented slightly southeast of the requested location. SCE&G will make an effort to locate the test pit as close to the requested area as practicable while still maintaining a safe distance from the buried fiber optic cable.

In general, twelve of the fifteen planned locations area intended to provide information in the areas that SCDHEC requested. The remaining three are intended to provide additional information that will further refine the planned lateral and vertical extent of excavation. TP-1 will provide information in the purifier area under the former Survey and Map Department building. TP-8 is intended to identify potential impacts between borings M-28 and M16 and TP-9 will provide information on conditions below the former office building. All of the test pits will provide valuable insight regarding the potential extent of groundwater infiltration into the planned excavation areas and other important subsurface conditions.

#### **4.0 TEST PIT EXCAVATION FIELD ACTIVITIES**

##### **4.1 Utility Clearance**

Isolation, disconnection and physical removal of site related utilities have been completed as part of the demolition process. As a result, all utilities should have been removed from the planned excavation areas. However, in order to be consistent with the applicable regulations, a request for clearing and identifying potential underground utilities at the site will be submitted to the Palmetto Utility Protection Services, Inc. (PUPS) prior to initiating any excavation activities. In addition to PUPS, any utility owners reporting lines that are still active at the site will be requested to provide personnel to mark their utilities in the vicinity of the proposed investigation locations. This will be especially important near the fiber optic cable mentioned in the previous section. Test pit locations may be adjusted slightly to provide adequate clearance from identified utilities.

##### **4.2 Test Pit Procedures**

An excavator with a maximum depth range of 18-20 feet below ground surface will be utilized in order to reach the known or anticipated depth of impacted material in certain areas. The length of the test pits will vary depending on the area and the subsurface conditions encountered but will most likely range from 20 to 25 feet. The width of the pits will vary depending on the size of the excavator bucket, depth of the excavation and the degree of sidewall cave-in. A minimum of approximately 3 feet is expected.

The test pits will be photographed and logged by field personnel. The logging results will be recorded in the field notebook, and/or the test pit log. The test pit log will include, at a minimum, horizontal and vertical extent of various soils and fill materials; occurrence of groundwater; nature and extent of any structures, pipes, etc.; and, the presence and extent of observed MGP materials. Observed DNAPL will be visually classified in the same manner as previous investigations and according to the following descriptors (EPRI, November 1998):

- *Not Present* – no visible coal tar identified;
- *Blebs* – separate, small-diameter spheres of DNAPL present in minor amounts;
- *Stringers* – continuous, thin streaks of DNAPL;

- *Ganglia* – continuous, branching, thin streaks of DNAPL;
- *Partially Saturated* – thick zones of DNAPL; or
- *Saturated* – pore spaces nearly filled with DNAPL.

Some test pits may be left open for a period of time (24-48 hours) to gauge groundwater infiltration rates, but most will be backfilled immediately upon completion of the identification and evaluation activities. Pits that are left open will be secured with caution tape, traffic cones and/or other similar type of barricade. Excavated material will be temporarily placed on plastic. Following completion of the pit, the excavated soils will be returned in the reverse order in which they are removed, and the surface area will be restored (to the extent practical) to prevent erosion from surface water. A fresh cover of gravel or soil may be placed over the excavation areas to further prevent erosion by surface water. As currently anticipated, no off-site disposal or containment of excavated material will be required.

#### **4.3 Decontamination Procedures**

Following completion of test pit excavation, backfill and site restoration activities, the excavator and other equipment that contacted impacted material will be properly decontaminated before leaving the site. Plastic sheeting, decontamination water and other investigative derived wastes will be managed for proper disposal by SCE&G.

### **5.0 DISPOSAL FACILITY PRECHARACTERIZATION SAMPLING**

#### **5.1 Overview**

Analytical results from soil samples collected during previous investigative efforts did not include some of the required analyses and are outdated for use in obtaining disposal facility acceptance of the material. As a result, SCE&G plans to collect the required samples during the test pit delineation activities. Based on a federal circuit court judgment decided in April 2000 and subsequent EPA guidance, MGP wastes are not subject to TCLP testing for a hazardous waste determination. Therefore, material from the Huger Street Site will be characterized for disposal primarily based on requirements of the disposal facilities.

#### **5.2 Sampling Procedures**

Representative soil samples will be collected from test pits located within the planned excavation area and analyzed in accordance with disposal facility requirements. Composite samples will be collected from a number of test pits in order to satisfy disposal facility sample volume requirements (e.g., one set of analytical results per 2,000 tons of material). As currently planned, test pits TP-1, TP-5, TP-6, TP-7 and TP-9 will be sampled. Other test pits may be sampled depending on the representative nature of the impacts encountered.

SCE&G anticipates utilizing a landfill and a thermal treatment facility for disposal of material from the Huger Street Site. Planned facilities will be contacted and sampling requirements such as volume, frequency and analytical parameters will be confirmed prior to mobilization. The results of the sample collection efforts and the disposal facility acceptance packages will be included in the IRA Work Plan.

## **6.0 REPORTING**

As stated previously, the results of these supplemental delineation activities will be incorporated into the IRA Work Plan.

## **7.0 SCHEDULE**

The fieldwork for the test pit excavation is tentatively schedule for mid September, pending SCDHEC's review and approval of this work plan. Field activities will be completed in less than one week. Analytical results will be available by early October and the waste profiles for the disposal facilities will be submitted by mid October. It is currently envisioned that the draft IRAWP will be submitted by October 31, 2008 for SCDHEC review and comment. The IRAWP will be very similar to previous work plans submitted by SCE&G for other MGP sites. It is SCE&G's intention to initiate excavation removal activities in early January 2009.

## **8.0 HEALTH AND SAFETY PLAN**

Appendix D of the approved Subsurface Investigation and Utility Identification Work Plan (MTR, December 2004) provided a site-specific Health and Safety Plan (HASP) to address potential hazards for completing soil boring and sample collection field work. Since the planned field activities as described in this SDWP are similar, the existing site-specific HASP will be utilized to complete the fieldwork. Excavation area air monitoring will be conducted in accordance with the procedures and action levels outlined in the HASP. Daily tailgate safety meetings will be conducted and will include a description of the day's planned activities and the task specific safety concerns.