

December 29, 2010

Mr. Lucas Berresford
Project Manager
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

**Re: Phase I Delineation - Summary
Phase II Delineation - Proposed Activities
Congaree River Sediments
Columbia, South Carolina**

Dear Mr. Berresford:

The letter provides a brief summary of the Phase I delineation results that were reviewed at the November 2, 2010 meeting and also presents the proposed Phase II delineation activities for the Congaree River Sediments.

PHASE I DELINEATION - SUMMARY

The revised Delineation Work Plan (DWP) for the Congaree River Sediments was submitted to the South Carolina Department of Health and Environmental Control (SCDHEC) on September 16, 2010 and approved on September 24, 2010. The objectives of the DWP were to:

- Delineate the vertical and lateral extent of tar-like material (TLM) via field observations;
- Collect samples for laboratory analysis around the perimeter of the areas of visible contamination to delineate the extent of contamination; and
- Complete the work in a safe and efficient manner.

The Phase I delineation activities were conducted from August through October 2010. Initially, the non-intrusive fieldwork consisted of screening the project area for magnetic anomalies that may include unexploded ordnances (UXO) from the Civil War. Pertinent findings from the Phase I delineation activities included (please refer to Figure 1):

- Numerous magnetic anomalies were observed;
- The horizontal extent of visual TLM appears to be defined to the north and west.
- The eastern boundary is likely defined by the Congaree River bank; however, this hypothesis could not be confirmed since access was not available at the time of the Phase I field activities.
- TLM was visually observed along the "16" line which represents the southern most extent of the Phase I sediment coring program; and
- Reconnaissance performed down river (south) of the "16" line to near the Blossom Street bridge yielded observations, at a limited number of locations, of other weathered material (OWM) with characteristics that could potentially be MGP-like material or other material. This OWM is distinctly different from the TLM and the locations of the OWM are shown in yellow on Figure 1.

PHASE II DELINEATION - PROPOSED ACTIVITIES

As discussed at the November 2, 2010 meeting and based on the Phase I findings, it was agreed that the following Phase II activities should be completed:

- Pre-screen the area for magnetic anomalies from the "16" line to approximately 400 feet below the Blossom Street bridge and within Unnamed Tributary #1;
- Evaluate the presence or absence of TLM in Unnamed Tributary #1;
- Delineate the eastern extent of TLM by drilling landside borings along the shoreline;
- Delineate the potential TLM extent from the "16" line to approximately 400 feet down river from the Blossom Street bridge;
- Evaluate the potential occurrence of OWM from the "16" line to below the Blossom Street bridge; and
- Collect samples for laboratory analyses at the visually un-impacted boundary locations to confirm delineation.

The following sections briefly discuss the proposed Phase II delineation activities. All field activities will follow procedures described in the approved DWP.

Magnetometer Survey

Consistent with Phase I, the magnetometer survey will be performed to identify magnetic anomaly locations, which could be indicative of potential UXO from the Civil War. The magnetometer survey will be performed prior to implementing Phase II intrusive activities in the Congaree River and Unnamed Tributary #1. The magnetometer survey will include (to the extent practicable) the area down river from the "16" line to approximately 400 feet south of the Blossom Street bridge, and from the "P" – "R" line east to the shoreline (Figure 2). The Unnamed Tributary #1 magnetometer survey will be performed from the river upstream to the waterfall.

Similar to the August 2010 event, the magnetometer survey will be conducted from a boat using transects on a 20-foot spacing. The presence of protruding and/or shallow submerged boulders may force adjustments to the transect lines and/or data collection methods (areas of shallow water may be waded). Horizontal control will be maintained via a differential global positioning system (DGPS) and appropriate navigational software.

The Unnamed Tributary #1 magnetometer survey will be conducted "on-foot" since the physical features of the tributary and limited water depth prevents accessing via a boat. Adjustments to the transect lines may be necessary to account for channel geometry.

Evaluation of Unnamed Tributary #1

A total of four sediment cores will be collected along the approximate centerline of the Unnamed Tributary #1 to evaluate the presence or absence of TLM. As currently planned, the coring locations will be established based on the previous H2 location and proceed on a 50-foot spacing upstream. Because of navigational constraints accessing Unnamed Tributary #1, the sediment sampling pontoon boat cannot be used. Therefore, the sediment cores will be advanced using either mechanical means (gas powered jackhammer [Whacker BH24]) and/or manual means (sharp shooter [shovel]). Figure 2 shows the approximate location of the proposed corings.

Landside Borings (as Proposed in Phase I)

A total of 20 landside borings are proposed and the locations and rationale are listed below:

- Borings L6 and L7: Determine visual presence/absence of TLM under the boat launch apron;
- Borings K4 through K8: Determine visual presence/absence of TLM near the toe of a steep bank; and
- Borings J3 through J15: Intended to delineate the eastern extent of TLM.

The borings will be completed using procedures presented in the approved September 2010 DWP. Collected soil samples will be evaluated for constituents consistent with coal tar.

Phase II - Congaree River Investigation Points

As stated previously, the Phase I results indicated that the occurrence of TLM extends south of the "16" line. Therefore, additional Congaree River investigative points are proposed as shown on Figure 2. As currently planned, the additional points will start at the "17" line and extend southward to the "36" line, which is approximately 400 feet down river from the Blossom Street bridge. As envisioned, the investigative points will likely be bounded by the "N", "P" or "R" line and extend eastward to the shoreline. A total of 60 sediment core samples are proposed within this Phase II river area. Also, 12 "contingency" sediment core samples (located on the western perimeter of the Phase II area) are shown on Figure 2 in the event interior points indicate the presence of visual TLM. It should be noted, that investigative points may be moved, added or deleted based on observations made at the time of implementation, physical constraints, or at the request of SCDHEC.

Consistent with Phase I, the grid node spacing from the "17" line through the "20" line will be 100 feet (north to south) by 50 feet (east to west). The grid spacing for this area is recommended because:

- TLM exists along the "16" line;
- Water depth between the "16" and "19" lines increases (the Congaree River bottom gets deeper) thus promoting the potential for settlement and accumulation of TLM; and
- Based on the field reconnaissance completed during Phase I, it is believed that the "19" or "20" line may represent the limit of visually continuous TLM.

For the area south of the "20" line, it is recommended that the sampling grid size be increased, with a spacing of 200 feet (north to south) by 100 feet (east to west). The increased spacing is proposed because of the sporadic and very limited observations of OWM in this area during Phase I.

The river sampling locations will likely be accessed using a pontoon boat equipped with direct push technology (DPT) [i.e. Geoprobe 420M] as utilized during the Phase I delineation activities. The sediment cores will be collected and logged using procedures presented in the approved DWP.

Sample Collection and Analysis

Sediment and soil samples will be collected at select locations to provide analytical data to augment sensory observations. Figure 3 presents the proposed analytical sample locations and field conditions will dictate the actual sample locations. Consistent with the approved DWP and Phase I activities, sediment samples will be collected at boundary locations where neither visual nor olfactory observations are noted. Generally, these perimeter samples will be collect on a 300-foot spacing. As shown on Figure

3, the Area D and E sediment samples will be collected on a 600-foot spacing. Table 1 also lists the potential sample locations and provides the sampling rationale.

The sediment and soil samples will be collected, processed, and transported to the laboratory following procedures described in the approved DWP and utilized during the Phase I activities. Shealy Environmental Services, Inc. (Shealy) located in West Columbia, South Carolina will perform the laboratory analyses. Soil and sediment samples will be analyzed for constituents consistent with coal tar which includes benzene, toluene, ethylbenzene, and total xylenes by Method 8260B and polynuclear aromatic hydrocarbons by Method 8270D. Decontamination of field instruments, sampling equipment and management of investigative derived waste (IDW) will follow procedures described in the approved DWP. The IDW will be containerized and staged at SCE&G's 1409 Huger Street site, pending disposal.

As before, each investigative location will also be field-screened with a metal detector to confirm the absence of any magnetic anomaly before attempting to obtain a sample. Also, a photoionization detector (PID) will be used to screen the sediment samples retrieved for laboratory analysis.

Schedule

The magnetometer survey represents the initial Phase II activity. As currently planned, it is anticipated that the magnetometer survey may occur in late December or early January 2011. Based on historical discharge data for the Congaree River, river levels should be conducive to conducting the fieldwork during this period. The actual start date will be dependent upon anticipated river conditions and the weather forecast. As before, the data obtained from the magnetometer survey will be superimposed onto the proposed sampling grid map so that potential obstructions can be avoided.

The Phase II sediment coring and soil borings will likely commence in January 2011. Field implementation of all Phase II work (and especially the landside activities) will be contingent upon securing a new property access agreement. A complete Delineation Report will be developed and submitted to SCDHEC for review and approval following completion of the Phase II work.

Should you have any questions, please contact Bob Apple at 919-819-2748 or me at 412-829-9650.

Sincerely,



Andrew R. Contrael
Senior Project Manger

Attachments

cc: B. Apple - SCANA
M. Ferlin - MTR

TABLE 1

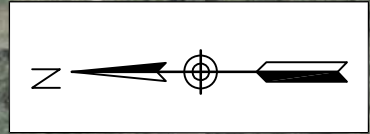
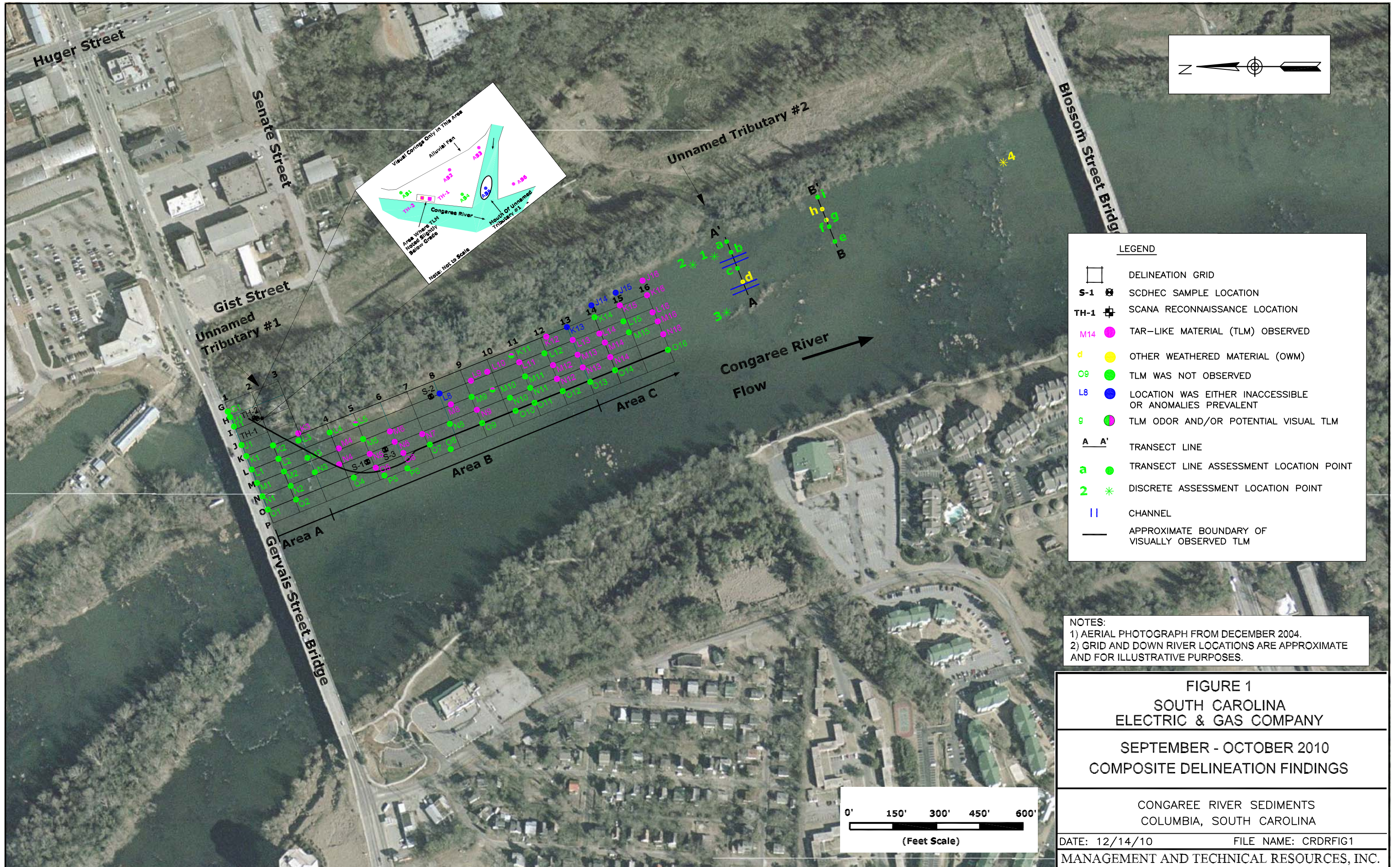
PROPOSED SAMPLE LOCATIONS FOR LABORATORY ANALYSES

**Congaree River Sediments
Columbia, South Carolina**

Western and Eastern Boundaries - Areas B and C			
Line	Proposed Location	Boundary	Depth
5	K5	Eastern	Composite from ground surface to approximately 2 feet below groundwater level surface.
8	K8	Eastern	
11	J11	Eastern	
14	J14	Eastern	Composite from groundwater surface to approximately 4 feet below groundwater level surface.
17	I17	Eastern	Composite from top of sediment to a maximum depth of 5 feet or refusal, whichever occurs first.
20	I20	Eastern	
17	O17	Western	Composite from top of sediment to refusal.
20	M20	Western	
Southern Boundary - Area C			
Line	Proposed Location	Boundary	Rationale and Depth
20	I20	Southern	Define contiguous TLM area southern boundary. Composite from top of sediment to refusal.
20	K20	Southern	
20	M20	Southern	
Area D			
Line	Proposed Locations	Rationale and Depth	
24	Western and Eastern	Obtain analytical data from non-contiguous TLM area. Sample interval from top of sediment to refusal.	
30	Western and Eastern		
36	Western and Eastern		

Notes:

- (1) All samples will be collected at locations where TLM is visually absent, olfactory evidence is not noted, and there is no PID response.
- (2) At locations where there are PID responses, the sample will be collected from the interval with the highest PID response (with a minimum sample interval of 2-foot length).



LEGEND

	DELINEATION GRID
	SCDHEC SAMPLE LOCATION
	SCANA RECONNAISSANCE LOCATION
	TAR-LIKE MATERIAL (TLM) OBSERVED
	OTHER WEATHERED MATERIAL (OWM)
	TLM WAS NOT OBSERVED
	LOCATION WAS EITHER INACCESSIBLE OR ANOMALIES PREVALENT
	TLM ODOR AND/OR POTENTIAL VISUAL TLM
	TRANSECT LINE
	TRANSECT LINE ASSESSMENT LOCATION POINT
	DISCRETE ASSESSMENT LOCATION POINT
	CHANNEL
	APPROXIMATE BOUNDARY OF VISUALLY OBSERVED TLM

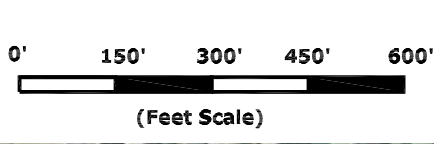
NOTES:
 1) AERIAL PHOTOGRAPH FROM DECEMBER 2004.
 2) GRID AND DOWN RIVER LOCATIONS ARE APPROXIMATE AND FOR ILLUSTRATIVE PURPOSES.

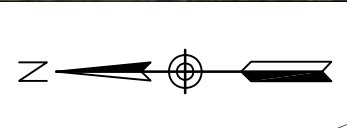
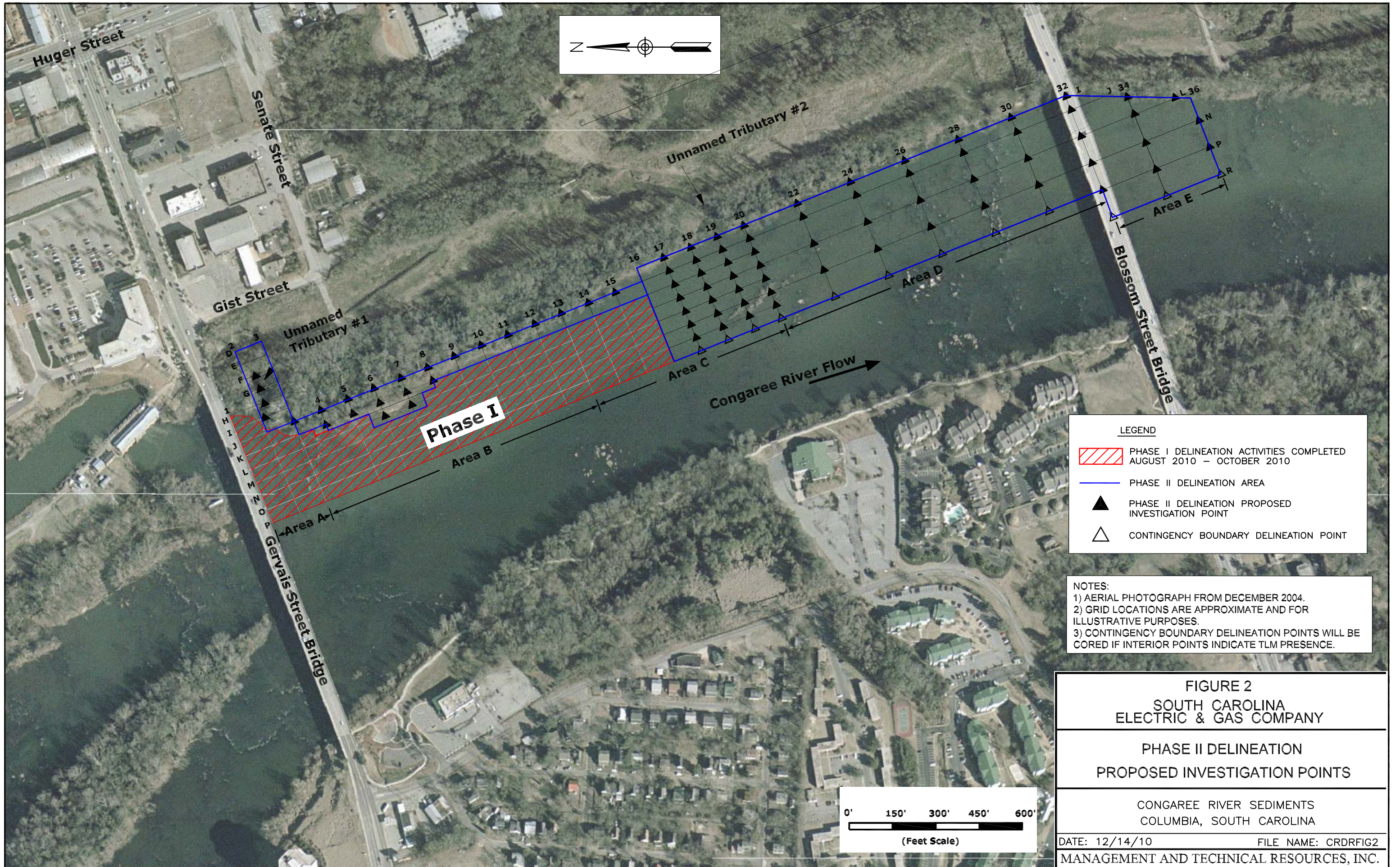
**FIGURE 1
 SOUTH CAROLINA
 ELECTRIC & GAS COMPANY**

**SEPTEMBER - OCTOBER 2010
 COMPOSITE DELINEATION FINDINGS**





CONGAREE RIVER SEDIMENTS
 COLUMBIA, SOUTH CAROLINA

DATE: 12/14/10 FILE NAME: CRDRFIG1
 MANAGEMENT AND TECHNICAL RESOURCES, INC.





LEGEND

-  PHASE I DELINEATION ACTIVITIES COMPLETED AUGUST 2010 – OCTOBER 2010
-  PHASE II DELINEATION AREA
-  PHASE II DELINEATION PROPOSED INVESTIGATION POINT
-  CONTINGENCY BOUNDARY DELINEATION POINT

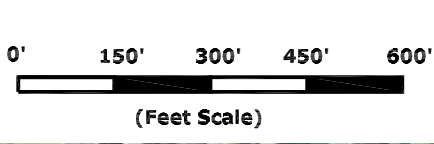
NOTES:
 1) AERIAL PHOTOGRAPH FROM DECEMBER 2004.
 2) GRID LOCATIONS ARE APPROXIMATE AND FOR ILLUSTRATIVE PURPOSES.
 3) CONTINGENCY BOUNDARY DELINEATION POINTS WILL BE CORED IF INTERIOR POINTS INDICATE TLM PRESENCE.

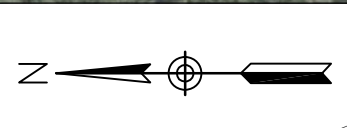
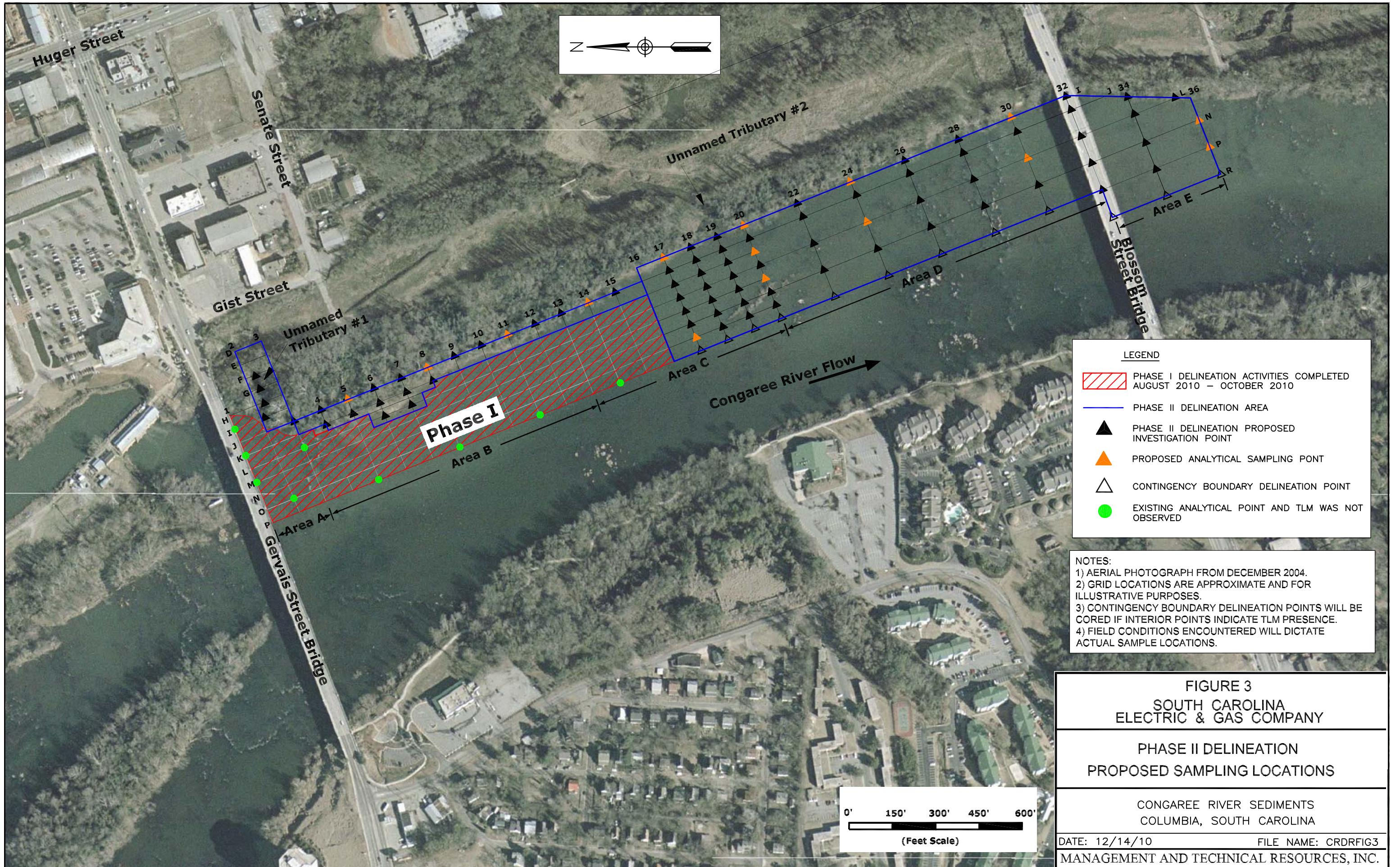
FIGURE 2
SOUTH CAROLINA
ELECTRIC & GAS COMPANY

PHASE II DELINEATION
PROPOSED INVESTIGATION POINTS

CONGAREE RIVER SEDIMENTS
 COLUMBIA, SOUTH CAROLINA

DATE: 12/14/10 FILE NAME: CRDRFIG2
 MANAGEMENT AND TECHNICAL RESOURCES, INC.





LEGEND

- PHASE I DELINEATION ACTIVITIES COMPLETED AUGUST 2010 – OCTOBER 2010
- PHASE II DELINEATION AREA
- PHASE II DELINEATION PROPOSED INVESTIGATION POINT
- PROPOSED ANALYTICAL SAMPLING POINT
- CONTINGENCY BOUNDARY DELINEATION POINT
- EXISTING ANALYTICAL POINT AND TLM WAS NOT OBSERVED

NOTES:

- 1) AERIAL PHOTOGRAPH FROM DECEMBER 2004.
- 2) GRID LOCATIONS ARE APPROXIMATE AND FOR ILLUSTRATIVE PURPOSES.
- 3) CONTINGENCY BOUNDARY DELINEATION POINTS WILL BE CORED IF INTERIOR POINTS INDICATE TLM PRESENCE.
- 4) FIELD CONDITIONS ENCOUNTERED WILL DICTATE ACTUAL SAMPLE LOCATIONS.

**FIGURE 3
SOUTH CAROLINA
ELECTRIC & GAS COMPANY**

**PHASE II DELINEATION
PROPOSED SAMPLING LOCATIONS**

CONGAREE RIVER SEDIMENTS
COLUMBIA, SOUTH CAROLINA

DATE: 12/14/10 FILE NAME: CRDRFIG3
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