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ANL/EVS/AGEM/TR-08-12

Final Report: Phase I Investigation at the Former CCC/USDA Grain Storage Facility in Savannah, Missouri

Environmental Science Division

USDA United States Department of Agriculture

Work sponsored by Commodity Credit Corporation,
United States Department of Agriculture

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Final Report: Phase I Investigation at the Former CCC/USDA Grain Storage Facility in Savannah, Missouri

by
Applied Geosciences and Environmental Management Section
Environmental Science Division, Argonne National Laboratory

June 2010

United States Department of Agriculture

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AGEM	Applied Geosciences and Environmental Management
AMSL	above mean sea level
BGL	below ground level
°C	degree(s) Celsius
CCC	Commodity Credit Corporation
CD	compact disc
CLP	Contract Laboratory Program
COC	chain of custody
CPT	cone penetrometer
DF	dilution factor
DTL	default target level
EPA	U.S. Environmental Protection Agency
ft	foot (feet)
g	gram(s)
gal	gallon(s)
GC-MS	gas chromatograph-mass spectrometer
GPS	Global Positioning System
hr	hour(s)
HWEU	Hazardous Waste Enforcement Unit
I.D.	inner diameter
in.	inch(es)
µg/kg	microgram(s) per kilogram
µg/L	microgram(s) per liter
µS/cm	microsiemen(s) per centimeter
MCL	maximum contaminant level
mg/L	milligram(s) per liter
mi	mile(s)
min	minute(s)
mL	milliliter(s)
MoDHHS	Missouri Department of Health and Senior Services
MoDNR	Missouri Department of Natural Resources
MoDOT	Missouri Department of Transportation
MRBCA	*Missouri Risk-Based Corrective Action*
MUE	Missouri University Extension
MWPK	*Master Work Plan* for Kansas

NAD	North American Datum
NAVD	North American Vertical Datum
ng	nanogram(s)
PID	photoionization detector
PMWP	*Provisional Master Work Plan*
ppb	part(s) per billion
PVC	polyvinyl chloride
PWSD	Public Water Supply District
QA	quality assurance
QC	quality control
RPD	relative percent difference
SDG	sample delivery group
TOC	top of casing
USDA	U.S. Department of Agriculture
VOC	volatile organic compound

Final Report: Phase I Investigation at the Former CCC/USDA Grain Storage Facility in Savannah, Missouri

1 Introduction

From approximately 1949 until 1970, the Commodity Credit Corporation of the U.S. Department of Agriculture (CCC/USDA) operated a grain storage facility on federally owned property approximately 0.25 mi northwest of Savannah, Missouri (Figure 1.1). During this time, commercial grain fumigants containing carbon tetrachloride were commonly used by the CCC/USDA and the private grain storage industry to preserve grain in their facilities. In November 1998, carbon tetrachloride was detected in a private well (Morgan) roughly 50 ft south of the former CCC/USDA facility, as a result of state-wide screening of private wells near former CCC/USDA facilities, conducted in Missouri by the U.S. Environmental Protection Agency (EPA 1999).

The 1998 and subsequent investigations by the EPA and the Missouri Department of Natural Resources (MoDNR) confirmed the presence of carbon tetrachloride in the Morgan well, as well as in a second well (on property currently owned and occupied by the Missouri Department of Transportation [MoDOT]), described as being approximately 400 ft east of the former CCC/USDA facility. The identified concentrations in these two wells were above the EPA maximum contaminant level (MCL) and the default target level (DTL) values of 5.0 μg/L for carbon tetrachloride in water used for domestic purposes (EPA 1999; MoDNR 2000a,b, 2006). (The DTL is defined in Section 4.)

Because the observed contamination in the Morgan and MoDOT wells might be linked to the past use of carbon tetrachloride-based fumigants at its former grain storage facility, the CCC/USDA is conducting an investigation to (1) characterize the source(s), extent, and factors controlling the subsurface distribution and movement of carbon tetrachloride at Savannah and (2) evaluate the potential risks to human health, public welfare, and the environment posed by the contamination. This work is being performed in accord with the Intergovernmental Agreement established between the Farm Service Agency of the USDA and the MoDNR, to address carbon tetrachloride contamination potentially associated with a number of former CCC/USDA grain storage facilities in Missouri. The site characterization at Savannah is being conducted on behalf of the CCC/USDA by the Environmental Science Division of Argonne National Laboratory. A phased approach is being employed by the CCC/USDA and Argonne, with the approval of the MoDNR, so that information obtained and interpretations developed

during each incremental stage of the study can be used most effectively to guide subsequent aspects of the program.

This report presents the technical findings of Phase I of Argonne's studies. The Phase I investigation was undertaken in accord with the final site-specific Phase I *Work Plan* for Savannah (Argonne 2007), as well as with the *Master Work Plan* (*MWPK*) for CCC/USDA-Argonne operations in the state of Kansas (Argonne 2002), which the MoDNR reviewed and approved (with minor revisions) for temporary use in Missouri to facilitate the start-up of the CCC/USDA's activities at Savannah. (Argonne is developing a similar *Master Work Plan* for operations in Missouri that is based on the existing *MWPK*, with the approval of the MoDNR. The Missouri document has not been finalized, however, at this time.)

The site-specific Savannah *Work Plan* (Argonne 2007; approved by the MoDNR [2007a]) (1) summarized the pre-existing knowledge base for the Savannah investigation site compiled by Argonne and (2) described the site-specific technical objectives and the intended scope of work developed for this phase of the investigation. Four primary technical objectives were identified for the Phase I studies, as follows:

- Update the previous (MoDNR 2000a,b) inventory and status of private wells in the immediate vicinity of the former CCC/USDA grain storage facility, and sample the identified wells for analyses for volatile organic compounds (VOCs) and geochemical constituents.

- Investigate for possible evidence of a soil source of carbon tetrachloride contamination to groundwater beneath the former CCC/USDA facility.

- Obtain preliminary information on the site-specific lithologies and hydrostratigraphy at the former CCC/USDA grain storage location.

- Establish preliminary groundwater monitoring points, to investigate the patterns of groundwater movement affecting possible contaminant migration near the former CCC/USDA facility.

The *MWPK* (Argonne 2002; provisionally approved by the MoDNR for use at Savannah) provides detailed information on the investigative technologies, analytical methodologies,

quality assurance/quality control measures, and general health and safety procedures routinely employed by Argonne in the investigation of former CCC/USDA grain storage facilities. Both the site-specific *Work Plan* (Argonne 2007) and the *MWPK* (Argonne 2002) must therefore be consulted for the complete documentation that guided the Phase I work at Savannah.

Section 2 of this report describes the investigative methods used in the Phase I studies at Savannah, and Section 3 presents a summary of the resulting Phase I field and laboratory data. These data, in conjunction with information presented in the site-specific *Work Plan* (Argonne 2007), are interpreted and integrated in Section 4 to (1) develop a preliminary conceptual model of the hydrogeologic framework affecting groundwater and potential contaminant migration in the vicinity of the former CCC/USDA facility and (2) serve as a basis for the *initial* consideration of contaminant levels and potential exposure pathways that may be of concern in the evaluation of risks to human health, public welfare, and the environment at this site. The working conclusions drawn from the Phase I studies are presented in Section 5.

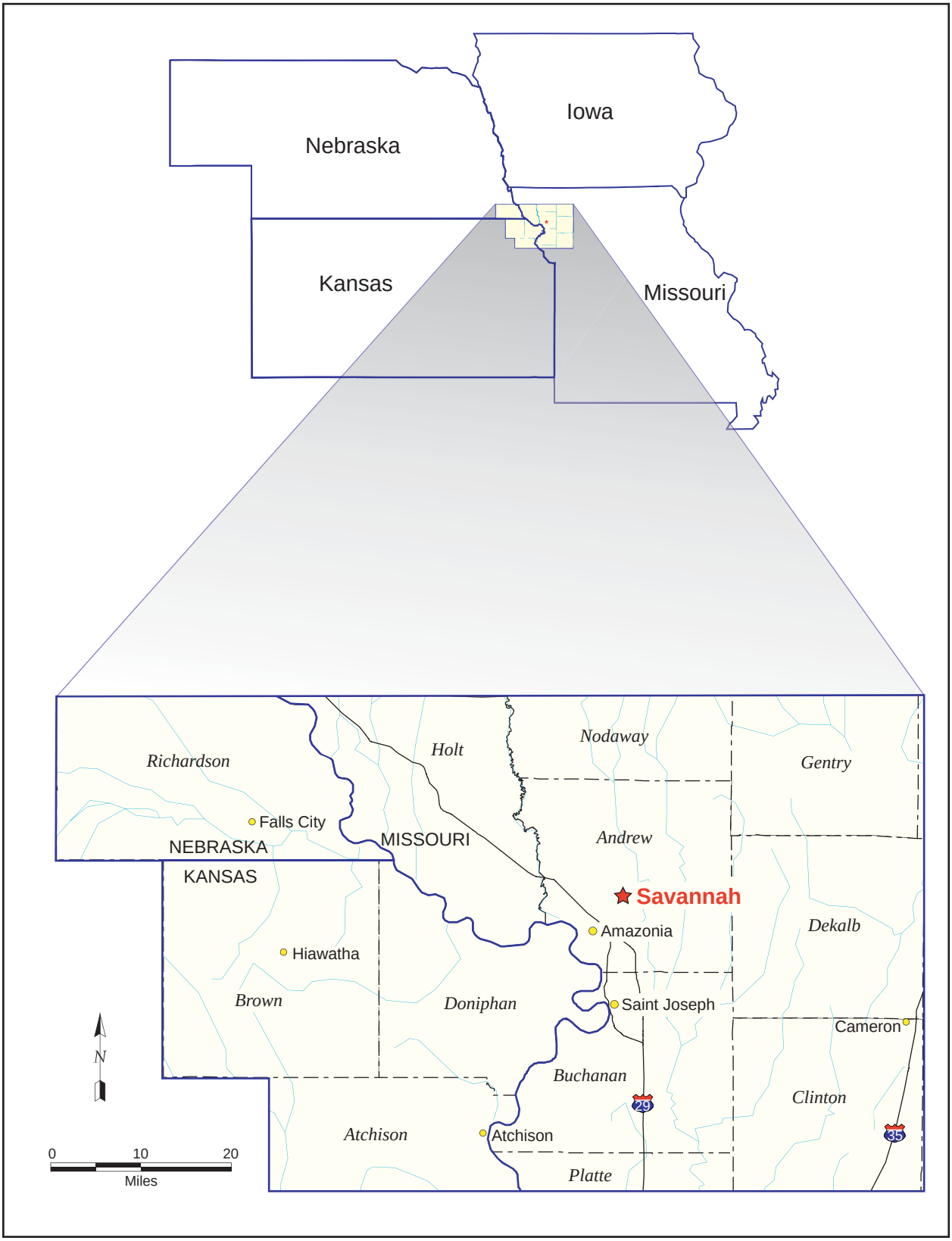

FIGURE 1.1 Location of Savannah, Missouri.

2 Investigative Methods

The Phase I investigation at Savannah was performed by using an iterative process of data collection, evaluation, and interpretation during the field activities, to ensure acquisition of the information necessary to address the specific technical objectives of the Phase I program (Section 1). The results were reviewed as they were obtained and discussed with the CCC/USDA and MoDNR program managers as the field activities progressed, so that decisions affecting the direction of the field efforts could be made with their input and approval. Such discussions resulted in several modifications to the Phase I activities originally outlined in the approved *Work Plan* (Argonne 2007).

Throughout the Phase I activities, a comprehensive quality assurance/quality control program was employed to confirm the reliability of all information as it was accumulated. The detailed field and laboratory procedures followed during the investigation are described in the *MWPK* (Argonne 2002) and the site-specific *Work Plan* (Argonne 2007).

The field activities during the Phase I investigation included (1) location, identification, and sampling of private wells (plus the Savannah public water system) for VOCs and geochemical analyses; (2) collection of surficial, shallow subsurface, and deeper subsurface soils — through the use of direct-push technologies — for lithologic characterization and for VOCs analyses; (3) installation of temporary and permanent piezometers to facilitate groundwater sampling and measurement of groundwater levels; and (4) establishment of a preliminary groundwater level monitoring network employing automatic water level recording devices. All locations investigated within the limits of the property formerly occupied by the CCC/USDA facility are shown in Figure 2.1. All Phase I study locations lying outside the limits of the former CCC/USDA facility are shown in Figure 2.2.

Before the Phase I mobilization, a public records search and a door-to-door survey were conducted to verify the sources of domestic water supply in use by all residents in the targeted Phase I study area. In conjunction with this work, 17 private wells were identified and located, and all accessible private wells (13), plus the Savannah municipal reservoir and (treated) public water supply, were sampled.

The Phase I program was conducted in two primary field sessions, as follows:

- **October 24-November 3, 2007.** The first primary field session of the Phase I work at Savannah began on October 24, 2007, and was suspended, with the approval of the MoDNR, on November 3, 2007, to accommodate time-critical CCC/USDA-Argonne remedial and monitoring activities at a former CCC/USDA grain storage facility in Kansas. During this initial field session in fall 2007, the following activities occurred:

  - Direct-push techniques were used to sample surficial and shallow subsurface soils at 41 locations at the former CCC/USDA facility and to sample deeper subsurface soils at 1 location. Deeper subsurface sampling initiated at a second location during this first field session was completed during the second session (see below).

  - Downhole pressure sensors equipped with automatic data loggers were installed in 6 private wells to initiate water level monitoring in the vicinity of the former CCC/USDA facility. The wells chosen for monitoring and selected additional reference points at the former CCC/USDA facility (requested by the MoDNR) were professionally surveyed to establish their exact surface locations and elevations.

  - Three temporary piezometers were installed to facilitate possible groundwater sampling and the measurement of groundwater levels on the former CCC/USDA property. The temporary piezometers were abandoned in December 2007, in accord with MoDNR requirements.

- **January 28-31, 2008.** The Phase I field program was completed during the January 2008 session. The activities performed at this time included the following:

  - Deeper subsurface soil sampling at 3 locations on the former CCC/USDA property approved by the MoDNR.

  - Installation of 2 permanent piezometers.

The two field sessions outlined above were supplemented by several additional, brief visits by Argonne staff to Savannah in conjunction with the Phase I program. The purposes of these visits were to accomplish the following:

- Obtain property ownership and water use data from available public records (in preparation for the first field session).
- Abandon the temporary piezometers as noted above.
- Recover water level records from the automatic data loggers and install several additional loggers.
- Conduct a final professional survey of critical locations identified during the Phase I studies.

A chronological summary of the field activities at Savannah is in Appendix A, Table A.1.

2.1 Methods to Determine Sources of Domestic Water Supply and the Status of Private Wells in the Vicinity of the Former CCC/USDA Facility

An irregular area extending approximately 0.5 mi in each direction from the former CCC/USDA facility (Figure 2.2) was delineated as the Phase I target area for the investigation of domestic water sources and for the identification, location, and sampling of existing private wells. The purposes of this exercise were to (1) verify the source(s) of water in use at all occupied properties in the targeted area and ensure that all residents have access to a domestic water supply that is uncontaminated by carbon tetrachloride and (2) identify any wells that might be affected by or at risk from carbon tetrachloride potentially associated with the former CCC/USDA facility or other source(s) of this contaminant.

To address these objectives, current ownership information for all properties in the area of interest was obtained from the office of the Andrew County Assessor, in Savannah. Contact and water use information for all occupied properties was obtained by cross-checking the ownership data against publicly available telephone service records, billing records for the Savannah public water supply system, and billing information from the Andrew County Public

Water Supply District #1 (PWSD1). Discussions with representatives for the city and PWSD1 confirmed that the Savannah public water supply system and PWSD1 provide the only public water supplies in the Phase I study area. For properties where possible discrepancies or questions were identified regarding ownership, occupancy, or potential water supply use, a door-to-door survey was performed.

Private wells in the study area were located on the basis of information obtained from the following sources:

- Previous investigations conducted by the MoDNR (2000a,b).
- Data on record with the MoDNR Public Drinking Water Branch, Wellhead Protection Section, Water Resources Center (MoDNR 2007b).
- Visual reconnaissance and a door-to-door survey by Argonne staff.
- Information volunteered by local residents.

In all, 17 private wells were identified within or just outside the targeted study area (Figure 2.2); however, 4 wells were unavailable for sampling. Two of the wells not sampled (Smith and Thomas), located in the southern portion of the study area, had damaged casings or surface completions. The approximate location of a third well (Waegele) was identified by its owner, but the well was buried under debris and could not be reached. Argonne was denied access to a fourth private well, located on the Vanschoiack property, near the northwest corner of the study area. The methods used to sample the 13 private wells that were accessible for this investigation are described in Section 2.3.

2.2 Methods to Investigate for Possible Carbon Tetrachloride Contamination in Soils at the Former CCC/USDA Facility

Two field activities were conducted to obtain information on the possible occurrence and distribution of carbon tetrachloride contamination in the soils beneath the former CCC/USDA grain storage facility. These activities were (1) initial sampling of the surficial and shallow subsurface soils (to a depth of 12 ft below ground level [BGL]) for VOCs analyses and

(2) sampling of deeper subsurface soils for VOCs analyses at locations selected on the basis of the findings for surficial and shallow subsurface soils.

2.2.1 Methods for Sampling of Surficial and Shallow Subsurface Soils

Samples of the surficial and shallow subsurface native soils were collected at 41 locations distributed across the property formerly occupied by the CCC/USDA grain storage facility, at targeted depths of 1 ft, 4 ft, 8 ft, and 12 ft BGL (Figure 2.3). The sampling locations were selected to test for possible contamination associated with the locations of the former grain storage structures (including the remaining foundations) at the site, as well as previously unoccupied areas that might have been used for the movement, storage, or handling of fumigant containers or related equipment. The results of these analyses (described in Section 3.4.1) were used to determine the areal distribution of residual carbon tetrachloride contamination in the surficial and near-surface soils, as well as to prioritize locations for sampling of the deeper subsurface soils for VOCs analyses.

The soil samples were obtained primarily by using the Argonne 22-ton, track-mounted crawler cone penetrometer (CPT) vehicle to advance a 4-ft-long, 1.5-in.-I.D. coring barrel equipped with a disposable liner and releasable piston tip. At 11 locations (SB1, SB3, SB4, SB5, SB7, SB11, SB19, SB25, SB35, SB36, SB37; Figure 2.3) where physical obstacles (proximity to trees, fences, etc.) prohibited the use of the CPT vehicle, a trailer-mounted Model 540M Geoprobe™ unit was employed for sampling with the same coring device. At each location, coring was conducted over depth intervals of 0-2 ft, 2-6 ft, 6-10 ft, and 10-14 ft BGL, so that each depth horizon targeted for sampling (1 ft, 4 ft, 8 ft, and 12 ft BGL) fell near the middle of an individual core.

At the request of the MoDNR, surficial and shallow subsurface soil samples were collected for VOCs analyses at two locations (SB40 and SB41) within the footprints of the two rectangular grain storage building foundations that remain on the former CCC/USDA property (Figure 2.3). To provide access to the sub-slab soils, a hole was first advanced through each concrete foundation by using the Geoprobe unit equipped with a 3.25-in.-diameter rotary-percussion drilling bit, as described in Appendix B of the site-specific *Work Plan* (Argonne 2007). Measurements of possible contaminant vapor concentrations were made at the drilling site throughout the foundation drilling process, as well as at the surface of the sub-slab soils immediately upon breaching of the foundation, by using a calibrated RAE Systems, Inc.,

ppbRAE 3000™ hand-held photoionization detector (PID). The Geoprobe unit and coring barrel were then used as described above to retrieve soil cores from beneath the foundations.

2.2.2 Methods for Sampling of Deeper Subsurface Soils

The analytical results for the surficial and shallow subsurface soils (described in Sections 3.4.1 and 4.2.1) were used as a basis for the selection — with the verbal approval of the MoDNR (Muenks, October 31, 2007) — of 4 locations (SB24, SB29, SB38, SB42; Figure 2.3) for deeper soil sampling for VOCs analyses. The deeper sampling was performed as described in Section 2.2.1 by using the Argonne CPT unit and the coring device. At SB24, SB29, and SB38, the deeper sampling continued at approximately the same location (within 1-2 ft at the surface) as the preceding shallower sampling. Location SB42 was chosen for deeper investigation on the basis of the analytical results for surficial and shallow subsurface soils collected at location SB4; SB42 was offset approximately 6 ft from SB4 for sampling, however, to accommodate the required use of the Argonne CPT for the deeper sampling at this physically obstructed location (where the smaller Geoprobe unit had been used for the shallower sampling described in Section 2.1.1).

Section 3.2.2.2 of the site-specific *Work Plan* (Argonne 2007) indicated that sampling of the deeper soils would extend at each location from 12 ft BGL to the top of the first groundwater-bearing unit; however, no distinct saturated aquifer units were conclusively identified during coring at any of the four locations selected for deeper sampling. Continuous coring of the soils with depth and sampling at 4-ft intervals for VOCs analyses were therefore performed until refusal of the coring device was encountered at each location. Refusal depths were generally similar at all locations, ranging from 91.92 ft BGL at SB42 to 96.30 ft BGL at SB38.

2.2.3 Methods for the Handling and Analysis of Soil Samples

Soil samples collected for VOCs analyses were taken from the soil cores immediately as the cores were removed from the core barrels. As described in Sections 4.2 and 4.5 of the site-specific *Work Plan* (Argonne 2007), the following two methods were employed for handling of the core samples:

- **Dry Ice Preservation.** Samples collected for preservation by using the dry ice method routinely employed by Argonne were obtained by quickly cutting through the full diameter of the core (and disposable liner) to retrieve a segment of the core approximately 1.5 in. long, centered at each chosen target depth. The core segments were immediately placed in laboratory-approved 125-mL glass sample jars, sealed, labeled, and placed in a cooler on dry ice.

- **Preservation with EnCore™ Samplers**. At the request of the MoDNR, corresponding samples were obtained at selected depth intervals for preservation by using 25-g EnCore sampling devices. The samples were collected by inserting an EnCore device, in accord with the manufacturer's instructions, along the center axis of the core, entering from the cut face immediately adjacent to the corresponding sample collected for dry ice preservation. The filled EnCore devices were then capped, labeled, placed in the foil shipping envelopes provided with the devices, and placed in a cooler with ice at 4°C.

Section 4.2 of the site-specific *Work Plan* (Argonne 2007) called for the collection of corresponding soil aliquots by using EnCore devices at approximately 10-20% of the total surficial and subsurface intervals sampled. During the sampling of surficial and shallow subsurface soils, however, at least one EnCore sample was collected from each shallow boring location (Figure 2.3), representing 25% of the sampled intervals during this element of the investigation. Preliminary data comparing the results of headspace analyses (see below) for the EnCore-preserved and dry-ice-preserved samples were discussed with representatives of the MoDNR at the Savannah site during the first field session (on October 31, 2007). On the basis of these discussions, the MoDNR verbally indicated that additional sampling with the EnCore devices would not be required, and no samples of the deeper subsurface soils were therefore collected by using this method.

The samples preserved with the above techniques were shipped by overnight service (at the required holding temperature for each method) to the Applied Geosciences and Environmental Management (AGEM) Laboratory at Argonne for rapid-turnaround analysis (within 48 hr for EnCore samples, per method requirements; generally within 24 hr for all samples), so that interim results could be evaluated in the field as the sampling program progressed. All soil samples were analyzed by (1) a headspace method with a gas chromatograph

and electron capture detector (modified EPA Method 5021) and (2) a purge-and-trap sample preparation method with analysis on a gas chromatograph-mass spectrometer (GC-MS) system (EPA Methods 5030B and 8260B; *MWPK* [Argonne 2002] Sections 6.1.1, 6.2, and 6.3.1).

2.3 Methods to Investigate for the Presence of Carbon Tetrachloride Contamination in Groundwater and Surface Water and to Establish Permanent Monitoring Points

Inspection of the 13 private wells accessible to Argonne (Figure 2.2) indicated that they ranged in diameter from 1 ft (Marshall) to 4 ft (Hughes), resulting in individual well casing storage volumes (at the time of the Phase I study) ranging from approximately 90 gal to over 4,000 gal (Table 2.1). In light of these quantities, all private wells were sampled after purging of approximately one casing volume. Purging was conducted by using a portable submersible pump (RediFlow™ or Grundfos™ Model MP-1) for wells that were not currently in service, or by using the existing installed pump for wells that were so equipped. All purge water was temporarily containerized in portable storage tanks on-site, prior to removal and disposal by Safety-Kleen Systems, Inc., Independence, Missouri (Section 3.9).

Savannah obtains its public water supply as a mixture of groundwater from two public wells located approximately 5 mi southwest of the city (in Amazonia; see Figure 1.1) and surface water from the city's municipal reservoir approximately 0.75 mi southwest of the former CCC/USDA facility (Figure 2.2). A sample of the blended and treated water supplied to the municipal distribution system was obtained from a tap at the city treatment plant, located near the southeast corner of the reservoir. A sample of untreated surface water was collected from the reservoir near the point of public water intake, which is also at the city treatment plant.

At the request of the owner, a sample of surface water was collected from a small pond in the eastern portion of the Hughes property, directly west of the former CCC/USDA facility (Figure 2.2).

As noted in Section 2.2.2, no distinct aquifer zones could be identified at the continuously cored, deep boring locations (SB24, SB29, SB38, SB42; Figure 2.3) investigated during Phase I. Shows of subsurface moisture were encountered, either as small quantities of water present in the core liners or as wetness on the outside of the coring barrels and push rods,

TABLE 2.1 Construction data for private wells sampled during Phase I.

Owner	Measured Dimiensions[a]			
	Depth (ft)	Diameter (in.)	Height of Water Column (ft)	Calculated Casing Storage Volume (gal)
Adkins	NA	NA	NA	NA
Barr	34.5	30	7.6	279
Burks	37.76	18	6.9	91
Clizer (new)	35.7	18	30.6	404
Clizer (old)	35.7	18	15.5	205
Hughes	56.4	48	45.2	4249
Marshall	37.18	12	15.8	93
McPike	48.5	18	30.0	397
Miller	54.25	36	32.9	1740
MoDOT	44	30	21.6	793
Moore	NA[c]	18	NA	NA
Morgan	60.58	36/25[b]	27.9	~1024
Potter	51.3	30	43.5	1597

[a] Measurements were made by Argonne staff at the time of sampling.

[b] Shallow/deep casing dimensions were provided by the well owner; shallow casing size (36 in.) was confirmed in the field.

[c] NA, well not amenable to measurement.

in association with generally silty-clayey sediments recovered at several depths at boring locations SB24 (54-58 ft and 82-92.5 ft BGL), SB29 (66-70 ft), SB38 (42-46 ft and 90-94 ft BGL), and SB42 (34-38 ft and 42-46 ft BGL). Sufficient groundwater to permit sampling for VOCs analyses was encountered at only one location and depth interval (54-58 ft BGL at SB24) during the coring activities. The sample was collected by temporarily placing a 5-ft-long, 0.5-in.-I.D. Schedule 40, mill-slotted (0.010-in.) polyvinyl chloride (PVC) screen and PVC riser in the coring hole (at 54-59 ft BGL) and retrieving the sample with a stainless steel bailer.

To investigate further the potentially water-bearing intervals identified above, two temporary piezometers were installed at location SB24 (screened at 53-58 ft and 87.36-92.36 ft BGL, respectively), and one temporary piezometer was installed at SB42 (screened at 28-38 ft BGL) during the initial (October-November 2007) field mobilization (Figure 2.4). Each temporary piezometer was constructed by using the Argonne CPT to advance the CPT push rods, equipped with an external disposal tip and an internal 0.5-in.-I.D. PVC screen, to the desired depth. Then PVC riser was assembled to the screen through the push rods, and the rods were withdrawn. A sand pack was placed around the screen, and the remaining annulus was filled to the ground surface with bentonite grout. Only the shallow piezometer (SB24ts) at SB24

accumulated sufficient groundwater for sampling for VOCs analyses prior to the abandonment of all of the temporary piezometers in December 2007, per MoDNR requirements. The temporary piezometer at SB42 remained dry; the deeper temporary piezometer at SB24 (SB24td) accumulated approximately 2 ft of groundwater prior to abandonment.

During the second field session in January 2008, two permanent piezometers were installed at the former CCC/USDA facility, at the locations of borings SB24 and SB38 (Figure 2.4). The permanent piezometers were constructed under Variance No. 3820 issued by the MoDNR (in the state well certification packages in Appendix B), which permitted use of the direct-push technique outlined above to set a 1-in.-diameter PVC screen and riser in a 3.25-in.-diameter boring at each location. The permanent piezometer at SB24 was constructed as a replacement (screened at 50-60 ft BGL) for the shallow temporary piezometer (SB24ts) previously installed at this location. The permanent piezometer at location SB38 was constructed with a long screened interval (50-90 ft BGL), in keeping with the apparent general construction practice for private wells observed in the investigation area (Section 3.1). Primary and secondary sand pack and grout materials required for completion of the piezometers were tremied into each boring, in accord with the detailed construction diagrams for SB24 and SB38 in Appendix B. Both piezometers were constructed with flush-mounted surface completions, at the request of the property owner (Savannah Reorganized School District III). As of this reporting, groundwater levels in both of the permanent piezometers are rising very slowly, but they do not appear to have reached ambient static conditions.

Because of very slow water level recovery rates, groundwater samples for VOCs analyses were collected from temporary shallow piezometer SB24ts and permanent piezometer SB38 without purging. The samples from SB24ts were collected by using a stainless steel bailer; SB38 was sampled by using 0.375-in. Waterra™ tubing fitted with a Geoprobe foot valve as a bailer. Insufficient water for sampling had accumulated in permanent piezometer SB24 at the time of this reporting; SB24 will be sampled if the water level in this piezometer appears to reach static conditions.

Water samples collected at all of the groundwater and surface water locations investigated during Phase I were analyzed for VOCs. The samples for VOCs analyses were preserved and shipped (on ice at 4°C) by overnight service to the AGEM Laboratory for purge-and-trap sample preparation with analysis by GC-MS (EPA Methods 5030B and 8260B; *MWPK* [Argonne 2002] Section 6.3.2). To ensure reproducibility, aliquots from three of the private wells

(Morgan, Moore, and MoDOT) were selected in the field for verification analysis by a second laboratory (Envirosystems, Inc., Columbia, Maryland) with the EPA's Contract Laboratory Program (CLP) methods. (An index of the EPA methods is online at http://www.epa.gov/epahome/index/.)

Water samples from the 13 private wells, the Savannah municipal reservoir, and the city (treated) public water supply were collected for analyses of selected additional parameters to help characterize the inorganic geochemistry of the waters at Savannah. The samples were preserved and shipped (on ice at 4°C) by overnight service to TestAmerica (South Burlington, Vermont, and University Park, Illinois) to determine the concentrations of common anions (chloride, sulfate, nitrate, total nitrogen, and phosphate) and metals (aluminum, calcium, iron, magnesium, manganese, potassium, sodium, silicon, and zinc).

2.4 Methods to Determine the Site-Specific Hydrogeology at the Former CCC/USDA Facility

Several test pushes employing the geomechanical logging capabilities of the Argonne CPT unit were initially made on the former CCC/USDA property to evaluate (1) the site-specific ability of the direct-push method to achieve sufficient penetration into the subsurface to accomplish the technical objectives of the Phase I studies and (2) the resulting electronically recorded geomechanical logs for possible use as tools in identifying or correlating the lithologies and hydrostratigraphy underlying the facility.

The locations of two test pushes, TP1 (near the eastern margin of the former facility) and TP2 in the west-central portion of the former facility), are shown in Figure 2.5. At location TP1, logs of tip pressure and sleeve friction on the instrumented CPT cone were recorded; at TP2, an additional parameter, conductance, was also logged. At each location the rods were advanced until refusal was encountered by the instrumented tip; this occurred at 91.8 ft BGL at TP1 and 93.2 ft BGL at TP2. At both locations, small deposits of hard, light gray calcareous materials were recovered from the tip of the CPT cone, suggesting possible contact with limestone bedrock. The observed refusal depths were comparable to the anticipated depth(s) to bedrock discussed in Section 2.2.1 of the site-specific *Work Plan* (Argonne 2007). On the basis of these observations, Argonne continued the subsurface investigation program at Savannah by using the CPT in lieu of conventional drilling techniques, as outlined in Section 4.3 of the *Work Plan* (Argonne 2007).

A third sounding using the instrumented CPT cone (tip pressure, sleeve friction, and conductance) was performed at sampling location SB24 (Figure 2.5), to provide a basis for comparison and possible correlation of the log responses to the observed lithologies identified in the continuous cores from this location. Evaluation of these data on-site suggested, however, that although the CPT logs provide supplemental information on the subsurface conditions, they did not reveal any diagnostic interpretive features linked to the site hydrogeology that could be used to identify or prioritize specific subsurface targets for investigation in the field. On the basis of these observations, no additional electronic logs were acquired during Phase I.

Primary data on the lithologic and hydrostratigraphic characteristics of the sediments underlying the former CCC/USDA facility were obtained through examination of the continuous soil cores recovered at boring locations SB24, SB29, SB38, and SB42 (Figure 2.3). All cores were described in accord with procedures in the *MWPK* (Argonne 2002, Sections 4.3.1.3 and 6.4.1.5) and archived at the Argonne equipment and storage facility in Lincoln, Nebraska. Selected core intervals from borings SB29, SB38, and SB42, reflecting the range of sediments penetrated at the site, were also shipped to HWS Consulting Group, Inc. (Lincoln, Nebraska) for laboratory analyses of soil physical parameters including particle size, moisture content, porosity, bulk density, specific gravity, and total organic content, as well as determinations of liquid and plastic limits and plasticity index, to assist in quantitative characterization of these materials.

To obtain information on the occurrence and possible direction(s) of groundwater flow in the vicinity of the former CCC/USDA facility, static water levels were measured in all available private wells in conjunction with the well sampling activities described in Section 2.3. With the approval of the property owners, self-contained, downhole pressure-sensing and data-logging units (Instrumentation Northwest, Inc. Model PT2X^{TM} sensor/loggers) were installed in six of the private wells (McPike, MoDOT, Burks, Hughes, Barr, Potter; Figure 2.6) during the initial field session in October-November 2007.

Data were retrieved from the initial suite of loggers during the second field session in January 2008 to facilitate a preliminary assessment of possible trends in the patterns of groundwater levels and flow in the study area. In March 2008 the initial water level monitoring network was expanded by installation of data loggers at three additional locations: the Morgan and Clizer “old” private wells and permanent piezometer SB38 (Figure 2.6). All loggers are programmed to measure and record the static water level in each well once every 4 hr. As

outlined in the site-specific *Work Plan* (Argonne 2007), automated monitoring is recommended at Savannah for a minimum of one year, to document possible seasonal or other variations in water levels (see also *MWPK* [Argonne 2002], Section 6.4.6.3).

To assist in the evaluation of possible variations or trends in the groundwater levels at Savannah, daily rainfall records for the area were obtained from the Missouri Historical Agricultural Weather Database maintained by the Missouri University Extension (MUE) office. These data are available online (MUE 2008).

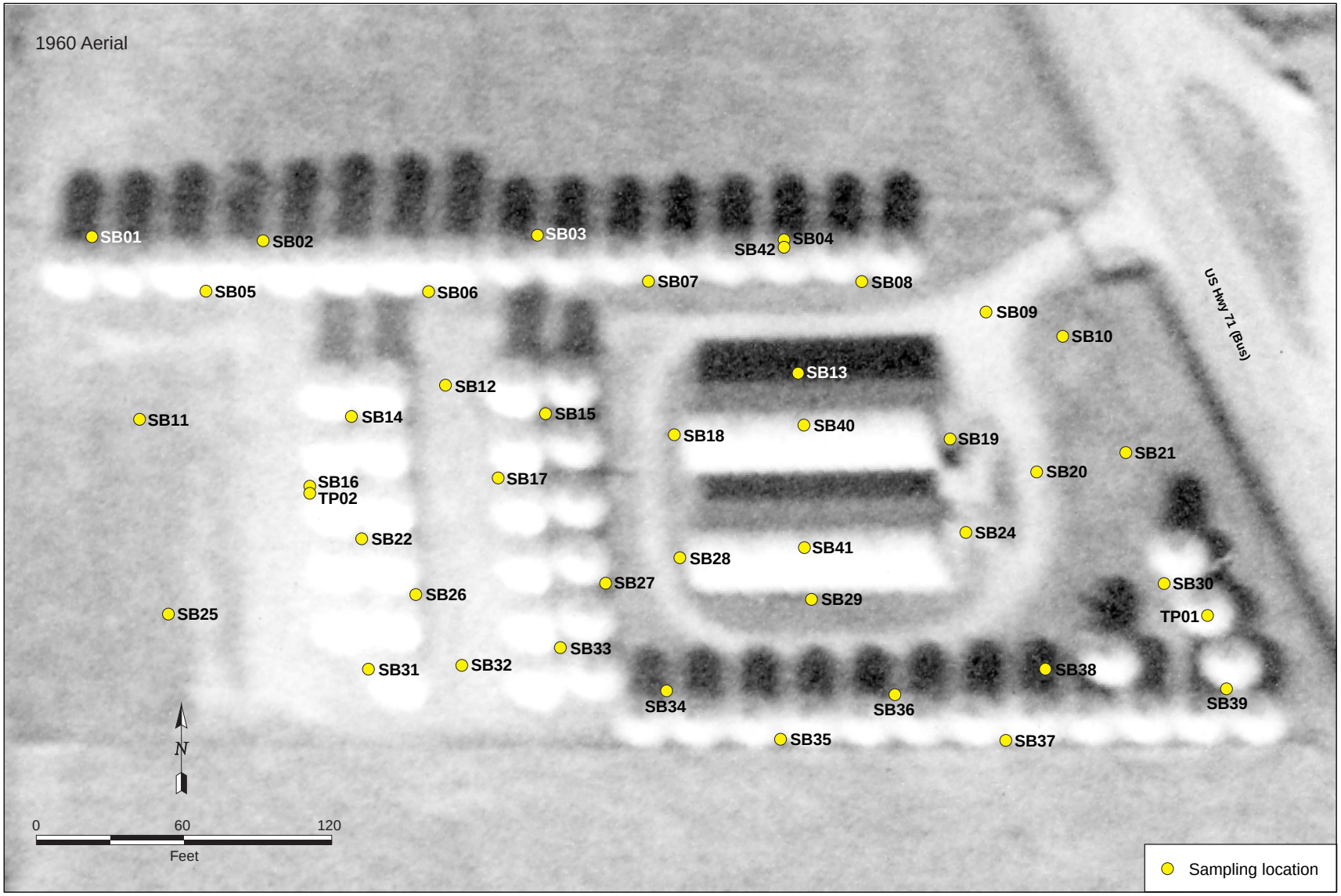

FIGURE 2.1 Investigation locations inside the boundaries of the former CCC/USDA grain storage facility. Source of photograph: USDA (1960).

FIGURE 2.2 Investigation locations (private wells and municipal water system sampling points) outside the former CCC/USDA grain storage facility. Source of photograph: NAIP (2007).

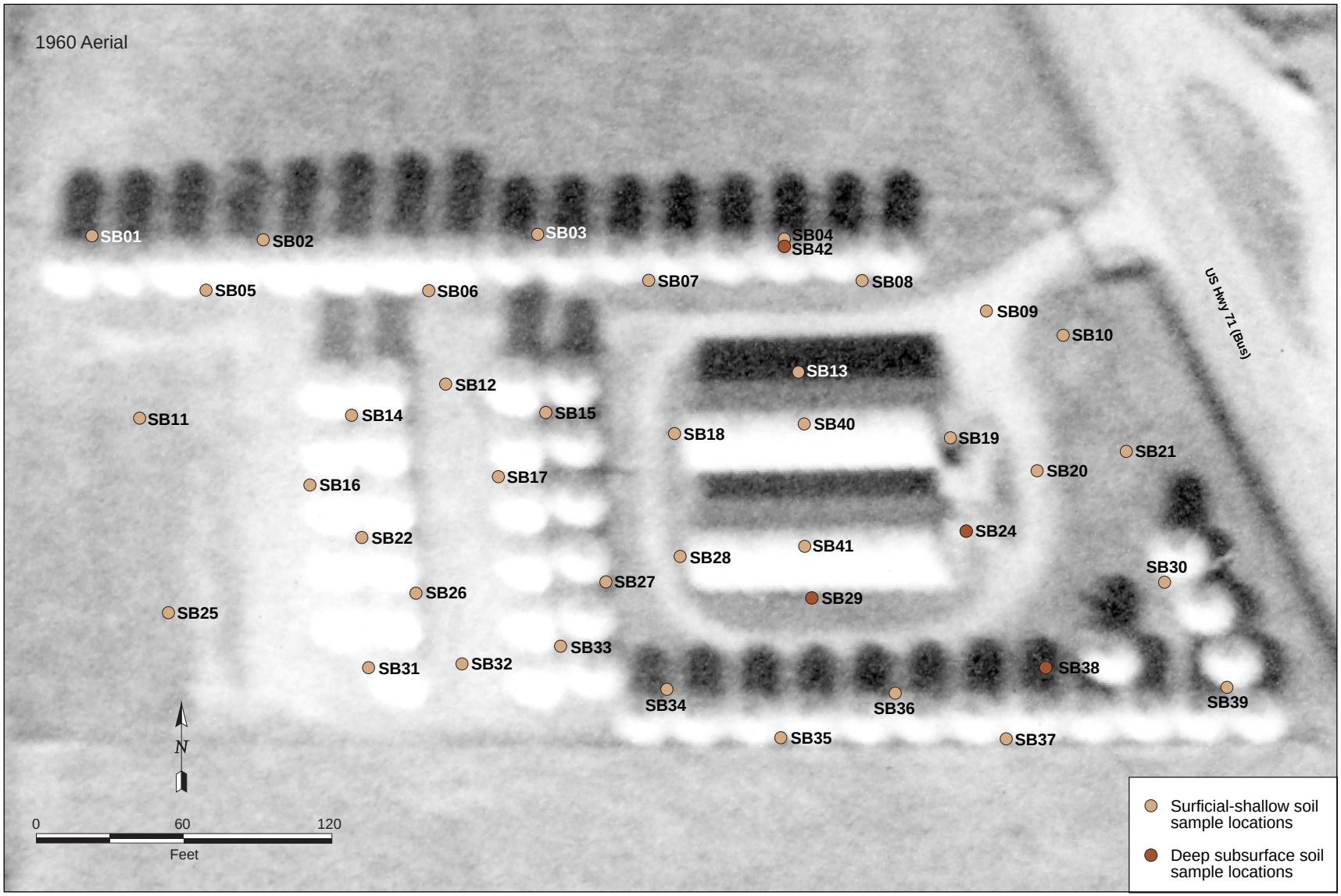

FIGURE 2.3 Locations of shallow and deep soil coring holes on the former CCC/USDA property. Source of photograph: USDA (1960).

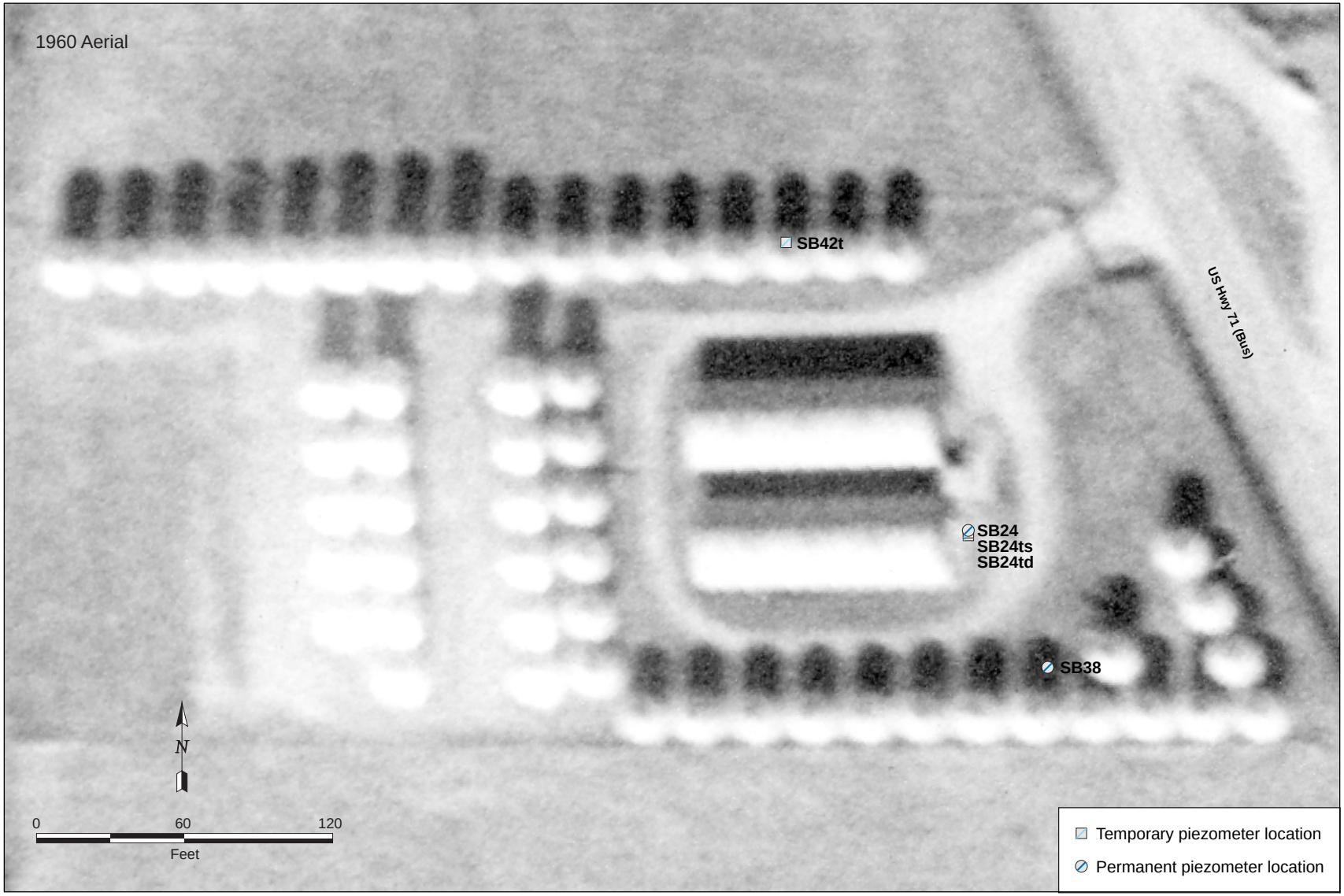

FIGURE 2.4 Locations of temporary and permanent piezometers on the former CCC/USDA property. Source of photograph: USDA (1960).

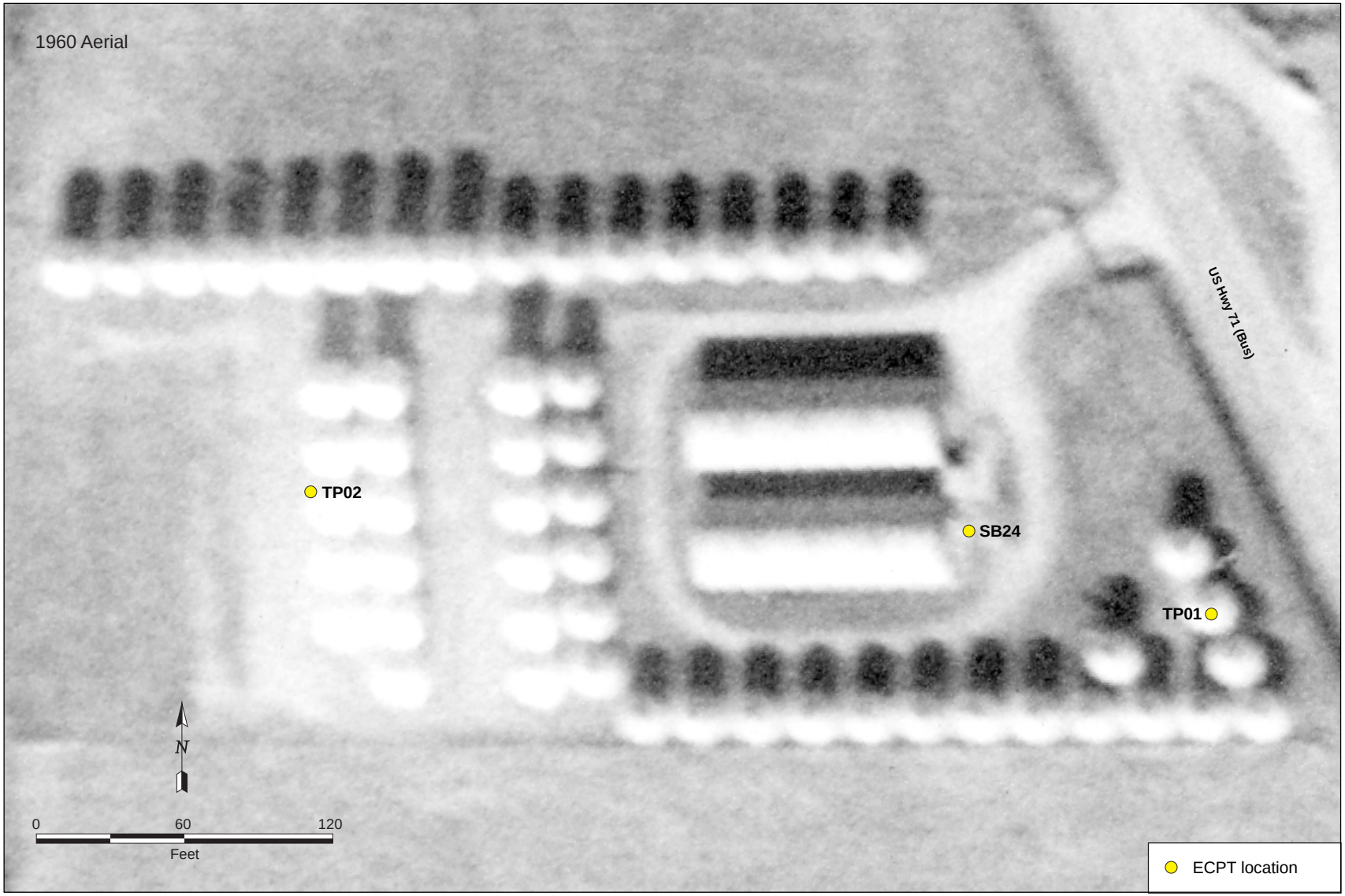

FIGURE 2.5 Cone penetrometer investigation locations on the former CCC/USDA property. Source of photograph: USDA (1960).

FIGURE 2.6 Locations of wells and piezometers in the water level monitoring network. Source of photograph: NAIP (2007).

3 Field and Laboratory Data

This section presents the field and laboratory data generated during Phase I of the site characterization at Savannah. A chronological summary of the field activities is in Appendix A, Table A.1. The methods and procedures employed in collecting these data are described in Section 2, in the *MWPK* (Argonne 2002), and in the site-specific *Work Plan* (Argonne 2007).

3.1 Domestic Water Supply Data and Identification of Private Wells

Data on the sources of domestic water supply used by residents within the Phase I investigation area are summarized in Table 3.1. Sixty-nine land parcels — 55 residential properties, 5 commercial properties, 8 parcels of undeveloped land, and the site of the former CCC/USDA grain storage facility — were identified in the study area on the basis of Andrew County tax records. The Section 3 tables are grouped at the end of this section's text, before the figures.

On-site reconnaissance and review of public utility billing records (Table 3.1) confirmed that 57 of the 60 identified residential or commercial properties in the study area currently obtain water for domestic purposes from either the Savannah municipal water system or PWSD1. One residence located approximately 600 ft south of the former CCC/USDA facility (Burks, Figure 2.2) is served by PWSD1 but is presently vacant. A second residence (Phillip Rasco, owner), located approximately 1,400 ft southeast of the former CCC/USDA facility, was identified as being within the Savannah municipal system service area. All other adjacent residences in this subdivision receive water from the municipal supply. No records of recent billing for the Rasco property were found, however, and Argonne was unable to verify the source(s) of domestic water supply at this location despite multiple attempts to contact the property owner.

Only one identified property in the targeted study area (Moore, Figure 2.2) obtains domestic water exclusively from a private well. The Moore residence is located approximately 2,000 ft east-southeast of the former CCC/USDA facility, near the eastern margin of the study area. A second residence (Clizer "new," Figure 2.2), located approximately 1,000 ft north-northwest of the former CCC/USDA facility, obtains domestic water from an on-site private well when groundwater conditions permit; however, the owner indicated that this well frequently

"goes dry." The Clizer residence therefore also obtains water as needed via a connection to PWSD1.

The former CCC/USDA property, now owned by the Savannah Reorganized School District III, is used primarily for the storage of excess school equipment. A yard hydrant on the property (connected to the PWSD1 supply) provides water for non-domestic purposes. No drinking water is used at this site.

Sixteen private wells (Vanschoiack, Potter, Clizer "new," Clizer "old," Hughes, McPike, Waegele, Barr, Morgan, MoDOT, Burks, Marshall, Smith, Thomas, Miller, Moore; Figure 2.2) were identified in the targeted study area. One additional private well (Adkins) just north of the planned study area was also included in the Phase I sampling activity, at the request of the well owner.

The Smith and Thomas wells were located by Argonne, but their upper casings or surface completions are damaged, and the wells are inaccessible. The approximate location of the Waegele well was identified by its owner, but the well is buried and also could not be reached. The Potter, Hughes, McPike, Barr, MoDOT, Burks, Marshall, and Miller wells are not in use; only the Burks well was equipped with an operable (hand) pump. Argonne was denied access to the Vanschoiack well, located near the northwest corner of the study area; the owner reported, however, that the well is not in use for any purpose. The Morgan and Clizer "old" wells are used for lawn and garden watering.

The Moore and Adkins wells are used for all domestic purposes at these locations. The Clizer "new" well is also used for domestic water supply; however, as noted above, this residence has a supplemental connection to water from the PWSD1 supply.

Mr. Charles Morgan provided documentation (included in Appendix C) indicating that the well currently used for lawn and garden purposes on his property was installed in 1992. The construction parameters for the Morgan well, as determined by Argonne (see Table 2.1), are generally consistent with this information, but they differ slightly from the construction cited in the MoDNR Well Record form (Ref. No. 00061671; Appendix C) on file for this installation. Mr. Morgan also indicated that an older well is buried somewhere on his property; however, its approximate location is unknown. No documentation for any of the other private wells identified at Savannah was discovered during the Phase I activities.

As noted in Section 2.3, all of the private wells investigated at Savannah are constructed with relatively large casings, ranging from 1 ft (Marshall) to 4 ft (Hughes) in diameter. The majority of the wells are constructed with segmented concrete or tile casing; however, several wells (Barr, Hughes, Burks) are lined with rock or brick. The documentation for the Morgan well described above does not indicate that this well is screened or otherwise designed to obtain groundwater from any specifically targeted depth interval. Similarly, Argonne's examination of the private well located on the MoDOT property directly east of the former CCC/USDA facility with a down-well video camera indicated that this well, too, has no uniquely screened interval. These wells were apparently constructed to (1) intercept any available groundwater in the subsurface via leakage through the (unsealed) casing joints and (2) hold a relatively large reserve of groundwater in casing storage. The construction details for the remaining private wells are unknown; however, Argonne's visual inspections suggest that many, if not all, of the wells in the study area were constructed in a similar manner.

3.2 Installation of Permanent Piezometers

Two permanent piezometers, identified as SB24 and SB38, were installed at the former CCC/USDA facility by using the direct-push technique outlined in Section 2.3. The piezometers were constructed in accord with Variance No. 3820 issued by the MoDNR, and completed as flush mounts at the request of the property owner (Savannah Reorganized School District III). Copies of the MoDNR certification forms for the piezometers (including the approved variance form) are in Appendix B.

3.3 Analytical Data for Groundwater and Surface Water Samples

During the Phase I investigation, 17 groundwater samples, 2 surface water samples, and 1 sample of treated water from the Savannah municipal water supply were collected for VOCs analyses. The sampling was conducted in accordance with the procedures outlined in Section 2.3, in the *MWPK* (Argonne 2002), and in the site-specific *Work Plan* (Argonne 2007).

The analytical results for VOCs in water samples are in Table 3.2. The areal distributions of carbon tetrachloride concentrations are illustrated in Figures 3.1 and 3.2, respectively, for the entire Phase I study area and the more immediate vicinity of the former CCC/USDA facility. The field measurements associated with these samples are in Appendix D, Table D.1.

Carbon tetrachloride was detected in groundwater (at a laboratory method detection limit of 0.1 μg/L) at four sampling locations only (Figures 3.1 and 3.2): at the MoDOT and Morgan private wells and at investigative boring locations SB24 and SB38 at the former CCC/USDA facility. The maximum carbon tetrachloride concentration in groundwater (150 μg/L) was identified at the MoDOT well, approximately 100 ft east of the eastern boundary of the former CCC/USDA facility. Carbon tetrachloride was detected in the Morgan private well, approximately 50 ft south of the southern boundary of the former CCC/USDA facility, at a concentration of 13 μg/L (Figure 3.2).

Carbon tetrachloride concentrations ranging from 3.8 μg/L to 6.4 μg/L were identified in groundwater sampled (at 54-59 ft BGL) during the soil coring activities at investigative boring SB24 (Figure 3.2), as well as in samples collected from a temporary piezometer (SB24ts, screened at 53-58 ft BGL) installed at this location during the first Savannah field session. Sufficient groundwater for sampling could not be recovered from a permanent piezometer (SB24) subsequently constructed at this location and depth, or from a deeper temporary piezometer (SB24td, screened at 87.36-92.36 ft BGL) installed at this location during the first field session. Carbon tetrachloride was detected at 4.9 μg/L in groundwater collected from the permanent piezometer installed at SB38 (Figure 3.2). The SB38 piezometer is screened at 50-90 ft BGL.

Lower concentrations of chloroform were identified in association with the carbon tetrachloride detections outlined above. The measured levels of chloroform were 7.4 μg/L in the MoDOT well, 1.0 μg/L in the Morgan well, 3.5-4.4 μg/L in SB24 (all samples), and 2.5 μg/L in SB38. Chloroform was not detected in any other private wells.

Neither carbon tetrachloride nor chloroform was detected in a surface water sample from the Savannah municipal reservoir, approximately 4,000 ft southwest of the former CCC/USDA facility (Figure 3.1), or in surface water from a small pond located on the Hughes property, approximately 50 ft west of the former CCC/USDA facility (Figure 3.2).

Chloroform was identified in the treated municipal water sample at a concentration of 43 μg/L, below the MRBCA DTL (80 μg/L) for this contaminant. A comparable level of chloroform (39.5 μg/L) was previously reported by the MoDNR for finished water from the municipal treatment system (MoDNR 2000b). Chloroform is a commonly recognized by-product of the disinfection performed in conjunction with treatment of public water supplies (EPA 2008).

Samples of groundwater from the 13 accessible private wells, a surface water sample from the Savannah municipal reservoir, and a sample of treated water from the Savannah public delivery system were analyzed for selected inorganic geochemical parameters to assist in possible characterization and correlation of the waters in the vicinity of the former CCC/USDA facility. The results of these analyses are in Appendix D, Table D.2. The analyses generally suggest little variability in the ionic composition of the groundwater at Savannah; however, a nitrate concentration (28 mg/L) — exceeding the EPA MCL (10 mg/L) for this contaminant in drinking water — was observed in the groundwater from the Moore private well, along with relatively high concentrations of calcium, chloride, sodium, and sulfate. Elevated concentrations of calcium (191 mg/L) and chloride (510 mg/L) were observed in the groundwater from the (unused) Miller private well, and an elevated concentration of chloride (200 mg/L) was found in the (unused) MoDOT well.

3.4 Analytical Data for Soil Samples

3.4.1 Volatile Organic Compounds in Surficial and Shallow Subsurface Samples

3.4.1.1 Samples Preserved on Dry Ice

Surficial and shallow subsurface soil samples were collected at 41 locations at the former CCC/USDA facility (Figure 2.3) to identify the possible presence and distribution of carbon tetrachloride in soils in the upper portion of the expected vadose zone, as a basis for prioritizing locations for deeper subsurface soil sampling. A total of 164 soil samples were collected, representing targeted depths of 1 ft, 4 ft, 8 ft, and 12 ft BGL at each location, and preserved on dry ice as described in Section 2.2.3.

All soil samples were analyzed by (1) a headspace method with a gas chromatograph and electron capture detector and (2) a purge-and-trap sample preparation method with analysis by GC-MS, as discussed in Section 2.2.3. Table 3.3 summarizes the results obtained with both methods for carbon tetrachloride in the samples preserved on dry ice. The complete analytical results for VOCs in these dry-ice-preserved samples are in Appendix E, Table E.1.

Carbon tetrachloride concentrations at or above the reporting limit of 0.1 μg/kg for the *headspace* method were detected in 67 of the surficial and shallow subsurface soil samples preserved on dry ice (Table 3.3). A maximum carbon tetrachloride concentration of 15.1 μg/kg was detected by the headspace method, for the sample collected at 12 ft BGL at boring location SB04. An estimated trace-level concentration of 4.8 μg/kg for carbon tetrachloride (above the purge-and-trap instrument detection limit of 1.0 μg/kg but below the quantitation limit of 10 μg/kg) resulted from the *purge-and-trap* analysis of this sample. Carbon tetrachloride was not detected in any of the surficial or shallow subsurface soil samples at concentrations at or above the purge-and-trap quantitation limit of 10 μg/kg. Only one other sample in this group yielded a trace-level concentration of carbon tetrachloride in the purge-and-trap analysis (3.0 μg/kg in the sample collected at 1 ft BGL at location SB03).

Chloroform was detected at or above the *headspace* method reporting limit of 0.75 μg/kg in 4 of the soil samples preserved on dry ice, at a maximum concentration of 1.2 μg/kg. Chloroform was not detected in any of the soil samples analyzed by the *purge-and-trap* method, with its detection limit of 1.0 μg/kg (Table E.1 in Appendix E).

3.4.1.2 Comparison of the Dry Ice and EnCore Preservation Methods

At the request of the MoDNR, aliquots of 37 surficial and shallow subsurface soil samples (approximately 23% of the total) were preserved by using EnCore sampling devices, as described in Section 2.2.3, for comparison with the dry ice method. Table E.2 in Appendix E compares carbon tetrachloride concentrations for the sample aliquots preserved by both methods, as analyzed by the headspace and purge-and-trap methods. Carbon tetrachloride was detected at concentrations at or above the headspace method's reporting limit of 0.1 μg/kg in 15 of the samples collected with the EnCore devices. The data indicate only minor differences in the carbon tetrachloride values for samples preserved with the two methods. With one exception, the analysis results for corresponding samples were within $\leq$ 0.4 μg/kg of each other. A mean difference (dry ice sample value minus EnCore sample value) of -0.09 μg/kg was determined for the data set.

3.4.1.3 Evaluation of Headspace Data to Prioritize Subsequent Sampling

The results of the headspace analyses of the surficial and shallow subsurface soils were evaluated in the field by Argonne personnel during the first field mobilization (October-November 2007) as a basis for recommending locations for possible deeper subsurface soil sampling and analyses for VOCs. In this application, the distributions of headspace values at each sampling horizon in the upper vadose zone were compared and evaluated semi-quantitatively, to identify locations having relatively more elevated levels of carbon tetrachloride with increasing depth. Such patterns might reflect the presence of contamination in the deeper subsurface.

The areal distributions of measured (by headspace analysis) carbon tetrachloride concentrations at each of the four depths (1 ft, 4 ft, 8 ft, and 12 ft) sampled at the former CCC/USDA facility are shown in Figures 3.3-3.6, respectively. Carbon tetrachloride was not detected (by the headspace method) — or was identified only sporadically and at relatively low levels — at all surficial and shallow subsurface soil sampling locations in the portion of the former CCC/USDA facility west of the remaining rectangular storage building foundations. In contrast, relatively higher indicated (headspace) carbon tetrachloride concentrations were consistently identified in four areas in the eastern portion of the former facility, as follows:

- Along the northern edge of the northern rectangular bin foundation and extending to the northern property limit (defined by boring locations SB4 and SB13)

- Along the southern edge of the southern rectangular bin foundation (defined by boring location SB29)

- Near the eastern end of the southern rectangular bin foundation (defined by boring locations SB20 and SB24)

- In association with the former location of several round grain bins near the southeast corner of the former facility (defined by boring locations SB38 and SB39)

3.4.2 Volatile Organic Compounds in Deeper Subsurface Soil Samples

A total of 79 deeper (> 12 ft BGL) subsurface soil samples were collected during the Phase I investigation for VOCs analyses, at four locations at the former CCC/USDA facility. The selected locations (SB24, SB29, SB38, SB42) were chosen to coincide with the observed occurrences of relatively higher concentrations (based on headspace analyses) of carbon tetrachloride identified in the associated surficial and shallow subsurface soils (Section 3.4.1.3). The proposed locations for the deeper soil sampling activities were discussed with representatives of the CCC/USDA and the MoDNR at Savannah during the first field session and were approved verbally by the agency project managers.

All of the deeper subsurface soil samples were preserved by using dry ice and were analyzed by the purge-and-trap method, as discussed in Section 2.2.3. The analytical results for VOCs in deeper subsurface soils are in Appendix E, Table E.3.

Table 3.4 summarizes the results for carbon tetrachloride in the deeper subsurface soil samples. Carbon tetrachloride concentrations at or above the *purge-and-trap* method's quantitation limit of 10 μg/kg were identified in 12 soil samples from borings SB38 and SB42. At boring location SB38, carbon tetrachloride concentrations of 19-42 μg/kg were observed at 20-32 ft BGL, while concentrations of 10-16 μg/kg were observed at 48-64 ft BGL. At location SB42, carbon tetrachloride concentrations of 15-171 μg/kg were identified at 44-56 ft BGL. Trace levels of carbon tetrachloride (above the purge-and-trap detection limit of 1.0 μg/kg but below the quantitation limit of 10 μg/kg) were detected in all four deep borings; however, no carbon tetrachloride was detected at any of the boring locations at depths greater than 60-68 ft BGL. The highest concentrations at location SB42 (126 μg/L at 44 ft BGL and 171 μg/kg at 48 ft BGL) occurred in soils that fell within the zone of saturation at the time of the investigation. (See Sections 4.2.1 and 4.3.2.)

Carbon tetrachloride concentrations at or above the reporting limit of 0.1 μg/kg for the *headspace* analysis method were detected in 58 of the deeper subsurface soil samples, at all four deep boring locations (Table E.3 in Appendix E). At SB24, SB38, and SB42, the headspace data generally show a trend of increasing carbon tetrachloride values with depth that qualitatively continues the patterns observed in the associated surficial and shallow subsurface (≤ 12 ft BGL) samples. At SB29, the levels of carbon tetrachloride determined by the headspace method for the deeper subsurface soils were comparable to those in the shallower soils, showing no consistent

increase or decrease with depth. The results in Table E.3 demonstrate a qualitative similarity in the patterns of carbon tetrachloride concentrations determined by the headspace and purge-and-trap analysis methods in each boring; however, no consistent quantitative relationship is observed for corresponding values obtained by these methods. *For this reason, concentrations determined by the headspace method are employed by Argonne for only the comparative screening purposes described in Section 3.4.1; they are not used for quantitative evaluation of potential soil contaminant levels or for the evaluation of risk.*

No chloroform was detected in any of the deeper subsurface soil samples analyzed by the *purge-and-trap* method, at a method detection limit of 1.0 μg/kg (Table E.3 in Appendix E).

3.4.3 Lithologic and Physical Property Data for Deeper Subsurface Soils

Lithologic descriptions for the continuous soil cores recovered at boring locations SB24, SB29, SB38, and SB42 are in Appendix F, together with the results of physical property analyses for selected intervals from borings SB29 (41.0-41.5 ft, 67.2-67.5 ft, 68.0-68.5 ft, 85.0-85.5 ft BGL), SB38 (67.6-68.0 ft BGL), and SB42 (31.0-31.5 ft, 56.0-56.5 ft BGL). The core intervals submitted for laboratory analyses were chosen to reflect the predominant sediment types penetrated beneath the former CCC/USDA facility during Phase I, as well as subtle variations in the properties of these soils suggested by the visual inspections. The Atterberg limit measurements for these samples (liquid limit, plastic limit, and plasticity index) could not be performed by the physical testing laboratory (HWS Consulting Group, Lincoln, Nebraska) as requested by Argonne, because of the relatively small volume of soil material available from the 1.5-in.-diameter core at each selected depth interval. All other physical property determinations (bulk dry density, moisture content, specific gravity, porosity, total organic carbon content, and sediment particle size distribution) were completed as planned. The characteristics of the Savannah soils are discussed in Section 4.3.2.

3.5 Data for Soil Vapor Determinations

At the request of the MoDNR, measurements of possible VOCs vapor levels were made in conjunction with the foundation drilling and soil coring activities at boring locations SB40 and SB41 (Figure 2.3), described in Section 2.2.1. The VOCs levels in the ambient air were determined periodically at the ground surface, at 2 ft above the ground surface, and in the

breathing zone during these operations by using a hand-held PID. The results of the measurements are in Appendix G; no VOCs were detected (at a reported instrument detection limit of 1 ppb) at either location during the drilling of the foundations, immediately upon penetration of the foundations, or during the subsequent collection of soil cores.

3.6 Groundwater Level Data

To obtain information on the occurrence and possible direction(s) of groundwater flow in the vicinity of the former CCC/USDA facility, static water levels were measured manually in all available private wells on October 25-29, 2007, in conjunction with the well sampling activities described in Section 2.3. Static water levels were also measured manually in selected private wells and in permanent piezometers SB24 and SB38 on January 28, March 21, and April 30, 2008. The results of the manual measurements are in Table 3.5.

With the approval of the property owners, self-contained, downhole pressure-sensing and data-logging units were installed in eight private wells (McPike, MoDOT, Burks, Hughes, Barr, Potter, Morgan, Clizer "old"; Figure 2.6), as well as in permanent piezometer SB38 at the former CCC/USDA facility. The complete set of water levels recorded by the data loggers is on the compact disc (CD) inside the back cover of this report, in Supplement 1, Table S1.1. The patterns of water level variations, the apparent hydraulic gradients, and groundwater flow directions developed from the data logger records and manual water level measurements are discussed in Section 4.4.

Information on precipitation in the Savannah area during the groundwater monitoring period was acquired to assist in evaluation of the observed groundwater level trends. Rainfall data for the nearest available recording station (Saint Joseph, located approximately 7 mi from Savannah) were obtained from the Missouri Historical Agricultural Weather Database (MUE 2008). The precipitation data are on CD, in Supplement 1, Table S1.2.

3.7 Coordinates Survey Data

The private wells identified in the Phase I study area, permanent piezometers SB24 and SB38, and selected additional physical locations identified by the MoDNR at the former CCC/USDA facility property were surveyed by Schwab-Eaton, P.A., Manhattan, Kansas, to provide

horizontal and vertical control for the interpretation and correlation of stratigraphic and groundwater levels data. At the request of the MoDNR, ground surface elevations were also surveyed by Schwab-Eaton along two transects oriented east-west and north-south, respectively, across the former CCC/USDA facility property, to provide topographic control. Per the MoDNR request, the topographic survey was extended eastward from the former CCC/USDA property across Business Hwy. 71 and onto the adjacent MoDOT property, to the approximate location of the MoDOT private well (Figure 2.6). The coordinates data for all surveyed locations are in Appendix H, Table H.1, and are depicted in Figures H.1-H.3.

Figure H.1 demonstrates that the ground surface elevations (above mean sea level [AMSL]) determined for the private wells identified during the Phase I study are consistent with the regional surface topographic setting identified by the U.S. Geological Survey (USGS 1996). Figure H.2 presents the locations and elevations of all points surveyed within and immediately adjacent to the former CCC/USDA facility. Figure H.3 illustrates use of these data (excluding elevations measured on foundation surfaces above the natural grade) to estimate the local surface topography. Figure H.3 indicates that the land surface beneath most of the former CCC/USDA facility slopes gently toward the north — or more steeply to the west — from a localized high near the southeast corner of the former facility. Figure H.3 also illustrates a local surface drainage divide formed by the ditch that lies parallel to the western margin of Business Hwy. 71, preventing direct runoff of surface waters from the former CCC/USDA facility property onto the adjacent MoDOT property to the east.

The areal locations of soil sampling points SB01-SB42 were established by Argonne staff by using on-site measurements made relative to selected fixed physical reference points at the former CCC/USDA facility, as well as by the use of a Thales MobileMapper CE Global Positioning System (GPS) receiver running the ArcPad 6.0.3 program with a Communications Systems International, Inc., model MBX-3 backpack antenna unit.

3.8 Results of Quality Control Activities

The quality assurance/quality control (QA/QC) procedures for sample collection, handling, and analysis followed during the investigation are described in detail in the *MWPK* (Argonne 2002). A detailed QA/QC report addressing activities related to sample collection, handling, and analysis during the investigation is on CD, in Supplement 2.

The results of the QA/QC activities are summarized as follows:

- Sample integrity was maintained successfully throughout the collection, shipping, and analysis activities by documentation of samples as they were collected and the use of custody seals and chain-of-custody records.

- All samples were received with custody seals intact and at appropriate preservation conditions. To verify the soil sample preservation methodology used during CCC/USDA investigations, in which soil samples are quick-frozen on dry ice after collection, aliquots corresponding to 37 near-surface soil samples were collected by using 25-g Encore sampling devices and preserved on ice at 4°C. This verification was done at the request of the MoDNR. Both types of samples were subjected to headspace analysis (modification of EPA Method 5021) and purge-and-trap sample preparation and GC-MS analysis (EPA Methods 5030b and 8260B) at the AGEM Laboratory. The two data sets gave similar results.

- Samples were analyzed in required holding times. Although the analyses of groundwater samples for nitrate as nitrogen were performed beyond the 48-hr holding time limit specified by Method 300, the primary analyses of the samples for total nitrogen were performed according to Method 353.2, within the allowable holding time and with preserved sample volumes.

- Carbon tetrachloride and chloroform were not detected in laboratory method blanks. Low levels of methylene chloride and 1,1,1-trichloroethane present in the methanol used for soil extraction are not reported, nor are 2-butanone, toluene, and xylene present in instrument blanks.

- As an indicator of cross-contamination, trip blanks were prepared and included in containers of soil or water samples shipped for organic analyses. Neither carbon tetrachloride nor chloroform was detected in the trip blanks.

- The near-surface soil samples (1-12 ft BGL) collected at 41 locations across the site were analyzed at the AGEM Laboratory with a modification of EPA Method 5021 (headspace analysis using a gas chromatograph with electron

capture detection) to provide a sensitive *qualitative* indicator of possible soil contamination in the deeper vadose zone. The headspace data were examined to determine contaminant distribution patterns and establish priorities for subsequent sampling of deeper subsurface soils. Typical detection limits achieved were 0.10 µg/kg for carbon tetrachloride and 0.75 µg/kg for chloroform. Replicate samples showed good agreement, with relative percent difference values of 0-11% for carbon tetrachloride and 7-18% for chloroform. After the headspace analysis, all of the soil samples were subjected to purge-and-trap sample preparation with analysis by GC-MS to achieve a *quantitative* measure of contamination.

- Both soil and groundwater samples were analyzed for carbon tetrachloride and chloroform at the AGEM Laboratory with the purge-and-trap method for quantitative determination of contaminant distribution. Dual analyses of samples indicated consistency in the sampling and analytical methodologies. Dual analyses were accomplished through either analysis of replicate samples submitted to the laboratory or duplicate analysis of samples selected by the laboratory. Consistency in both the sampling and analytical methodologies is indicated.

- The analyses of soil samples at the AGEM Laboratory with EPA Method 8260B were verified by a second laboratory (TestAmerica Laboratories) with the same analytical procedure. Of the 240 soil samples analyzed by the AGEM Laboratory, 25 (10%) were also analyzed by TestAmerica. Low surrogate recovery was evident in 2 of the soil verification samples, while high recovery (approximately 200% in all surrogates) was evident in 1 of the verification samples. The carbon tetrachloride concentrations reported by TestAmerica for these samples are, therefore, qualified. The low carbon tetrachloride concentrations detected in analyses at the AGEM Laboratory are supported by the verification analysis results. Outside laboratory data are on CD, in Supplement 3.

- The analyses of water samples at the AGEM Laboratory with EPA Method 524.2 were verified at a second laboratory (Envirosystems, Inc.) with EPA-defined CLP methodology. Of the 20 groundwater samples analyzed by

the AGEM Laboratory, 3 (15%) were subjected to the verification analysis. Agreement is good over the range of contaminant concentrations detected. Outside laboratory data are on CD, in Supplement 3.

- Groundwater samples were collected for inorganic analyses to aid in geochemical characterization of the water-bearing zone. Groundwater samples collected for inorganic analyses were shipped immediately to TestAmerica (South Burlington, Vermont) for filtration and analysis. The analyses included dissolved anion concentrations (chloride, sulfate, nitrate, and phosphate) by EPA Method 300, nitrate/nitrite nitrogen by EPA Method 353.2, and dissolved metals (aluminum, calcium, iron, magnesium, manganese, phosphorus, potassium, silicon, sodium, and zinc) by EPA Method 6010. At the request of the MoDNR the waste purge water was analyzed for several additional metals (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, and vanadium) by EPA Method 6010. The recovery of known concentrations of the metals and anions of interest in spiked laboratory QC samples was in the desired range of 80-120%.

3.9 Waste Characterization, Handling, and Disposal

All wastewater generated during the Phase I investigation at Savannah was temporarily containerized in portable storage tanks on-site. The containerized wastewater was analyzed for VOCs by the AGEM Laboratory at Argonne, for selected metals by TestAmerica (South Burlington, Vermont), and for total nitrogen by TestAmerica (University Park, Illinois). The results of the wastewater analyses are in Appendix I.

The results of the wastewater analyses were reviewed by the MoDNR Hazardous Waste Enforcement Unit (HWEU). On the basis of these data, the MoDNR-HWEU indicated that the wastewater from the Savannah investigation did not represent a characteristic hazardous waste (MoDNR 2007c). Staff of the MoDNR Hazardous Waste Program concurred with this interpretation (MoDNR 2007d); however, authorization for local disposal of the wastewater, either on-site or at the Savannah municipal wastewater treatment facility, could not be obtained from the MoDNR or the city of Savannah in a timely fashion. Therefore, to expedite completion of the Phase I waste handling activities, the wastewater was removed from the investigation site

and accepted for disposal by Safety-Kleen Systems, Inc., Independence, Missouri. Bill of lading documents included in Appendix I indicate that the wastewater was accepted by Safety-Kleen as non-regulated liquid material.

TABLE 3.1 Property ownership and water supply information.

Parcel ID/Map Number	Assessor's Computer ID	Property Size (acres)	Listed Property Owner	Owner's Listed Mailing Address	Property Owner Telephone No.	Water Billing for This Property?
Properties having confirmed access to water from PWSD1						
13-3.0-05-0-00-03.01	05-01048.01	24.98	Vanschoiack, Dean A., et al.	11248 Hwy. 71, Savannah 64485	324-6171	Yes
13-3.0-05-0-00-06.00	05-01051.00	19.96	Barr, David W.	11810 County Rd. 428, Savannah 64485	324-4517	Yes
13-3.0-05-0-00-07.00	05-01052.00	4.6	Sullender, John P.	11911 County Rd. 428, Savannah 64485	324-4393	Yes
13-3.0-05-0-00-08.00	05-01053.00	5.49	Morgan, Charles P.	11886 Hwy. 71, Savannah 64485	324-5790	Yes
13-3.0-05-0-00-08.01[a]	05-01053.01	7.02	Burks, Martha	8251 County Rd. 418, Amazonia 64421	324-3517	Vacant house
13-3.0-05-0-00-09.00	05-01054.00	38.51	Wilt, Randall J.	10825 County Rd. 160, Savannah 64485	324-4661	Yes
13-3.0-05-0-00-12.00	05-01057.00	98.54	Clizer, Herbert E. (trust)	11649 County Rd. 428, Savannah 64485	324-4460	Yes
13-3.0-05-0-00-14.00	05-01059.00	61.05	Potter, Kathleen	11672 County Rd. 428, Savannah 64485	324-5972	Yes
13-3.0-05-0-00-14.01	05-01059.01	0.75	Defenbaugh, Guy C.	11670 County Rd. 428, Savannah 64485	Not found	Yes
13-3.0-05-0-00-14.02	05-01059.02	5.01	Fothergill, Curtis D.	11450 Hwy. 71, Savannah 64485	324-1712	Yes
13-3.0-05-0-00-15.00	05-01060.00	34.16	Waegele, C. Kenneth	11772 County Rd. 428, Savannah 64485	324-5077	Yes
13-3.0-05-0-00-22.00	05-01066.00	3.69	Hughes, Jerry and Wife	11731 County Rd. 428, Savannah 64485	324-3791	Yes
13-3.0-08-0-00-02.01	05-01090.01	0.68	Briner, Billy L.	10221 County Rd. 427, Savannah 64485	324-5319	Yes
13-3.0-08-0-00-14.00	05-01102.00	4.52	O'Conor, Patrick F.	10480 Four Winds Dr., Savannah 64485	324-5441	Yes
13-3.0-08-0-00-14.01	05-01102.01	3.04	Holt, Randall L.	10315 Fourwinds Dr., Savannah 64485	324-6704	Yes
13-3.0-08-0-00-14.02	05-01102.02	2.86	Null, Phillip S.	10475 Fourwinds Dr., Savannah 64485	324-6546	Yes
13-3.0-08-0-00-14.03	05-01102.03	3.34	Geyer, William E.	10255 Fourwinds Dr., Savannah 64485	324-5613	Yes
13-30.-08-0-00-14.04	05-01102.04	2.06	Ray, Rodney W.	10351 Fourwinds Dr., Savannah 64485	324-5085	Yes
13-3.0-08-0-00-14.05	05-01102.05	2.06	Ray, Kevin S.	10368 Fourwinds Dr., Savannah 64485	324-7994	Yes
13-3.0-08-0-00-14.06[a]	05-01102.06	3.64	Briner, Daniel	10260 County Rd. 428, Savannah 64485	Not found	Yes
13-3.0-08-1-04-01.00	05-01104.00	2.9	Barker, Beverly (trust)	10360 County Rd. 429, Savannah 64485	324-5369	Yes
13-3.0-08-1-04-01-01	05-01104.01	0.94	Thomas, Robert A.	10606 County Rd. 429, Savannah 64485	324-1829	Yes
13-3.0-08-1-04-02.00	05-01105.00	7.76	Hanna, Mark E.	12121 County Rd. 428, Savannah 64485	324-3574	Yes
13-3.0-08-1-04-02.01[a]	05-01105.01	25.11	Miller, Raymond K.	P.O. Box 111, Savannah 64485	Not found	Yes
13-3.0-08-1-04-02.02	05-01105.02	0.82	Marshall, Jeannine L.	10508 County Rd. 429, Savannah 64485	324-5038	Yes
13-3.0-05-0-00-21.00[a]	05-01065.00	2.58	Whitlock, Joan	607 NE 67th Pl., Gladstone 64118	468-1262	McPike Storage, yard hydrant
13-3.0-05-0-00-19.00		2.17	Reorg. School Dist. III			Former CCC/USDA, yard hydrant
13-2.0-09-2-04-10.00	05-01038.00	0.8	McNeiley, Marshel and Wife	11044 County Rd. 159, Savannah 64485	324-5283	Yes
Properties having confirmed access to water from the Savannah municpal system						
13-2.0-09-2-03-01.00[a]	09-00197.00	0.81	Field, Charles A	1403 W. Hwy. 71, Savannah 64485	324-5217	Yes
13-2.0-09-2-03-01.01[a]	09-00197.01	2.83	Ruoff, Harold R.	12355 State Rt. C, Savannah 64485	324-4711	Yes (commercial)
13-2.0-09-2-03-01.03	09-00197.03	2.7	Leader, Robert and Charity	11140 Counth Rd. 160, Savannah 64485	Not found	Yes
13-2.0-09-2-03-04.00	05-01028.01	1.52	Leader, Robert and Charity	11140 Counth Rd. 160, Savannah 64485	Not found	Adjacent to above
13-2.0-09-2-04-11.00	05-01039.00	0.8	Anderson, Shawn	11155 County Rd. 160, Savannah 64485	432-4028	Yes
13-3.0-05-0-00-18.00	05-01062.00	0.94	Ring, Guy	11821 County Rd. 428, Savannah 64485	Not found	Yes
13-3.0-08-0-00-13.00	05-01101.00	9.48	O'Neal, Mary Jo etal	10315 County Rd. 427, Savannah 64485	Not found	Yes

TABLE 3.1 (Cont.)

Parcel ID/Map Number	Assessor's Computer ID	Property Size (acres)	Listed Property Owner	Owner's Listed Mailing Address	Property Owner Telephone No.	Water Billing for This Property?
Properties having confirmed access to water from the Savannah municpal system (cont.)						
13-3.0-08-0-00-15.00	05-01103.00	0.51	Hutchison, Johnny	10111 County Rd. 427, Savannah 64485	324-5119	Yes
13-3.0-08-1-02-01.00[a]	09-01117.00	0.85	Williams, Gary H.	2001 Karnes Rd., St. Joseph 64505	233-9859	Yes (apartment bldg.)
13-3.0-08-1-02-01.01	09-01117.01	0.4	George, Alan D.	907 15th St. Terrace, Savannah 64485	432-4059	Yes
13-3.0-08-1-02-01.02	09-01117.02	0.37	Dreher, Bobby	903 15th St. Terrace, Savannah 64485	324-4985	Yes
13-3.0-08-1-02-01.03[a]	09-01117.03	1.73	Krull, Greg	11720 County Rd. 162, Savannah 64485	324-5347	Yes
13-3.0-08-1-02-01.04	09-01117.04	0.53	Seyller, Dennis	809 15th St. Terrace, Savannah 64485	324-6463	Yes
13-3.0-08-1-02-01.05	09-01117.05	0.53	Calloway, Richard	807 15th St. Terrace, Savannah 64485	324-4110	Yes
13-3.0-08-1-03-01.00	09-01118.00	0.24	Flanary, Curtis E.	804 15th St. Terrace, Savannah 64485	324-1333	Yes
13-3.0-08-1-03-01.01	09-01118.01	0.23	Salsbury, Clay and Serena	906 N 15th St. Terrace, Savannah 64485	Not found	Yes
13-3.0-08-1-03-01.02	09-01118.02	0.22	Hellerich, Dane	904 15th St. Terrace, Savannah 64485	324-3233	Yes
13-3.0-08-1-03-01.03	09-01118.03	0.23	Williams, James	902 15th St. Terrace, Savannah 64485	324-4751	Yes
13-3.0-08-1-03-01.05	09-01118.05	0.22	Christian, Dirk J.	900 N 15th St. Terrace, Savannah 64485	324-1835	Yes
13-3.0-08-1-03-01.06	09-01118.06	0.23	Lengal, Thomas E.	808 15th St. Terrace, Savannah 64485	324-7177	Yes
13-3.0-08-1-03-01.07[a]	09-01118.07	0.24	Fennell, Johnny and Angie	700 E. Maple Pl. , Savannah 64485	432-4153	Yes
13-3.0-08-1-03-01.08	09-01118.08	0.23	Burchett, Dollie E.	802 15th St. Terrace, Savannah 64485	324-5970	Yes
13-3.0-08-1-03-02.00[a]	09-01119.00	2.11	Porter, Garvin G.	10402 County Rd. 427, Savannah 64485	324-3050	Yes (commercial)
13-3.0-08-1-03-02.01[a]	09-01119.01	2.05	Sur Gro Leasing, Inc.	1006 N St., Plattsburg 64477	Not found	Yes (commercial)
13-3.0-08-1-03-02.02	09-01119.02	0.34	Haley, Joshua E.	1604 W Andrew St., Savannah 64485	324-5001	Yes
13-3.0-08-1-03-02.03	09-01119.03	0.33	Uzzle, Derek and Shandy	1606 W Andrew St., Savannah 64485	Not found	Yes
13-3.0-08-1-03-02.04[a]	09.01119.04	0.29	Ferbert, Randall	9101 Highway H, Fillmore 64449	Not found	Yes
13-3.0-08-1-03-02.05	09-01119.05	0.35	Phillippe, Kevin T.	1602 W Andrew St., Savannah 64485	Not found	Yes
13-3.0-08-1-04-04.00	05-01107.00	6.06	Smith, Neville R.	12181 County Rd. 428, Savannah 64485	324-5079	Yes
13-3.0-08-1-04-05.00	05-01108.00	24.55	Bowman, Charles V.	10451 County Rd. 427, Savannah 64485	324-5345	Yes
13-3.0-08-1-04-06.00	05-01109.00	26.24	Halloran, Harold and Wife	10605 County Rd. 427, Savannah 64485	324-3249	Yes
13-3.0-05-0-00-10-00[a]	Not found	10.44	MO Dept. of Transport.	Hwy. 71, Savannah 64485		Yes
Unoccupied parcels having no identified water source						
13-3.0-08-0-00-10.00[a]	05-01098.00	6.1	Sloan, Darin R.	10479 County Rd. 424	324-6422	Undeveloped ag. land
13-2.0-04-0-00-04.00[a]	05-00975.00	20.43	Wilt, Randy J.	10825 County Rd. 160, Savannah 64485	324-4661	Undeveloped ag. land
13-3.0-05-0-00-13.00	Not found	0.79	MO Highway Dept.			At Hwy.71 and County 156
13-3.0-05-0-00-05.00[a]	05-01050.00	14.49	Briner, Susan E.	10221 County Rd. 427, Savannah 64485	324-5319	Undeveloped ag. land
13-3.0-08-0-00-02.00[a]	05-01090.00	26.97	Briner, Susan E.	10221 County Rd. 427, Savannah 64485	324-5319	Undeveloped ag. land
13-3.0-05-0-00-01.00[a]	05-01046.00	59.88	Holt Angus Farms Inc.	10960 State Rt. C, Savannah 64485	324-3804	Undeveloped ag. land
13-3.0-08-1-01-01.00[a]	09-01116.00	4.95	Leader, Robert and Charity	11140 County Rd. 160, Savannah 64485	Not found	Undeveloped land

TABLE 3.1 (Cont.)

Parcel ID/Map Number	Assessor's Computer ID	Property Size (acres)	Listed Property Owner	Owner's Listed Mailing Address	Property Owner Telephone No.	Water Billing for This Property?
Parcels using private wells						
13-3.0-05-0-00-12.00	05-01057.00	98.54	Clizer, Herbert E. (trust)	11649 County Rd. 428, Savannah 64485	324-4460	Also has PWSD#1 service
13-2.0-09-2-02-04.00	05-01028.00	4.57	Wilson, Robert Lee	10025 County Rd. 160, Savannah 64485	324-3669	Bob/Molly Moore sublot
North of target area*			Adkins, Wilton	10719 County Rd. 156, Savannah 64485	324-4509	Sampled by request
Parcels to be resolved						
13-3.0-08-1-03-01.04[a]			Rasco, Phillip L.	800 15th St. Terrace, Savannah 64485	Not found	In city service area

[a] Current owner's address does not match the location of the parcel.

TABLE 3.2 Analytical results from the AGEM Laboratory for volatile organic compounds in water samples collected at Savannah in Phase I.

					Concentration (μg/L)		
Location	Sample	Depth (ft BGL)	Sample Date	Type[a]	Carbon Tetrachloride	Chloroform	Methylene Chloride
Adkins	SVADKINS-W-25374	–	10/27/07	DW	ND[b]	ND	ND
Barr	SVBARR-W-25377	34.5	10/28/07	DW	ND	ND	ND
Burk	SVBURK-W-25365	37.76	10/26/07	DW	ND	ND	ND
City reservoir	SVCITYSI-W-25385	–	10/29/07	PW	ND	ND	ND
City treated	SVCITYTR-W-25384	–	10/29/07	PW	ND	43	ND
Clizer-New	SVCLIZERNEW-W-25378	35.7	10/28/07	DW	ND	ND	ND
Clizer-Old	SVCLIZEROLD-W-25380	35.7	10/29/07	DW	ND	ND	ND
Hughes	SVHUGHES-W-25381	56.4	10/29/07	DW	ND	ND	ND
Hughes Pond	SVHUGHESPD-W-25382	–	10/29/07	SW	ND	ND	ND
Marshall	SVMARSHALL-W-25366	37.18	10/26/07	DW	ND	ND	ND
McPike	SVMCPIKE-W-25373	48.5	10/28/07	DW	ND	ND	ND
Miller	SVMILLER-W-25372	54.25	10/27/07	DW	ND	ND	ND
MoDOT	SVMDOT-W-25368	44.0	10/26/07	DW	150	7.4	ND
Moore	SVMOORE-W-25361	–	10/25/07	DW	ND	ND	ND
Morgan	SVMORGAN-W-25360	60.58	10/25/07	DW	13	1.0	ND
Potter	SVPOTTER-W-25376	51.3	10/28/07	DW	ND	ND	ND
SB24	SVSB24-W-25357	54-59	10/31/07	CPT	3.8	4.3	ND
SB24ts	SVSB24S-W-25409	53-58	11/3/07	CPT/P(t)	4.2	3.5	ND
SB24ts	SV-24S-W-25400	53-58	12/5/07	CPT/P(t)	6.4	4.4	ND
SB38	SVSB38-W-25397	50-90	3/21/08	CPT/P	4.9	2.5	ND

[a] Sample types: CPT, cone penetrometer; CPT/P, permanent piezometer; CPT/P(t), temporary piezometer; DW, domestic well; PW, public water supply; SW, surface water.

[b] ND, not detected at instrument detection limit of 0.1 μg/L.

TABLE 3.3 Summary of carbon tetrachloride concentrations in surficial and shallow subsurface soil samples collected during the Phase I investigation at Savannah, and preserved on dry ice.[a]

				Carbon Tetrachloride Concentration (μg/kg)	
Location	Sample Date	Depth (ft BGL)	No. of Samples	Headspace Analysis	Purge-and-Trap Analysis
SB01	10/28/07	1	1	0.2	ND[b]
		4	1	0.1	ND
		8	1	0.8	ND
		12	1	0.1	ND
SB02	10/25/07	1	1	0.2	ND
		4	1	0.1	ND
		8	1	ND	ND
		12	1	0.2	ND
SB03	10/28/07	1	1	0.1	3.0 J[c]
		4	1	ND	ND
		8	1	0.2	ND
		12	1	2.7	ND
SB04	10/29/07	1	1	1.5	ND
		4	1	1.4	ND
		8	1	1.6	ND
		12	1	15.1	4.8 J
SB05	10/27/07	1-12	4	ND	ND
SB06	10/26/07	1-12	4	ND	ND
SB07	10/29/07	1	1	0.5	ND
		4-10.5	3	ND	ND
SB08	10/27/07	1-4	2	ND	ND
		8	1	0.1	ND
		12	1	0.4	ND
SB09	10/27/07	1-8	3	ND	ND
		12	1	0.3	ND
SB10	10/27/07	1-8	3	ND	ND
		12	1	0.2	ND
SB11	10/28/07	1-12	4	ND	ND
SB12	10/26/07	1-12	4	ND	ND
SB13	10/27/07	1	1	0.8	ND
		4	1	0.8	ND
		8	1	1.4	ND
		12	1	2.8	ND
SB14	10/25/07	1-12	4	ND	ND

TABLE 3.3 (Cont.)

Location	Sample Date	Depth (ft BGL)	No. of Samples	Carbon Tetrachloride Concentration (μg/kg) Headspace Analysis	Purge-and-Trap Analysis
SB15	10/26/07	1	1	0.2	ND
		4	1	0.1	ND
		8	1	ND	ND
		12	1	0.3	ND
SB16	10/25/07	1-12	4	ND	ND
SB17	10/26/07	1-4	2	ND	ND
		8	1	0.3	ND
		12	1	1.7	ND
SB18	10/26/07	1-8	3	ND	ND
		12	1	0.1	ND
SB19	10/30/07	1-12	4	ND	ND
SB20	10/29/07	1	1	0.7	ND
		4	1	0.5	ND
		8	1	1.0	ND
		12	1	3.9	ND
SB21	10/29/07	1	1	0.3	ND
		4	1	ND	ND
		8	1	0.2	ND
		12	1	0.8	ND
SB22	10/25/07	1-12	4	ND	ND
SB24	10/27/07	1	1	0.9	ND
		4	1	0.5	ND
		8	1	2.0	ND
		12	1	3.5	ND
SB25	10/28/07	1-12	4	ND	ND
SB26	10/25/07	1-12	4	ND	ND
SB27	10/26/07	1	1	0.2	ND
		4	1	0.2	ND
		8	1	ND	ND
		12	1	0.3	ND
SB28	10/26/07	1-8	3	ND	ND
		12	1	0.2	ND
SB29	10/30/07	1	1	0.4	ND
		4	1	0.4	ND
		8	1	1.6	ND
		12	1	3.4	ND

TABLE 3.3 (Cont.)

Location	Sample Date	Depth (ft BGL)	No. of Samples	Carbon Tetrachloride Concentration (μg/kg) Headspace Analysis	Purge-and-Trap Analysis
SB30	10/30/07	1-4	2	ND	ND
		8	1	0.8	ND
		12	1	2.7	ND
SB31	10/25/07	1-12	4	ND	ND
SB32	10/26/07	1-12	4	ND	ND
SB33	10/26/07	1-12	4	ND	ND
SB34	10/26/07	1-8	3	ND	ND
		12	1	0.1	ND
SB35	10/30/07	1-8	4	ND	ND
		12	1	0.3	ND
SB36	10/30/07	1-12	4	ND	ND
SB37	10/30/07	1-4	2	ND	ND
		8	1	0.1	ND
		12	1	0.6	ND
SB38	10/30/07	1	1	0.3	ND
		4	1	0.3	ND
		8	1	1.9	ND
		12	1	9.4	ND
SB39	10/30/07	1	1	ND	ND
		4	1	0.2	ND
		8	1	1.4	ND
		12	1	4.4	ND
SB40	10/29/07	1	1	0.2	ND
		4	1	ND	ND
		8	1	0.1	ND
		12	1	0.3	ND
SB41	10/31/07	1	1	0.2	ND
		4	1	ND	ND
		8	1	0.1	ND
		12	1	0.3	ND

[a] Compete results are in Appendix E, Table E.1.
Concentration limits for carbon tetrachloride are as follows:
Headspace method reporting limit 0.1 μg/kg
Purge-and-trap method detection limit 1.0 μg/kg

[b] ND, not detected at the instrument detection limit.

[c] Qualifier J indicates an estimated concentration below the purge-and-trap quantitation limit of 10 μg/kg.

TABLE 3.4 Summary of purge-and-trap analysis results for carbon tetrachloride in deeper subsurface soil samples collected during the Phase I investigation at Savannah.[a]

Location[b]	Sample Date	Depth (ft BGL)	No. of Samples	Carbon Tetrachloride (μg/kg)
SB24	10/27/07-10/31/07	1-20	6	ND[c]
	10/31/07	24	1	1.3 J[d]
	10/31/07	28	1	ND
	10/31/07	32	1	ND
	10/31/07	36	1	1.2 J
	10/31/07	40	1	ND
	10/31/07	44	1	ND
	10/31/07	48	1	6.3 J
	10/31/07	52	1	2.9 J
	10/31/07	56	1	2.9 J
	11/1/07	60	1	2.5 J
	11/1/07	64-90.5	8	ND
SB29	10/29/07-1/30/08	1-44	12	ND
	1/30/08	48	1	3.2 J
	1/30/08	52	1	2.2 J
	1/31/08	56	1	ND
	1/30/08	60	1	1.5 J
	1/30/08-1/31/08	64-84	6	ND
SB38	10/30/07	1-12	4	ND
	1/28/08	16	1	3.3 J
	1/28/08	20	1	22
	1/28/08	24	1	19
	1/28/08	28	1	42
	1/29/08	32	1	24
	1/28/08	36	1	7.4 J
	1/29/08	40	1	ND
	1/28/08	44	1	2.6 J
	1/29/08	48	1	16
	1/28/08	52	1	12
	1/29/08	56	1	16
	1/28/08	60	1	6.2 J
	1/29/08	64	1	10
	1/28/08	68	1	3 J
	1/29/08	72-96	7	ND
SB04[e]	10/29/07	1-8	3	ND
	10/29/07	12	1	4.8 J
SB42[e]	11/2/07	16	1	4.1 J
	11/2/07	20	1	ND
	11/2/07	24	1	ND
	11/2/07	28	1	ND
	1/28/08	32	1	6 J
	11/2/07	36	1	2.2 J
	1/28/08	40	1	7.3 J
	11/2/07	44	1	171

TABLE 3.4 (Cont.)

Location[b]	Sample Date	Depth (ft BGL)	No. of Samples	Carbon Tetrachloride (µg/kg)
	1/28/08	48	1	126
	11/2/07	52	1	15
	1/28/08	56	1	77
	11/2/07-1/28/08	60-90.5	9	ND

[a] Complete results are in Table E.3, Appendix E.

[b] Surficial and shallow subsurface data are included to illustrate the complete vertical profile.

[c] NC, not detected at the following instrument detection limit of 1.0 µg/kg.

[d] Qualifier J indicates an estimated concentration below the method quantitation limit of 10 µg/kg.

[e] Deep boring SB42 was advanced as a lateral offset at 6 ft from shallow boring SB04, to facilitate deeper sampling with the CPT.

TABLE 3.5 Hand-measured water levels at Savannah in October 2007-April 2008.

		Water Level on Date Indicated[a]							
		October 25-29, 2007		January 28, 2008		March 21, 2008		April 30, 2008	
Location	Reference Elevation (ft AMSL)	Depth (ft)	Elevation (ft AMSL)	Depth (ft).	Elevation (ft AMSL)	Depth (ft)	Elevation (ft AMSL)	Depth (ft).	Elevation (ft AMSL)
McPike	1148.76	18.53	1130.23	15.26	1133.50	12.28	1136.48	10.78	1137.98
Potter	1134.80	7.78	1127.02	6.15	1128.65	4.69	1130.11	4.75	1130.05
Hughes	1149.65	11.20	1138.45	9.37	1140.28	5.59	1144.06	5.18	1144.47
Barr	1153.05	26.95	1126.10	25.16	1127.89	22.32	1130.73	20.40	1132.65
Burks	1126.11	30.90	1095.21	25.63	1100.48	20.94	1105.17	17.74	1108.37
MoDOT	1150.29	22.51	1127.78	20.60	1129.69	16.95	1133.34	15.24	1135.05
Clizer “old”	1149.44	20.25	1129.19	-[b]		7.93	1141.51	5.85	1143.59
Clizer “new”'	1144.38	21.50	1122.88	-		-		-	
Morgan	1159.27	32.71	1126.56	-		24.20	1135.07	21.81	1137.46
Marshall	1120.34	21.40	1098.94	-		-		-	
Miller	1150.11	21.40	1128.71	-		-		-	
Moore	1113.93	26.20	1087.73	-		-		-	
SB24	1158.06					52.85	1105.21	45.10	1112.96
SB38	1158.40					36.39	1122.01	35.43	1122.97

[a] Depths were measured in feet below the reference point for each well.

[b] Level not measured.

[c] Installed April 28, 2008.

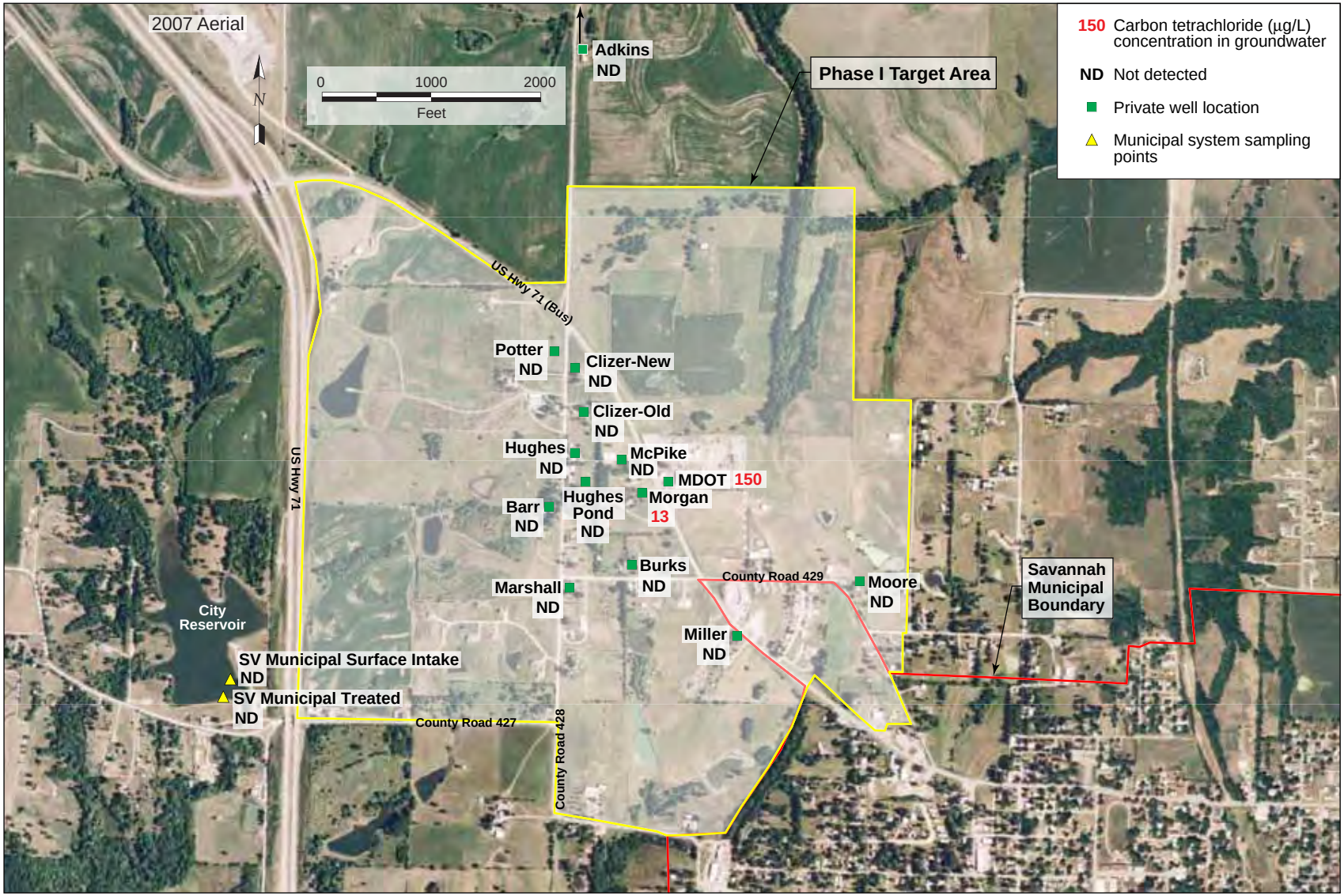

FIGURE 3.1 Lateral distribution of carbon tetrachloride in water samples in the wider investigation area. Source of photograph: NAIP (2007).

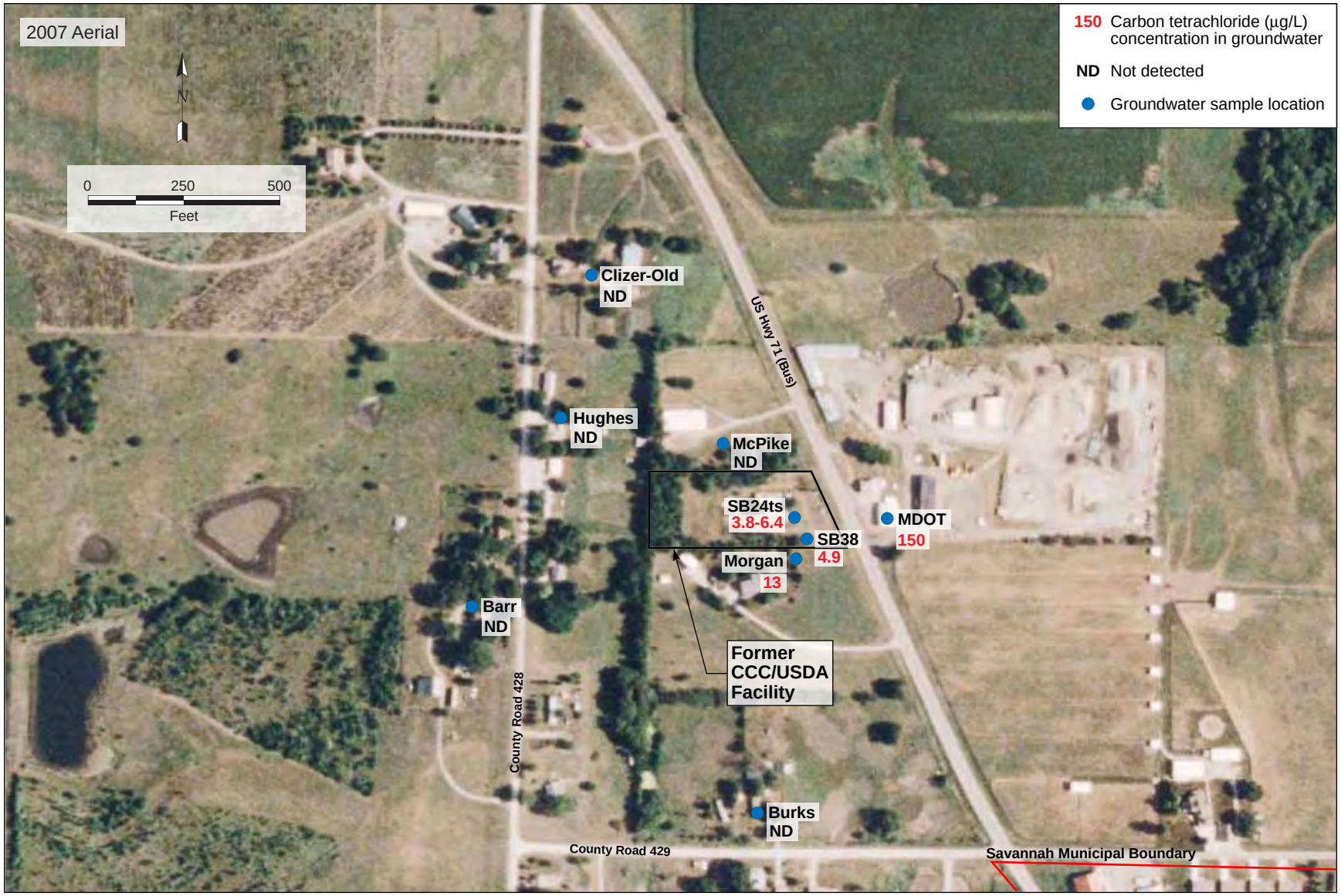

FIGURE 3.2 Lateral distribution of carbon tetrachloride in water samples near the former CCC/USDA facility. Source of photograph: NAIP (2007).

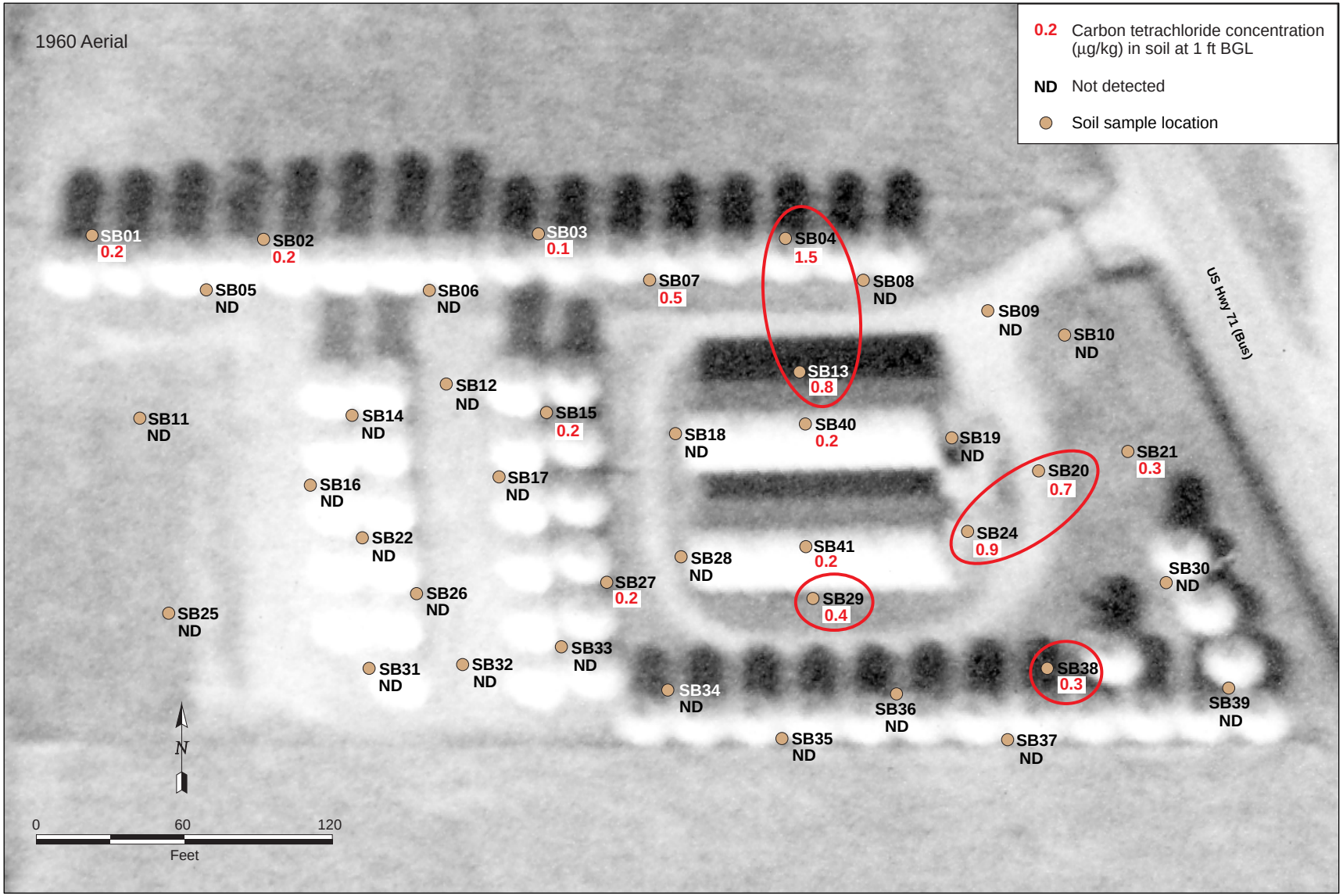

FIGURE 3.3 Results of headspace analyses for carbon tetrachloride in soil samples collected on the former CCC/USDA property at a depth of 1 ft BGL. Source of photograph: USDA (1960).

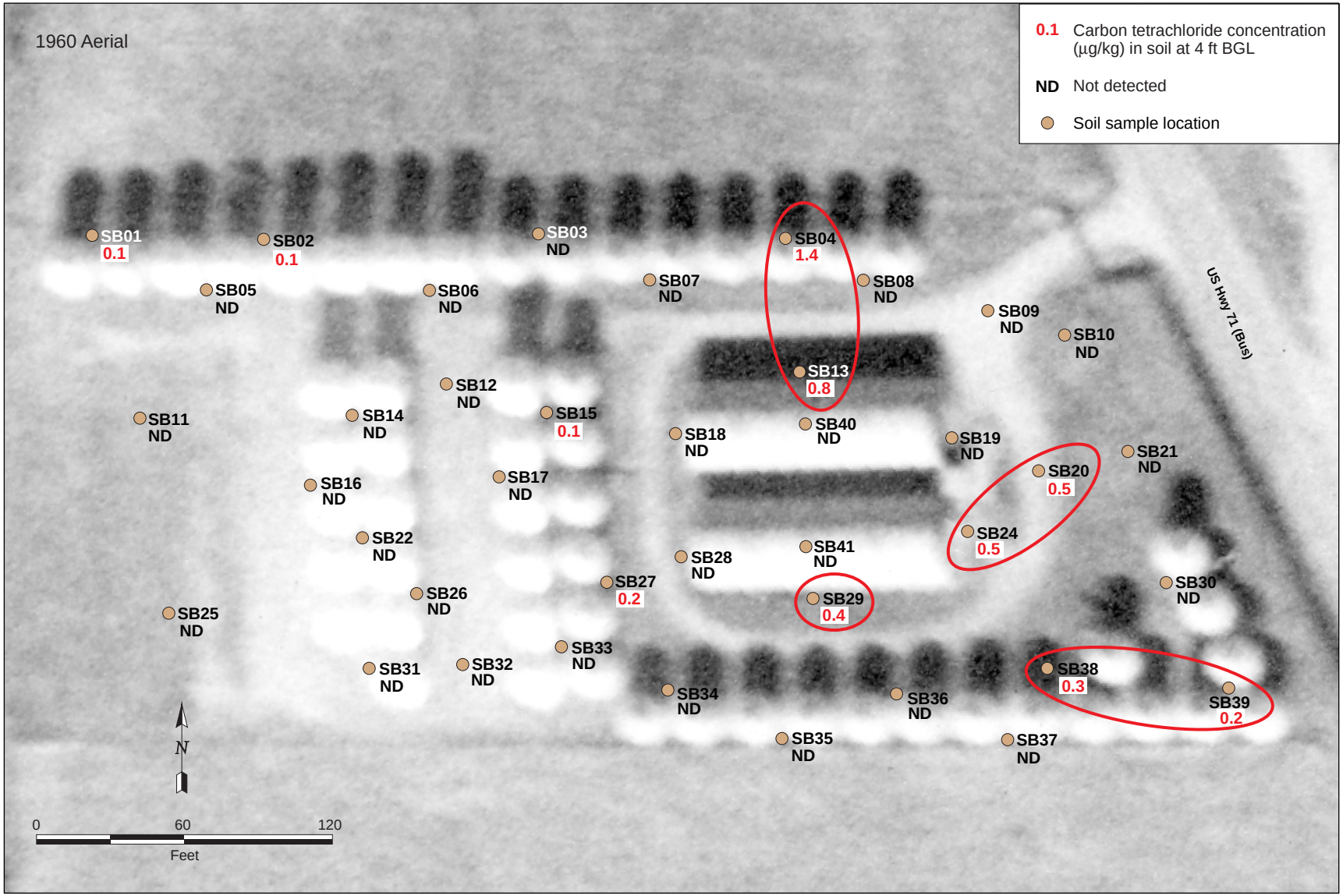

FIGURE 3.4 Results of headspace analyses for carbon tetrachloride in soil samples collected on the former CCC/USDA property at a depth of 4 ft BGL. Source of photograph: USDA (1960).

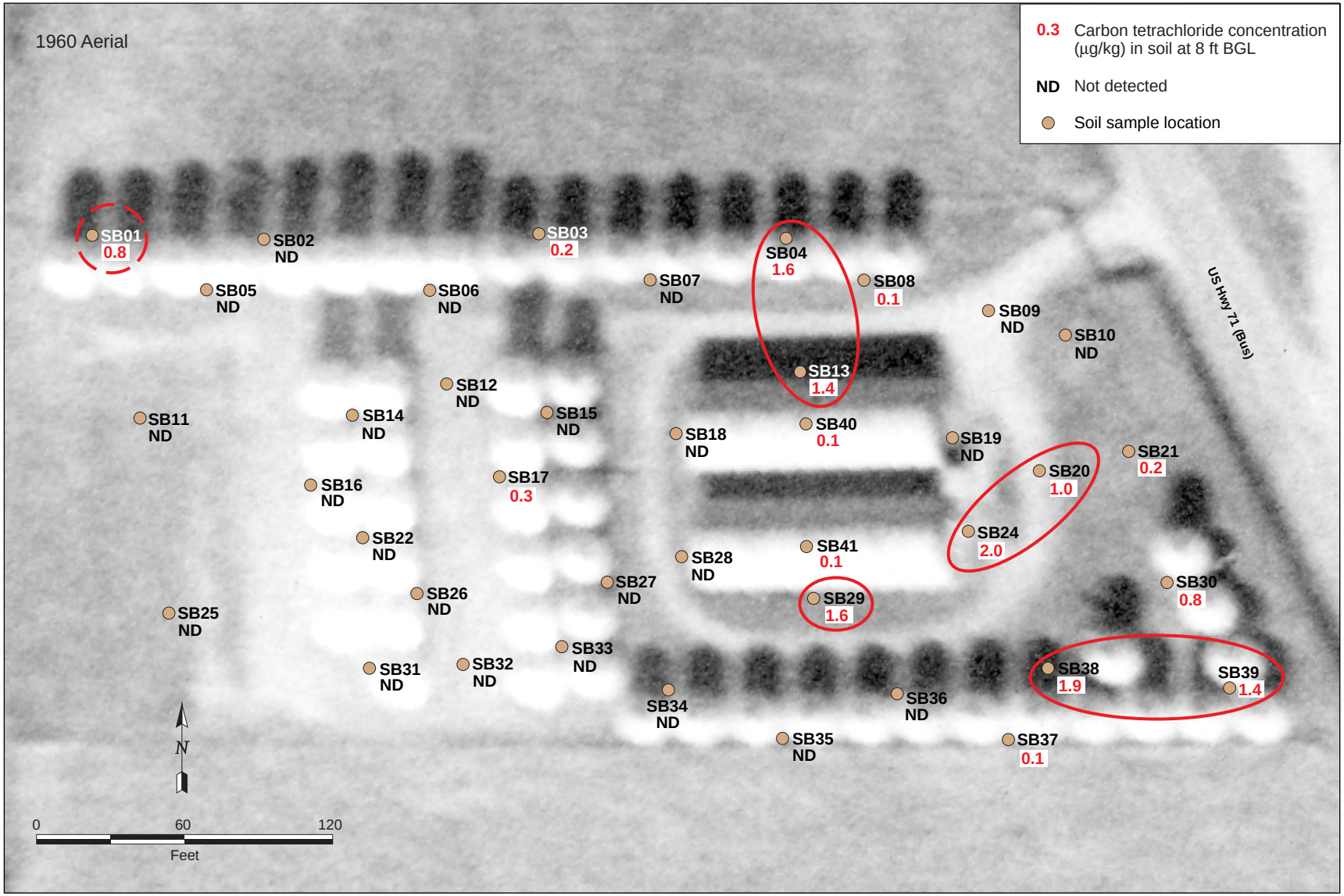

FIGURE 3.5 Results of headspace analyses for carbon tetrachloride in soil samples collected on the former CCC/USDA property at a depth of 8 ft BGL. Source of photograph: USDA (1960).

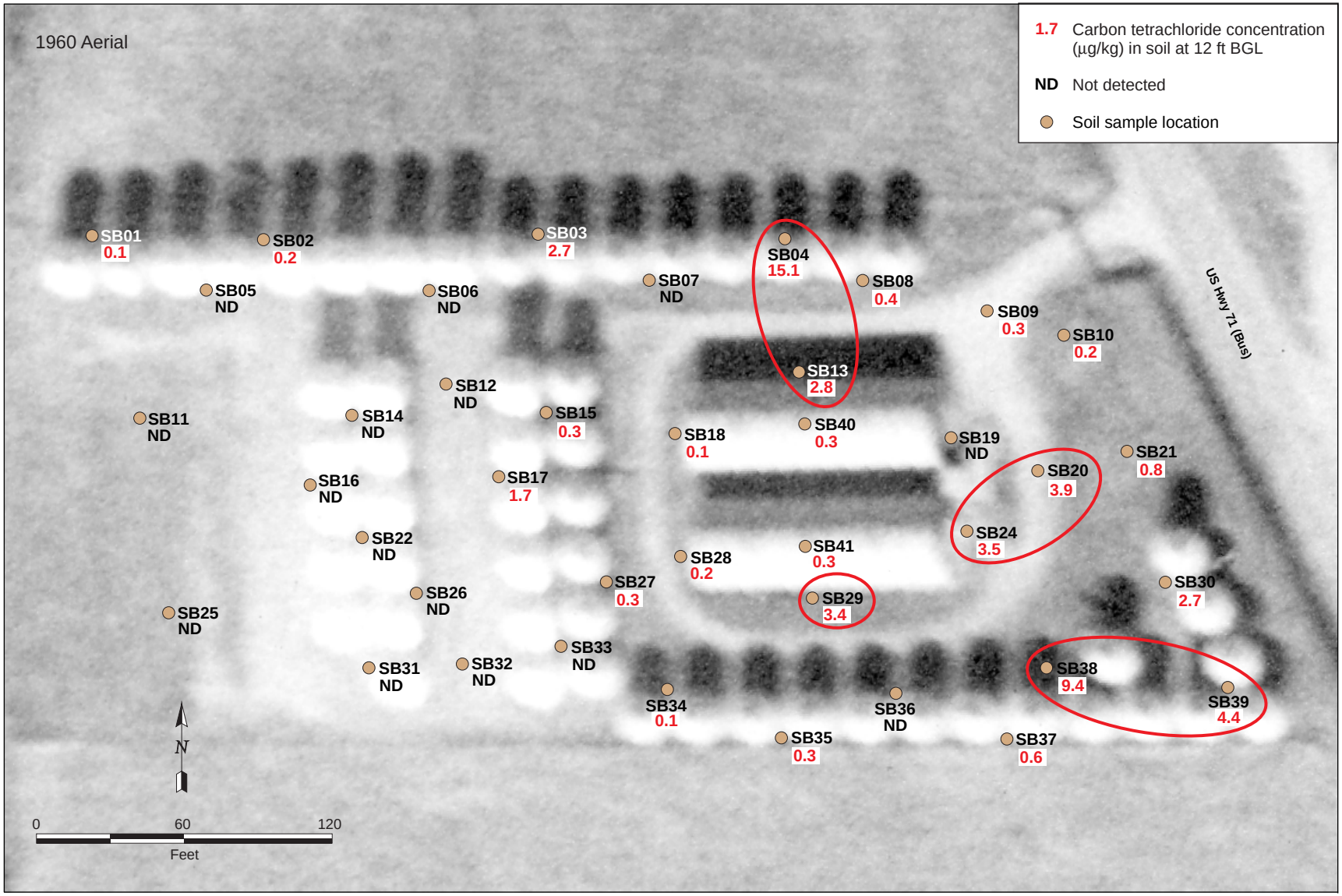

FIGURE 3.6 Results of headspace analyses for carbon tetrachloride in soil samples collected on the former CCC/USDA property at a depth of 12 ft BGL. Source of photograph: USDA (1960).

4 Interpretation of Results

In this section, the investigation results summarized in Section 3 are discussed and interpreted in the context of the primary Phase I technical objectives identified in Section 1. The site-specific results and interpretations, together with regional and local data for the Savannah area summarized in the Phase I *Work Plan* (Argonne 2007), are then integrated to form an updated conceptual model of the geologic and hydrologic framework influencing the movement and distribution of groundwater and carbon tetrachloride contamination in the vicinity of the former CCC/USDA grain storage facility at Savannah. Finally, these findings are used as the basis for a preliminary consideration of the potential risks to human health, public welfare, and the environment associated with the contaminant levels identified in soil and groundwater in Phase I.

The MoDNR has established default target levels (DTLs) for chemicals of concern, against which the results of site characterization studies conducted in Missouri are to be compared, as outlined in *Missouri Risk-Based Corrective Action (MRBCA): Departmental Technical Guidance* (MoDNR 2006). The MRBCA DTL levels for carbon tetrachloride in groundwater and soils of all types are 5.0 μg/L and 79.6 μg/kg, respectively. The MRBCA DTL levels for chloroform in groundwater and soils of all types are 80 μg/L and 78.8 μg/kg.

4.1 Update the Inventory and Status of Private Wells near the Former CCC/USDA Facility, and Sample for VOCs and Geochemical Analyses

With the approval of the MoDNR, an irregular area extending approximately 0.5 mi in each direction from the former CCC/USDA facility (Figure 4.1) was delineated as the Phase I target area for the determination of domestic water sources and for the identification, location, and sampling of existing private wells. The results of this investigation (summarized in Section 3.1) demonstrated that, with only two exceptions, all occupied residential and commercial properties identified in the Phase I study area have confirmed access to and obtain water for domestic uses from a public water supply free from carbon tetrachloride contamination. The two public water utilities that serve the Phase I study area are the Savannah municipal water system and the Andrew County PWSD1.

The city of Savannah obtains its public water supply as a mixture of surface water and groundwater. The surface water source is a municipal reservoir approximately 0.75 mi southwest

of the former CCC/USDA facility (Figure 4.1), while two groundwater wells are located approximately 5 mi southwest of the city, in Amazonia (Figure 1.1). Samples of surface water from the reservoir and of the blended and treated water in the distribution system were analyzed during Phase I. These samples were confirmed to be free of carbon tetrachloride contamination (at a laboratory method detection limit of 0.1 μg/L). Chloroform was identified in the municipal distribution system sample at a concentration of 43 μg/L, below the MRBCA DTL (80 μg/L) for this contaminant. A similar level of chloroform (39.5 μg/L) was identified in finished water from the municipal treatment system during sampling previously conducted by the MoDNR (2000b). Chloroform is a commonly recognized by-product of disinfection performed in conjunction with the treatment of public water supplies (EPA 2008).

The water provided by PWSD1 was not sampled as part of the Phase I investigation. This water supply comes from several wells in Saint Joseph, Missouri, that are owned and operated by Missouri American Water.

The use of private wells for domestic water supply was confirmed at two residences in the Phase I study area (Moore and Clizer "new"; Figure 4.1). The Moore residence, located approximately 2,000 ft east of the former CCC/USDA facility (near the eastern limit of the Phase I study area; Figure 4.1) obtains water exclusively from an on-site private well. Water for domestic use is also obtained from a private well at the Clizer residence, approximately 1,000 ft north-northwest of the former CCC/USDA facility. The property owner reported that this well periodically "goes dry," however, and that the household obtains additional water as needed via a connection to PWSD1.

The source of domestic water used at one residence only (identified from Andrew County tax records as owned by Mr. Phillip Rasco) could not be verified by Argonne staff. The Rasco property is one of numerous small lots in a residential development approximately 2,000 ft southeast of the former CCC/USDA facility. All adjacent residences in this development were confirmed as receiving water from the Savannah municipal supply.

Sixteen private wells in the Phase I study area were located by Argonne (Vanschoiack, Potter, Clizer "new," Clizer "old," Hughes, McPike, Waegele, Barr, Morgan, MoDOT, Burks, Marshall, Smith, Thomas, Miller, Moore; Figure 4.1). Thirteen of these wells were determined to be presently capable of yielding groundwater. Of these, the Potter, Hughes, McPike, Barr, MoDOT, Burks, Marshall, Miller, and Vanschoiack wells were confirmed as not being in current

use for any purpose. The Morgan and Clizer "old" wells are used for lawn and garden watering. The Moore and Clizer "new" wells are used for domestic water supply, as noted above.

The results of the Phase I analyses confirmed that the Moore and Clizer "new" private wells presently in use for domestic water supply are free of carbon tetrachloride and chloroform contamination (at a laboratory method detection limit of 0.1 μg/L). Nitrate was noted in the groundwater from the Moore private well at a level (28 mg/L, expressed as nitrogen) that exceeds the federal MCL for this compound in public drinking water supplies; this contamination is unrelated, however, to any activities that might be associated with the former CCC/USDA grain storage operations at Savannah.

Carbon tetrachloride was detected in only two private wells in the Phase I study area: at the MoDOT and Morgan properties (Figure 3.2). The identified concentrations at each of these locations exceed the EPA MCL and the MRBCA DTL values for carbon tetrachloride (5.0 μg/L) in groundwater; however, neither of these wells is used for domestic purposes. The maximum carbon tetrachloride concentration identified in groundwater at any location during the Phase I investigation (150 μg/L) was detected at the MoDNR well, approximately 100 ft east of the eastern boundary of the former CCC/USDA facility. The observed concentration suggests a decrease in the level of carbon tetrachloride at this location since this well was last sampled, by the MoDNR, in August 2000 (MoDNR 2000b). A carbon tetrachloride concentration of 321 μg/L was identified at the MoDOT well at that time.

Carbon tetrachloride was detected in the Morgan private well, approximately 50 ft south of the southern boundary of the former CCC/USDA facility, at 13 μg/L (Figure 3.2). This concentration is generally consistent with the results of annual sampling of the Morgan well performed by the Missouri Department of Health and Senior Services (MoDHSS). The MoDHSS reported carbon tetrachloride levels of 13-22 μg/L at the Morgan well during monitoring performed from July 2004 to June 2006. The MoDHSS and Argonne results show no clear trend of either concentration increase or decrease in this well. A maximum carbon tetrachloride concentration of 61 μg/L was reported in the Morgan well in sampling conducted by the EPA in 1999 (EPA 1999), however, and values of 42.8-49.2 μg/L were detected in MoDNR sampling events in January and August 2000 (MoDNR 2000a,b). These results suggest that the levels of carbon tetrachloride at this location have generally decreased with time.

The areal distribution of carbon tetrachloride contamination presently observed in private wells in the vicinity of the former CCC/USDA facility mirrors the results of the previous sampling conducted by the EPA (1999) and the MoDNR (2000a,b), in that this contaminant has been detected only in the Morgan and MoDOT wells immediately to the south and east, respectively, of the former facility. The Phase I analyses demonstrate that no other private wells to the north and west — or farther to the south and east — of the former CCC/USDA facility have been affected by carbon tetrachloride as of this investigation.

4.2 Investigate for a Soil Source of Carbon Tetrachloride beneath the Former CCC/USDA Facility

4.2.1 Evaluation of Carbon Tetrachloride Contamination in Soils at the Former Facility

In keeping with the recommendations provided in Section 6.4.2 of *Missouri Risk-Based Corrective Action (MRBCA): Departmental Technical Guidance* (MoDNR 2006), a sequential program of surficial, shallow subsurface, and deeper subsurface soil sampling and analyses was performed within the areal limits of the former CCC/USDA facility, to identify likely locations and determine the extent of possible carbon tetrachloride contamination in soils that might be associated with the former CCC/USDA grain storage activities on this property. With the approval of the MoDNR, VOCs data were initially obtained for the surficial and shallow subsurface soils (collected at depths of 1 ft, 4 ft, 8 ft, and 12 ft BGL per MoDNR request) by using a headspace analysis method. These results were examined in the field for distribution patterns, as a basis for recommending locations for possible deeper subsurface soil sampling for VOCs analyses. In this application, the headspace values at each sampling horizon were compared semi-quantitatively to identify locations with relatively more elevated levels of carbon tetrachloride with increasing depth Such patterns might reflect the presence of contamination in the deeper subsurface.

The results of the headspace analyses, summarized in Section 3.4.1.3 and Figures 3.3-3.6, showed that relatively little to no carbon tetrachloride was detected (by the headspace method) in the surficial or shallow subsurface soils underlying the portion of the facility generally west of the former rectangular storage buildings. A 1960 aerial photo depicting the maximum known extent of the storage facilities formerly present at the CCC/USDA site (used as the base for Figures 3.3-3.6) shows that this area was occupied by two double rows of circular storage bins

directly west of the rectangular bins, along with a single row of circular bins along the northern boundary of the CCC/USDA property. In contrast, relatively higher (headspace) carbon tetrachloride concentrations were identified in apparent association with the rectangular bins and circular grain bins in the eastern portion of the former facility. Figure 4.2 highlights the following four specific areas, where relatively high headspace carbon tetrachloride concentrations were consistently observed, at increasing concentrations with depth:

- Along the northern edge of the northern rectangular bin foundation, extending to the northern property limit
- Along the southern edge of the southern rectangular bin foundation
- Near the eastern end of the southern rectangular bin foundation, near a remaining small concrete pad appearing to mark the entrance to the former bin
- In association with the former location of a cluster of round grain bins near the southeast corner of the former facility

Subsequent quantitative analyses performed by using EPA Methods 5030B and 8260B (purge-and-trap sample preparation with analysis by GC-MS) demonstrated, however, that none of the surficial or shallow subsurface soils contained concentrations of carbon tetrachloride at or above the quantitation limit of 10 μg/kg for these methods (or near the MRBCA DTL of 79.6 μg/kg for carbon tetrachloride in soils).

The results of the surficial and shallow subsurface soil headspace analyses were discussed with the CCC/USDA and MoDNR project managers in the field. With their approval, the four locations outlined above were selected for deeper soil sampling and analyses for VOCs. The soil boring designations assigned to these locations are, respectively, SB42, SB29, SB24, and SB38 (Figure 4.2).

Section 4.5 of the Phase I *Work Plan* for Savannah (Argonne 2007) recommended that soil sampling for VOCs analyses be continued with depth to the top of the first saturated zone identified at each selected deep boring location, in accordance with the MoDNR (2006) terminology for subsurface soils under anticipated water table conditions. As noted in Section 2.2.2, however, no clearly identifiable onset of saturated soil conditions with depth could

be distinguished in the field at any of the four deep borings. Sampling for VOCs analyses was therefore continued at each location until refusal of the CPT coring device was encountered, at depths ranging from 91.92 ft (at SB42) to 96.30 ft (at SB38) BGL.

The results of the deeper soil sampling and analyses for VOCs are summarized in Table 3.4 and illustrated in Figure 4.3. Very low concentrations of carbon tetrachloride (below the purge-and-trap quantitation limit of 10 μg/kg) were detected at each boring location at depths of 16-68 ft BGL; however, quantifiable levels of carbon tetrachloride were identified only at SB38 (near the southeastern corner of the former CCC/USDA facility) and at SB42 (along the northern boundary of the former CCC/USDA property). In boring SB38, carbon tetrachloride concentrations identified were 19-42 μg/kg at 20- 32 ft BGL and 10-16 μg/kg at 48-64 ft BGL. At SB42, concentrations of 15-171 μg/kg were determined for soil samples from the depth interval 44-56 ft BGL, with the highest concentrations of 126 μg/kg and 171 μg/kg occurring at 44 ft and 48 ft BGL, respectively. Findings discussed in Section 4.3.2 indicate that the carbon tetrachloride contamination identified at SB42 and in the deeper interval (48-64 ft BGL) at SB38 occurred in saturated sediments under the groundwater conditions present at the former CCC/USDA facility at the time of the Phase I investigation.

Only the two highest carbon tetrachloride concentrations identified in soils during the Phase I investigation, at SB42 (126 μg/kg and 171 μg/kg), are greater than the MRBCA DTL for carbon tetrachloride in soils (79.6 μg/kg). Because these two samples were from depths (44 ft and 48 ft BGL) greater than that at which saturated soil conditions were identified in the same boring (at 31-31.5 ft BGL, in SB42), they were not collected in the subsurface soil (vadose) zone, as defined by the MoDNR (2006). Consequently, no concentrations detected in the "subsurface soil zone" exceeded the DTL. The DTL reflects the maximum risk-based concentration in soils (of any lithologic type) that is considered acceptable for unrestricted, residential use of a property affected by a contaminant of concern. For carbon tetrachloride in soils, the DTL reflects risk that might be associated with the indoor inhalation pathway. Because the former CCC/USDA property has been used continuously for only non-residential purposes since the CCC/USDA grain storage operations were terminated (by 1974), the indoor inhalation pathway at the former facility has been and currently remains incomplete, and no receptors have been or presently are at risk of exposure by this route. Representatives for the current owners of the former CCC/USDA property, the Savannah Reorganized School District III, have indicated to the CCC/USDA that the district has no current or future plans to sell or otherwise permit the use of this property for residential purposes (Mallette 2008).

4.2.2 Evaluation of Carbon Tetrachloride Contamination in Groundwater at the Former Facility

In keeping with Section 3.2.2.2 of the Phase I *Work Plan* (Argonne 2007), efforts were made to collect groundwater for VOCs analyses at three of the four deep boring locations (SB24, SB38, and SB42) on the former CCC/USDA property, in conjunction with the subsurface soil contaminant investigation. Free water was encountered in the soil barrel during coring of the depth interval 54-58 ft BGL at SB24. One water sample was recovered before the coring activities were continued, by placing a temporary screen (at a depth of 54-59 ft BGL) and riser through the open coring hole. Two additional groundwater samples were also recovered from a temporary piezometer installed at this location during the first field mobilization in fall 2007 (screened at 53-58 ft BGL). A permanent piezometer subsequently constructed at SB24 (screened at 50-60 ft BGL) has, however, failed to accumulate sufficient groundwater for sampling as of this reporting. The carbon tetrachloride concentrations identified in the groundwater samples collected at SB24 (Table 3.2) ranged from 3.8 μg/L to 6.4 μg/L. A trace of carbon tetrachloride (< 10 μg/kg) was detected in a soil sample (56 ft BGL; Table 3.4) associated with this water sampling interval.

At location SB24, a small amount of free water was observed in the soil core barrels collected directly above the CPT refusal depth (92.56 ft BGL); however, a temporary piezometer constructed to test this interval (screened at 87.4-92.4 ft BGL) failed to accumulate groundwater within the 30-day period permitted for temporary installations. No carbon tetrachloride was detected in the soil core samples (88 ft and 90.5 ft BGL; Table 3.4) associated with this screened interval.

At location SB42, a temporary piezometer was installed (screened at 28-38 ft BGL) to test an apparent show of soil moisture encountered during coring of the interval 34-38 ft BGL. This piezometer also failed to accumulate groundwater within the permitted 30-day observation period. Trace levels of carbon tetrachloride (< 10 μg/kg) were detected in the soil cores (32 ft, 36 ft, and 40 ft BGL, Table 3.4) associated with this screen interval.

Soil sampling location SB38 lies approximately 62 ft northeast of the contaminated Morgan well. To test for availability and possible contamination of groundwater at this location, a permanent piezometer was installed at SB38 during the second field mobilization in January 2008. The SB38 piezometer was constructed with a long screened interval (50-90 ft BGL) to promote possible groundwater entry into the boring (similar to entry of water into the Morgan

well, described in Section 3.1). Significant groundwater accumulation was noted in the SB38 piezometer approximately two months after its installation; carbon tetrachloride was detected in a groundwater sample from the piezometer at a concentration of 4.9 μg/L (Table 3.2).

The carbon tetrachloride concentrations identified to date in groundwater beneath the former CCC/USDA facility are similar to or slightly exceed the EPA MCL and the MRBCA DTL values for carbon tetrachloride (5.0 μg/L). The observed carbon tetrachloride concentrations in groundwater at the former CCC/USDA facility are roughly comparable to those identified during recent MoDHSS (2004, 2005, 2006) and Argonne sampling of the Morgan private well, located south of the former CCC/USDA property, but the concentrations are lower by approximately an order of magnitude than those detected in the MoDOT well directly east of the former CCC/USDA property.

4.3 Obtain Preliminary Information on the Site's Lithology and Hydrostratigraphy

4.3.1 Stratigraphy of the Former CCC/USDA Facility

The former CCC/USDA facility is located in the formerly glaciated northwestern portion of Missouri, in the Dissected Till Plains region of the Central Lowlands physiographic province (MoDNR 2000a). In this area, pre-Illinoian periglacial and glacial materials (consisting predominantly of clay till) and surficial loess were deposited over a sequence of Pennsylvanian shale and limestone bedrock units more than 1,300 ft thick. Extensive preglacial erosion of the bedrock surface and subsequent postglacial erosion of the till and loess deposits have resulted in widely varying thicknesses of the Pleistocene sediments and depths to bedrock across much of northwestern Missouri and the local Savannah area (McQueen and Greene 1938). Regional studies suggest that relatively coarser-grained sediments — consisting of discontinuous lenses, stringers, or sheets of silt, sand, and gravel — may be sparsely distributed in the till. At some locations, the coarser sediments may be better developed near the base of the glacial sequence (Fuller et al. 1957; Heim et al. 1960).

Information on the site-specific lithologic sequence underlying the former CCC/USDA facility was obtained from continuous cores recovered at deep boring locations SB24, SB29, SB38, and SB42 and from geomechanical logs acquired with the Argonne CPT vehicle at locations TP1, TP2, and SB24 (Figure 4.4). Lithologic descriptions for the investigative borings

and data regarding sediment physical properties for selected cored intervals are in Appendix F, along with the geomechanical CPT logs. Two stratigraphic cross sections were developed from the lithologic descriptions and CPT profiles, at the locations shown in Figure 4.4. The cross sections are shown in Figures 4.5 and 4.6.

At the former CCC/USDA facility, two predominant lithologic units were identified underlying a relatively uniform dark brown to black, organic-rich surficial layer of modern soil, approximately 2 ft thick. The uppermost of the underlying units consists of generally dense, stiff to slightly softer, non-plastic and non-calcareous silty clay to clayey silt, with possible traces of very fine sand. The silty clay unit is pale brown to yellowish brown with abundant staining (patchy to streaky, rusty orange to black) in its upper reaches, transitioning (generally at depths of 38-50 ft BGL) to a more uniform light gray with occasional staining becoming fainter with depth. Little or no consistent textural variation was noted in association with the color change.

The second, deeper lithologic unit identified at the former CCC/USDA facility consists of generally firm and dense, uniformly light gray silty clays to clayey silts with some dispersed fine to medium sand. This unit is also marked by the presence of variably sparse to abundant, small (approxiimately 1-mm) to large (with diameters up to 2-3 cm or more), white calcareous nodules and patches, along with occasional dark, non-calcareous pebbles to approximately 4 cm in diameter. The silty clay to clayey silt matrix of this unit is non-calcareous.

At locations TP1, TP2, and SB24, the electronically instrumented cone of the CPT unit was advanced until refusal was encountered, at 91.8 ft BGL at TP1, 93.2 ft BGL at TP2, and 93.2 ft BGL at SB24. At each location, small deposits of hard, light gray calcareous materials were recovered from the tip of the CPT cone, suggesting possible contact with limestone bedrock. Similar refusal depths were observed at deep boring locations SB29, SB38, and SB42 (92.8 ft, 96.3 ft, and 91.9 ft BGL, respectively), suggesting a relatively consistent bedrock surface elevation beneath the former CCC/USDA facility. The inferred bedrock surface could not, however, be penetrated with the CPT coring equipment. The observed refusal depths were comparable to the anticipated depth(s) to bedrock discussed in Section 2.2.1 of the *Work Plan* (Argonne 2007).

Thin zones of coarser-grained sediments identified directly above the refusal depth in borings SB24, SB38, and SB42 appeared most extensively developed at the SB38 location. (No core was recovered for the deepest interval penetrated at location SB29.) At SB24, a small

amount of coarse gravel was recovered from the coring shoe during an attempt to penetrate bedrock. At SB42, approximately 0.5 ft of light olive brown, fine to coarse sand was retrieved. At SB38, approximately 1.1 ft of relatively poorly sorted, iron-stained, clayey silt and sand was penetrated. This material became calcareous with depth. No other distinctly coarse-grained intervals were identified in the overlying silty clay and till units at the locations investigated during Phase I.

The identified sequence of lithologies described above is qualitatively consistent with the regionally recognized occurrence of clayey till and overlying loess in the Savannah area. The depositional transition from loess to till in the local stratigraphic sequence might occur in the light gray interval identified in this report as the lower portion of the silty clay to clayey silt unit; however, the results of the physical property analyses in Appendix F suggest that these sediments show relatively little textural variation. Therefore, for this discussion, the top of the till is interpreted as marked by the first occurrence with depth of calcareous inclusions. On this basis, the silty clay to clayey silt unit ranges in thickness from approximately 58 ft to 65 ft, and the till unit ranges in thickness from approximately 26 ft to 30 ft.

4.3.2 Hydrostratigraphy of the Former CCC/USDA Facility

As noted in Sections 2.2.2 and 4.2.1 and in the core descriptions in Appendix F, the identification of saturated conditions in the fine-grained sediments beneath the former CCC/USDA facility, on the basis of the character of the Phase I deep soil cores, proved difficult in the field. With few exceptions, the cored materials recovered throughout the soil profile at each location appeared visually damp (at maximum), with no discernable free soil moisture. The results of laboratory moisture and porosity content determinations (included in Appendix F) for a suite of core samples reflecting the range of soil types (clayey silt to silty-sandy clay) and subsurface depths penetrated (sample depths of approximately 31 ft to 85 ft BGL) demonstrate, however, that all of the soils tested were effectively saturated at the time of collection. The laboratory data therefore suggest a maximum estimated depth to the onset of saturated conditions, at the time of the Phase I investigation activities, of approximately 31 ft BGL (at boring SB42). Because no soil samples were collected for physical property analyses at depths shallower than 31 ft BGL, the depth to the water table beneath the former CCC/USDA facility could not be constrained further on the basis of these data.

The soil core analyses are qualitatively consistent with groundwater levels measured during the Phase I sampling program at the McPike (18.53 ft BGL) and Morgan (32.71 ft BGL) private wells located directly to the north and south, respectively, of the former CCC/USDA property boundaries (see Section 4.4, Table 3.5, and Figure 4.7). Regional evaluations of the groundwater conditions in the Savannah area (Heim et al. 1980) and anecdotal reports of nearby private wells periodically "going dry" (H. Clizer and T. Hughes, personal communications to Argonne field personnel) suggest, however, that the elevation of the local water table — and hence the thickness of the subsurface (as defined by the MoDNR [2006]) and saturated soil zones — may vary seasonally.

The observed physical, textural, and water-producing characteristics of the silty clay to clayey silt and till units identified at the former CCC/USDA facility suggest that the ability of these materials to transmit groundwater is limited. Occasional thin intervals, identified primarily on the basis of slight changes in the relative stiffness and color of the light gray silty clay to clayey silt and till materials, were noted at each boring location, suggesting the possible existence of pathways for preferred horizontal groundwater movement. These intervals were most commonly observed at depths of 50-70 ft BGL; however, no detailed lateral correlation among these horizons could be identified. Locally enhanced porosity and/or permeability might also occur in association with the calcareous nodules and patches observed in the till (Section 4.3.1) — the larger of which frequently possess a relatively coarse, granular texture — if sufficient hydraulic communication exists among these features. The basal coarse-grained deposits observed at boring locations SB24, SB38, and SB42 were, in all cases, dry and friable at the time of the Phase I investigation. Similar coarse-grained deposits might provide a pathway for enhanced groundwater migration in the Savannah study area, however, if these materials are locally saturated.

Free groundwater in sufficient quantities for sampling for VOCs analyses accumulated immediately only at location SB24 during the Phase I investigation. Sampling was possible only in the open CPT boring during the coring of sediments at SB24, at a depth of 53-58 ft BGL, and in a temporary (0.5-in.-I.D.) piezometer screened at 53-58 ft BGL at this location. Groundwater accumulation (as of this report) has been extremely slow, however, in a permanent (1.0-in.-I.D.) piezometer subsequently constructed at this location and depth. A temporary piezometer installed at SB42 (0.5-in.-I.D.; screened at 28-38 ft BGL) during the initial Phase I field mobilization in fall 2007 remained dry during a 30-day period of observation; similarly, only 2 ft of groundwater collected over 30 days in a deeper temporary piezometer (0.5-in.-I.D.; screened at 87.36-92.36 ft

BGL) installed at SB24. At location SB38, a permanent (1.0-in.-I.D.) piezometer was installed with a long screened interval (50-90 ft BGL) to mirror the construction approach used in the private wells near the former CCC/USDA facility. Significant groundwater accumulation in the SB38 piezometer was noted at the time of this report; however, the measured water levels at this location thus far do not appear consistent with the levels identified in the nearby Morgan and McPike private wells (see Section 4.4, Table 3.5, and Figure 4.7).

4.4 Establish Preliminary Groundwater Monitoring Points to Investigate Groundwater Movement and Possible Contaminant Migration

Argonne's experience thus far suggests that investigation of groundwater levels at selected depth intervals and locations at the former CCC/USDA facility in Savannah through the use of small-diameter piezometers (or wells) might prove difficult. This is because of the fine-grained texture of the subsurface materials and hence the apparently slow movement of groundwater to the installed borings in the time frame of the current site characterization program. To obtain preliminary information on the levels and patterns of groundwater movement in the area, a water level monitoring network consisting of eight private wells (McPike, Morgan, Burks, Barr, Hughes, Clizer "old," Potter, MoDOT; Figure 2.6) has therefore been established. At these locations, automatic sensors and data loggers are being used to measure and record water levels continuously at 4-hr intervals. A sensor and a data logger have also been installed in permanent piezometer SB38 (see Section 4.3.2) to track the progress of water levels at this location in comparison to those in the nearby private wells.

Hydrographs depicting the water level variations observed in the private wells during the six-month period from October 28, 2007, to April 30, 2008, are in Figure 4.7. The hydrographs are shown in conjunction with daily rainfall data recorded at the Saint Joseph, Missouri, weather monitoring station (MUE 2008; Table S1.2 in Supplement 1), located approximately 7 mi south of Savannah.

The water level recorders at the McPike, Burks, Barr, Hughes, Potter, and MoDOT wells were installed within 1 day (Hughes) to 6 days (Burks) after the purging of these wells for groundwater sampling, as described in Section 2.3. The water level traces in Figure 4.7 for the Hughes, Potter, and Burks wells each depict an extended period of apparent recovery, lasting from approximately 2 weeks (Potter well) to 6 weeks (Hughes), before the depths to water at these locations returned to apparently ambient static levels. The observed recovery periods at

these locations appear qualitatively consistent with the inferred heterogeneous and potentially limited rates of groundwater production to borings discussed in Section 4.3.2.

The water level traces for all of the monitored private wells show relatively consistent trends of water level rise throughout the period of observation, in apparent response to local rainfall events in the winter and early spring. The traces for the Hughes, McPike, Potter, and MoDOT wells appear to exhibit more distinct and direct responses to individual precipitation events, while the traces for the remaining wells show more subdued patterns of water level increase. The observed responses to precipitation show no consistent relationships to the depth, diameter, method of construction, or relative topographic position (see below) of the individual private wells.

Automatic monitoring of the groundwater levels in piezometer SB38 was initiated in March 2008, upon discovery that the groundwater in the piezometer had risen substantially since its installation during the second Phase I field mobilization in January 2008. The hydrograph depicted for SB38 (Figure 4.7) suggests a trend of water level increase similar to that observed in the private wells; however, the absolute water levels observed at this location to date appear inconsistent with (approximately 15 ft lower than) those recorded in the adjacent McPike, Morgan, and MoDOT wells to the north, south, and east, respectively. The fact that the SB38 piezometer is screened over a deeper stratigraphic interval than the nearby private wells suggests a possible influence of both horizontal and vertical hydraulic gradients in the saturated zone near the former CCC/USDA facility. Additional monitoring will be required to develop a more detailed interpretation of the water level variations at SB38.

Water level measurements obtained manually in the network of monitoring wells on October 25-29, 2007, and January 28, March 21, and April 30, 2008 (Table 3.5), were used to generate estimates of the configuration of the potentiometric surface near the former CCC/USDA facility, as shown in Figures 4.8-4.11. The water level data acquired to date suggest a relatively consistent pattern of semi-radial groundwater flow in the study area, from a relative high west-northwest of the former CCC/USDA facility, as defined by the water level measurements in the Hughes and Clizer “old” private wells. Figures 4.8-4.11 suggest that groundwater flow beneath the former CCC/USDA facility has been predominantly toward the south throughout the period of observation.

The estimated potentiometric surface for October 25-29, 2007, reflects the maximum number of groundwater level control points available to Argonne during the Phase I investigation. This potentiometric surface was re-plotted in Figure 4.12 to illustrate an apparent relationship between the hydraulic gradients controlling groundwater movement near the former CCC/USDA facility and the local land surface topography. Figure 4.12 shows that the former CCC/USDA property lies near the approximate crest of a local topographic high that extends east-southeastward beneath the Hughes property, the former CCC/USDA facility, and the western portion of the MoDOT property. The predominant surface drainage pathways from this high, in the current Argonne study area, are toward the south and northeast in the vicinity of the former CCC/USDA and MoDOT properties, and toward the south, east, and north near the locations of the Hughes, Clizer "old," and Clizer "new" private wells. Figure 4.12 demonstrates that the patterns of groundwater flow depicted in Figures 4.8-4.11 closely mirror these dominant topographic trends.

At the request of the MoDNR, a more detailed survey was performed to determine the topographic characteristics at and immediately adjacent to the former CCC/USDA property. The coordinates survey data are in Appendix H, Table H.1.

The potentiometric surfaces shown in Figures 4.8-4.11 suggest groundwater flow predominantly toward the south, or possibly southeast, beneath the former CCC/USDA facility during the current monitoring period. Under these observed conditions, the carbon tetrachloride contamination identified in groundwater at the Morgan private well appears to lie generally downgradient of contaminated groundwater detected at both investigative borings SB24 and SB38, as well as the contamination identified in the deeper soils in borings SB38 and SB42. The carbon tetrachloride concentration presently identified at the Morgan well is generally comparable to the concentrations of this contaminant in the groundwater at SB24 and SB38.

Figures 4.8-4.11 indicate that the uncontaminated (by carbon tetrachloride) Clizer "new" well (presently used for domestic purposes) — as well as the McPike, Hughes, Clizer "old," and Potter private wells — are effectively upgradient from the former CCC/USDA facility. The unused Barr private well appears to lie in a cross-gradient position relative to the former CCC/USDA facility, while the unused Burks and Marshall wells lie downgradient from the former facility.

The presently available data suggest only a relatively weak component of possible groundwater flow from the former CCC/USDA facility toward the east, in the direction of the contaminated MoDOT well. The present concentration of carbon tetrachloride identified in the MoDOT well is greater by approximately an order of magnitude than the concentration observed at the former CCC/USDA facility. As noted in Section 4.3.2, however, seasonal or other transient fluctuations in groundwater levels might influence the apparent hydraulic gradients and flow directions near the former CCC/USDA facility over time. For this reason, as recommended previously (Argonne 2007), the monitoring of groundwater levels and apparent flow directions at Savannah should continue for a minimum of one year, to further assess the potential groundwater flow and contaminant relationships at this site.

FIGURE 4.1 Target area near the former CCC/USDA grain storage facility for the inventory of private wells. Source of photograph: NAIP (2007).

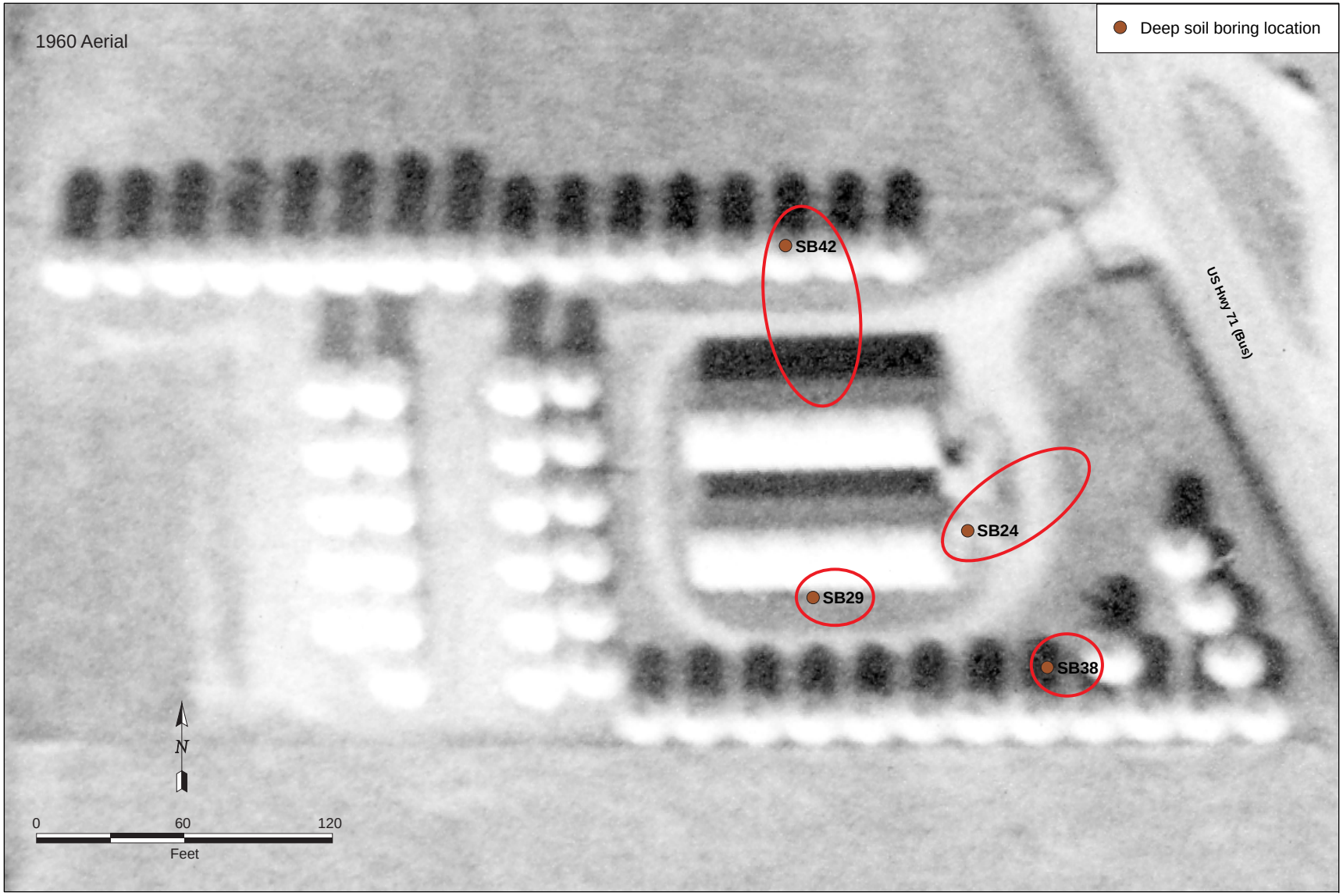

FIGURE 4.2 Specific areas on the former CCC/USDA property with consistently observed relatively high headspace carbon tetrachloride concentrations, with locations of deeper soil borings. Source of photograph: USDA (1960).

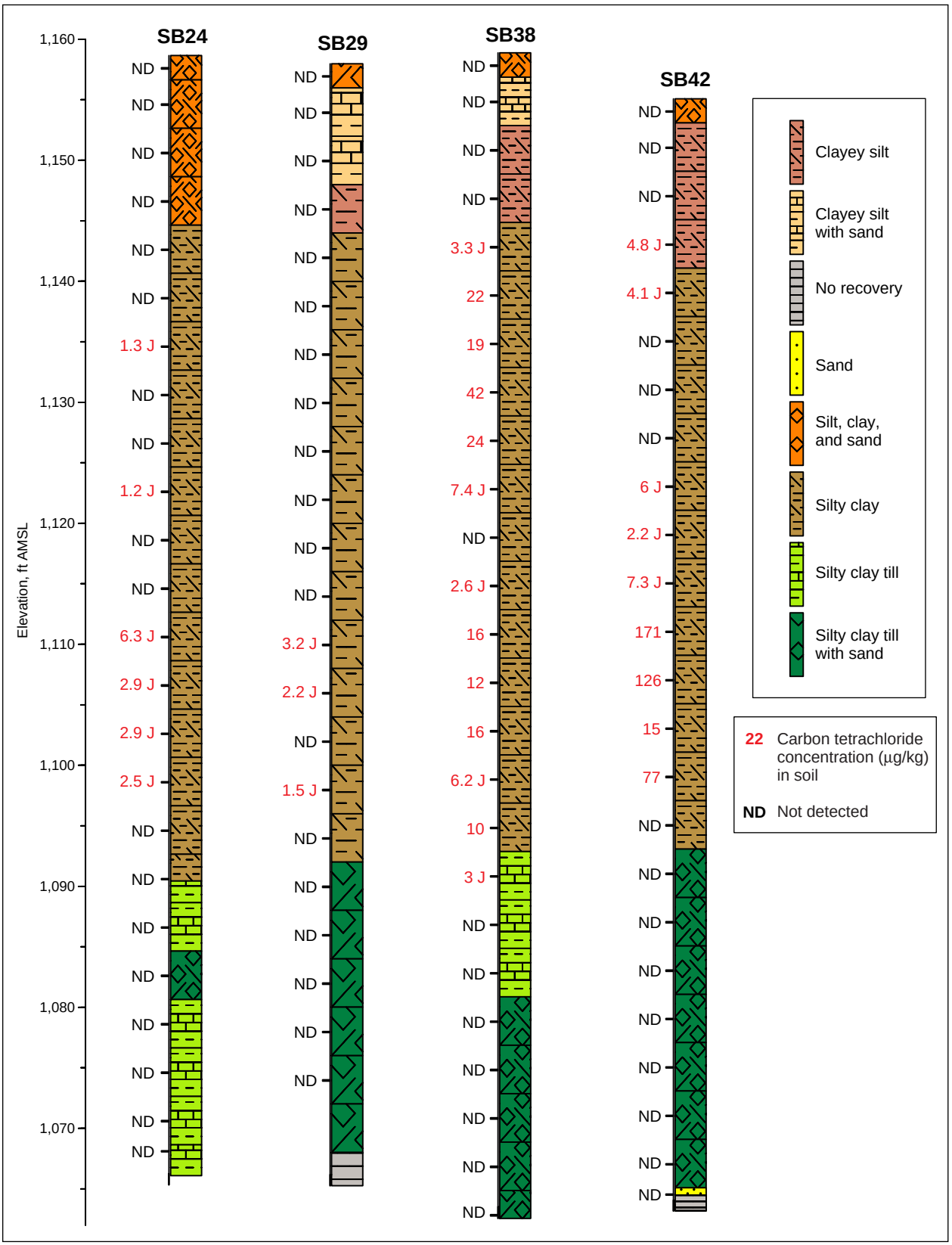

FIGURE 4.3 Vertical distribution of carbon tetrachloride in soil cores collected at locations SB24, SB29, SB38, and SB42.

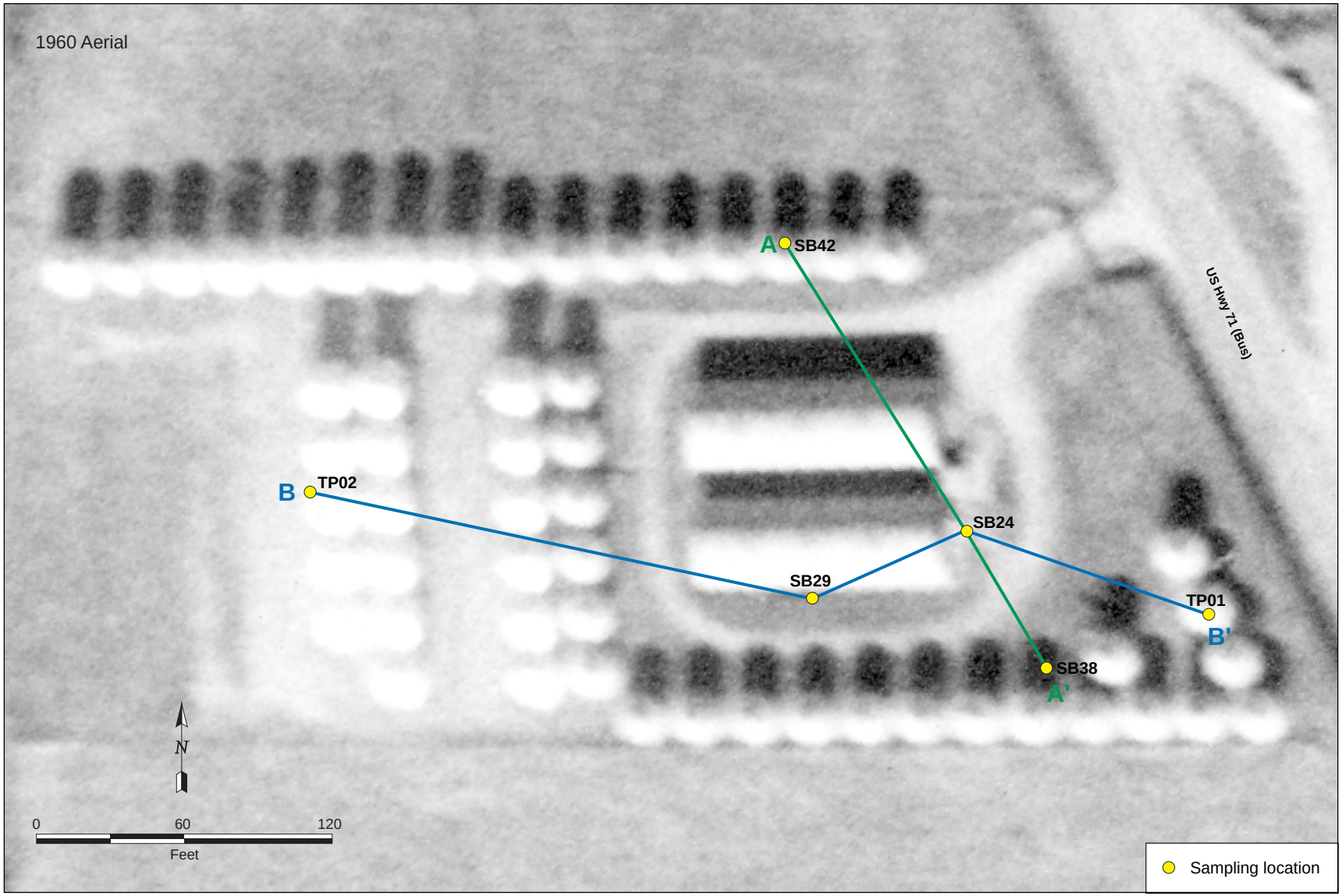

FIGURE 4.4 Locations of hydrogeologic cross sections A-A' and B-B'. Source of photograph: USDA (1960).

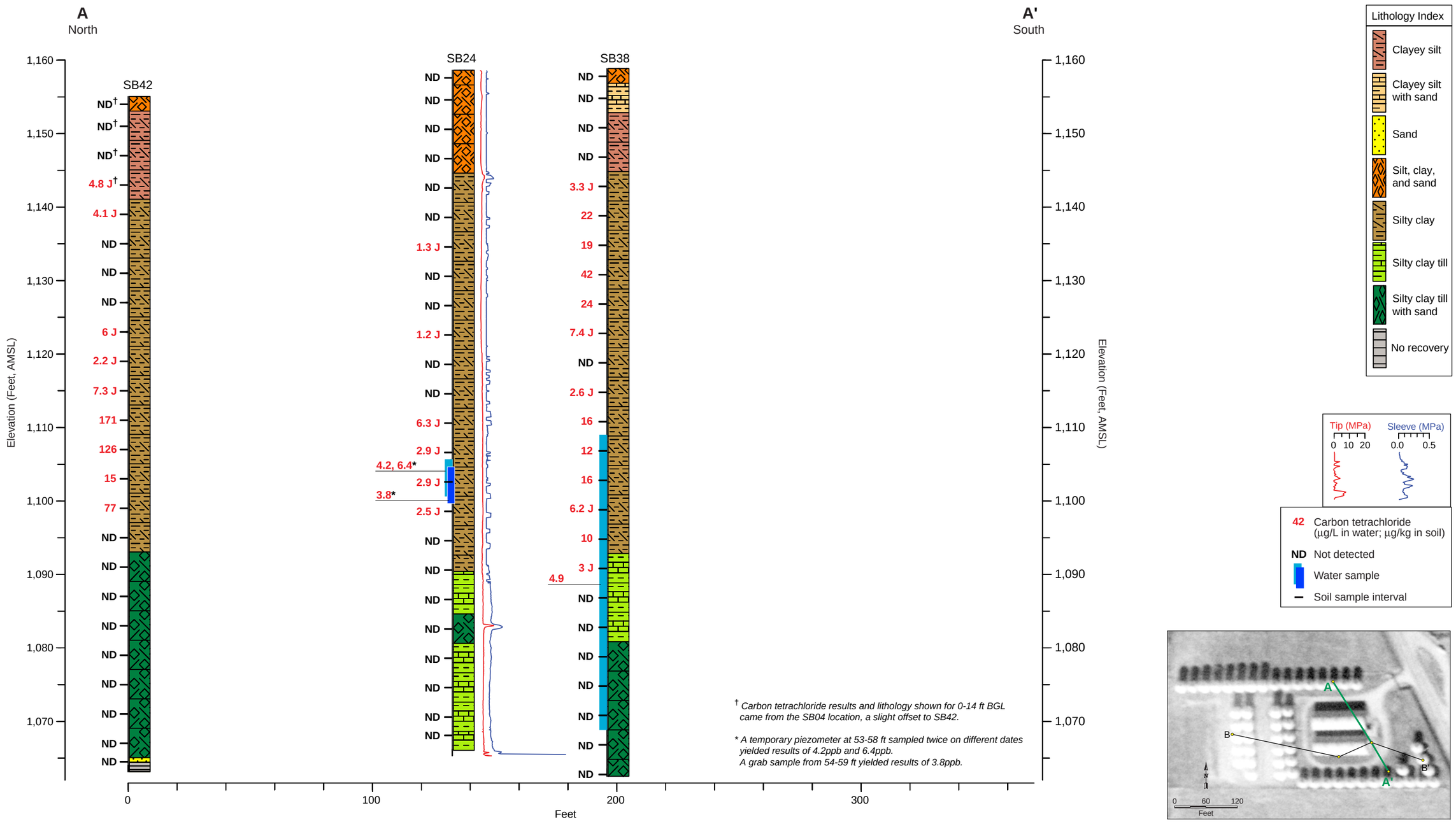

FIGURE 4.5 North-to-south hydrogeologic cross section A-A' (vertically exaggerated) on the former CCC/USDA property, showing the distribution of carbon tetrachloride in soil and groundwater.

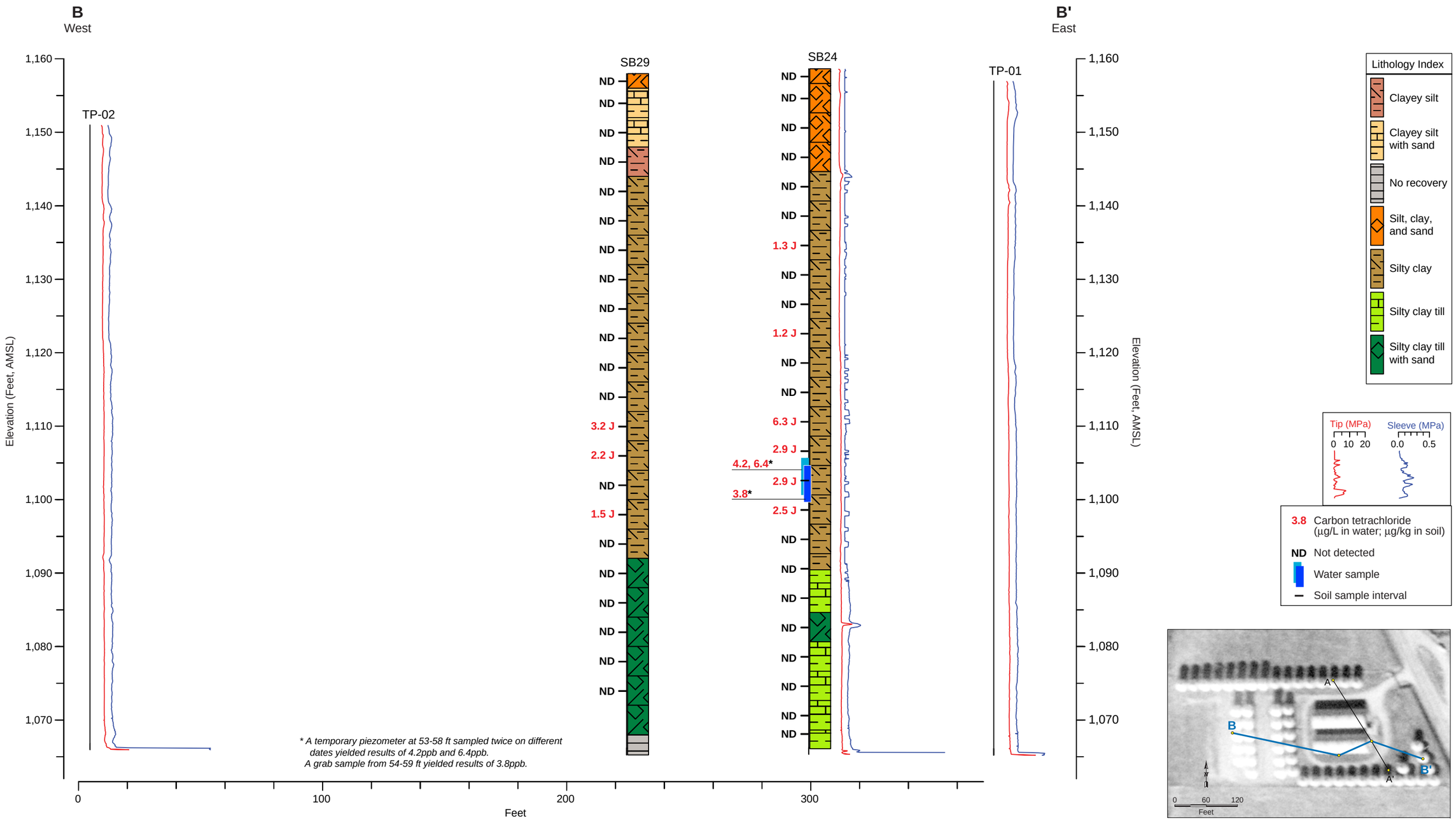

FIGURE 4.6 West-to-east hydrogeologic cross section B-B' (vertically exaggerated) on the former CCC/USDA property, showing the distribution of carbon tetrachloride in soil and groundwater.

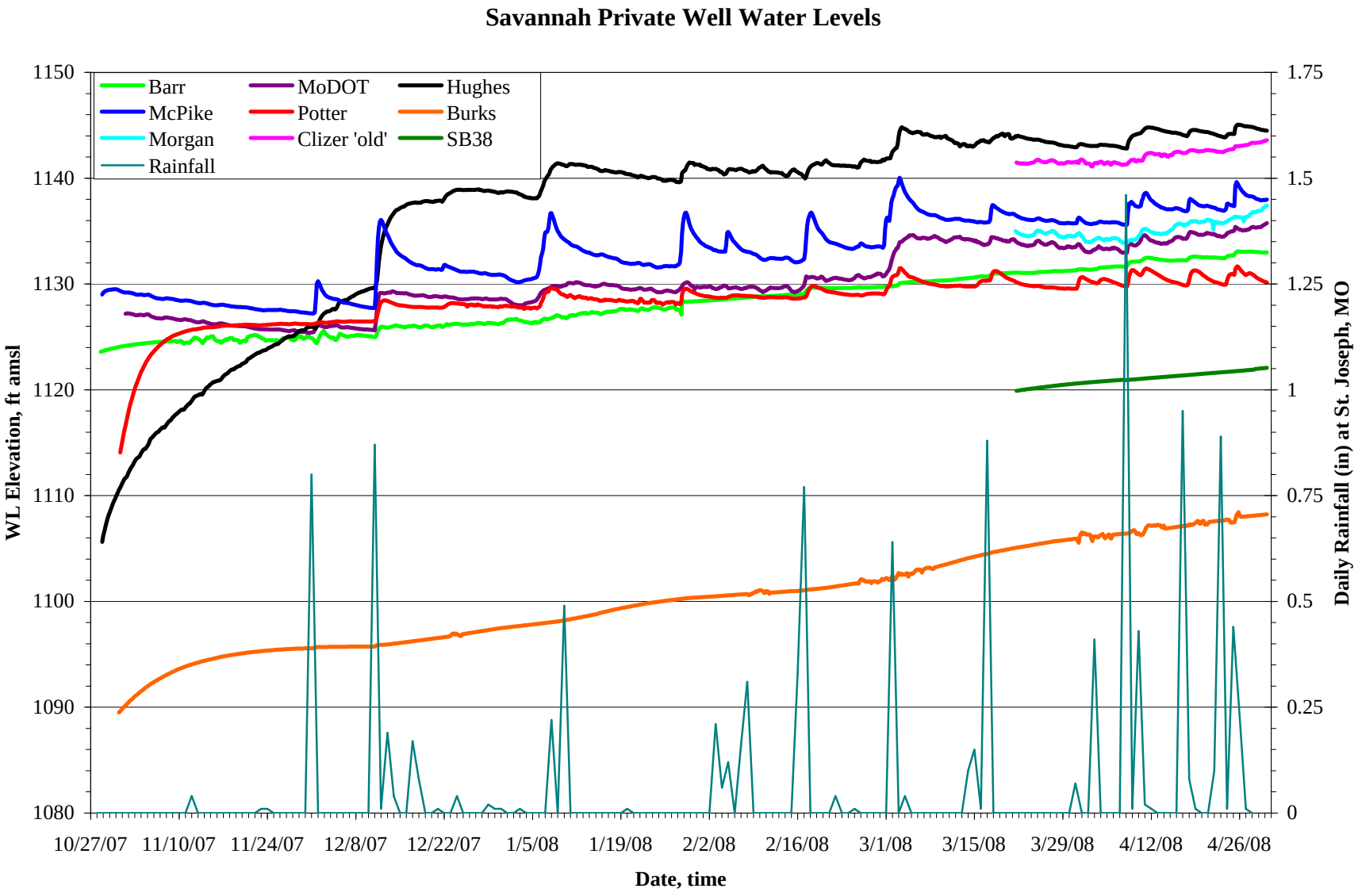

FIGURE 4.7 Hydrographs for wells in the water level monitoring network, October 2007 to April 2008.

FIGURE 4.8 Water level contours constructed with data measured manually on October 25-29, 2007. Source of photograph: NAIP (2007).

FIGURE 4.9 Water level contours constructed with data measured manually on January 28, 2008. Source of photograph: NAIP (2007).

FIGURE 4.10 Water level contours constructed with data measured manually on March 21, 2008. Source of photograph: NAIP (2007).

FIGURE 4.11 Water level contours constructed with data measured manually on April 30, 2008. Source of photograph: NAIP (2007).

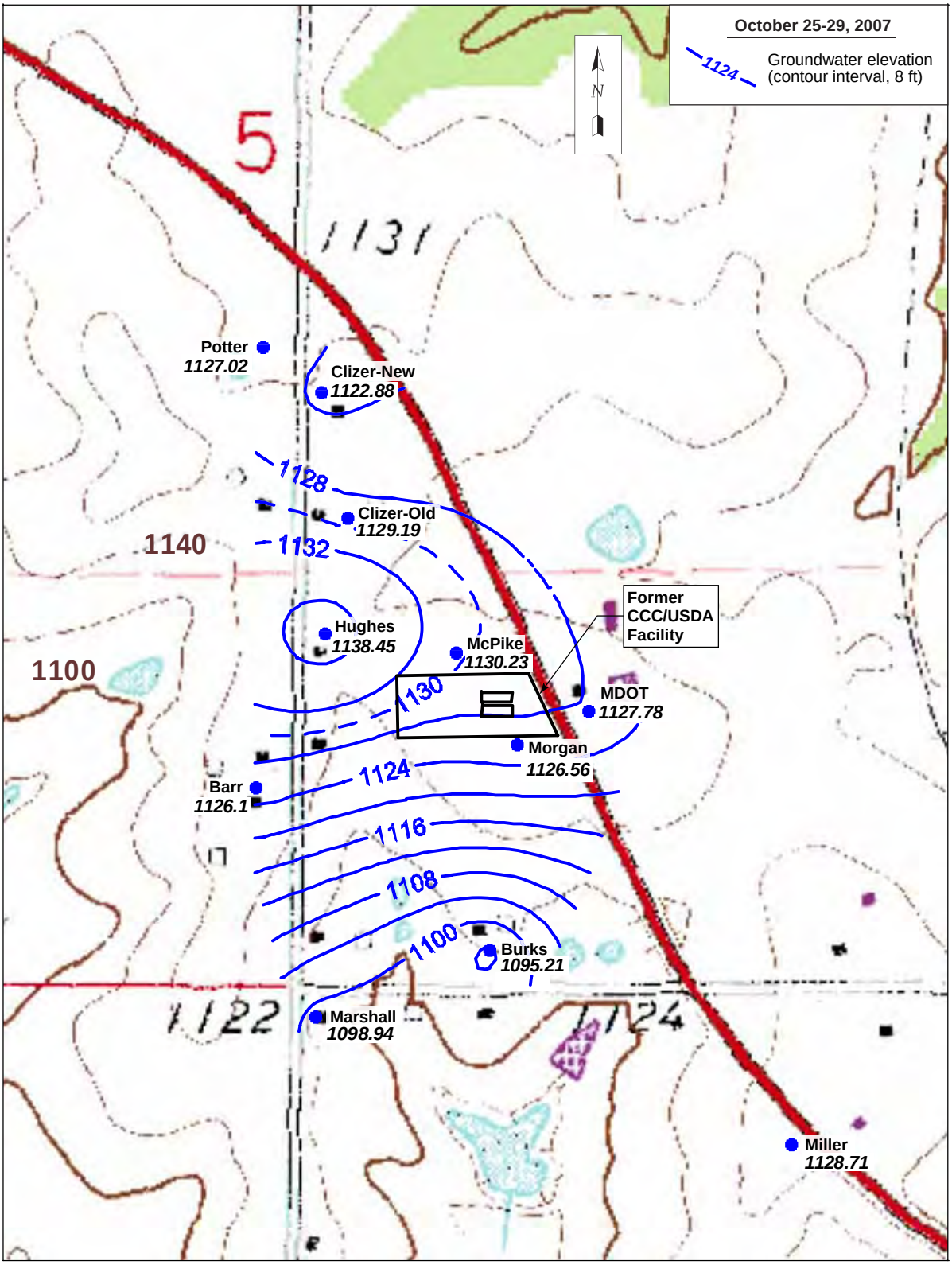

FIGURE 4.12 Groundwater levels and potentiometric surface at Savannah, October 25-29, 2007, with ground surface topography in the vicinity of the former CCC/USDA facility. Topographic contour interval = 20 ft. Source of topographic map: USGS (1996).

5 Conclusions

The site-specific information obtained during Phase I of the investigation program at the former CCC/USDA grain storage facility in Savannah forms the basis for a preliminary conceptual model of the factors controlling the distribution, possible movement, and potential risks associated with the carbon tetrachloride contamination identified at this site. The key elements of this working conceptual model are summarized as follows:

- Two predominantly fine-grained lithologic units were identified at the former CCC/USDA facility. The uppermost of these units consists of approximately 58-65 ft of generally dense, stiff to slightly softer, non-plastic and non-calcareous silty clay to clayey silt, with possible traces of very fine sand. The second, deeper lithologic unit consists of approximately 26-30 ft of generally firm and dense, uniformly light gray silty clay till with some fine to medium sand.

- Depths to bedrock, inferred to coincide with the depths of refusal encountered during vertical probing with the Argonne CPT, ranged from 91.8 ft BGL to 96.3 ft BGL, suggesting a relatively consistent bedrock surface elevation beneath the former CCC/USDA facility. The observed refusal depths were comparable to depths to bedrock previously reported for the Savannah area.

- On the basis of the observed refusal depths and the reported depths to bedrock, the upper unit of silty clay to clayey silt beneath the former facility is approximately 58-65 ft thick, while the lower till unit is approximately 26-30 ft thick.

- Thin zones (up to approximately 1.1 ft in thickness) of damp-to-dry, coarser-grained sediments were identified directly above the refusal depth at three locations on the former CCC/USDA property, in borings SB24, SB38, and SB42. These zones appeared most extensively developed at the SB38 location. No other distinctly coarse-grained intervals were identified in the overlying silty clay and till units at the locations investigated during Phase I.

- The groundwater levels measured in nearby private wells located immediately to the north (McPike) and south (Morgan) of the former CCC/USDA facility property boundary were 18.53 ft BGL and 32.71 ft BGL, respectively, at the time of the Phase I field activities. The depth to groundwater beneath the former CCC/USDA facility could not be determined with certainty, however, on the basis of the Phase I study results.

- The observed physical, textural, and water-producing characteristics of the silty clay to clayey silt and till units suggest that the ability of these materials to transmit groundwater is limited. Occasional thin, discontinuous intervals of relatively softer and lighter colored materials, observed most commonly at depths of 50-70 ft BGL, might suggest the presence of pathways for preferred horizontal groundwater movement in these units. Locally enhanced porosity and/or permeability might occur in association with calcareous nodules and patches observed in the till, if hydraulic communication among these features is sufficient. Basal coarse-grained deposits similar to those observed at borings SB24, SB38, and SB42 might also provide pathways for enhanced groundwater migration in the Savannah study area, if these materials are locally saturated.

- Groundwater level data monitored in a network of eight private wells in the vicinity of the former CCC/USDA facility demonstrate that the apparent patterns of groundwater flow in this area closely mirror predominant local surface topographic trends. The data suggest groundwater flow toward the south, or possibly southeast, beneath the former CCC/USDA facility during the current monitoring period. Additional water level monitoring will help to resolve the flow direction(s) in this area.

- No carbon tetrachloride contamination was identified in surficial and shallow subsurface soils collected at the former CCC/USDA grain storage facility, at depths of 1 ft, 4 ft, 8 ft, and 12 ft BGL, at concentrations at or above either the MRBCA DTL of 79.6 μg/kg or the quantitation limit of 10 μg/kg for analyses according to EPA Methods 5020B and 8260B (purge-and-trap sample preparation with analysis by GC-MS).

- With the approval of the MoDNR, VOCs data obtained for the surficial and shallow subsurface soils by using a laboratory headspace analysis method were used to prioritize four locations at the former CCC/USDA facility (SB24, SB29, SB38, and SB42) for sampling of deeper subsurface soils for VOCs analyses. Traces of carbon tetrachloride contamination (below the purge-and-trap method quantitation limit of 10 μg/kg) were detected at each boring location; however, quantifiable levels of carbon tetrachloride were identified only at SB38 (near the southeastern corner of the former CCC/USDA facility) and at SB42 (along the northern boundary of the former CCC/USDA property). Carbon tetrachloride concentrations of 10-42 μg/kg were identified at boring SB38. Concentrations of 15-171 μg/kg were identified at SB42, with the highest of these levels, 126 μg/kg and 171 μg/kg, occurring at 44 ft and 48 ft BGL, respectively. The carbon tetrachloride contamination above the DTL at SB38 and SB42 occurred in the zone of saturated soils.

- Only the two highest carbon tetrachloride concentrations in soil samples identified during the Phase I investigation, at SB42 (126 μg/kg and 171 μg/kg), are greater than the MRBCA DTL for carbon tetrachloride in soils (79.6 μg/kg). No concentrations detected in the subsurface soil (vadose) zone as defined by MoDNR (2006) exceeded the DTL. For carbon tetrachloride in soils, the DTL reflects risk that may be associated with the indoor inhalation pathway. Because the former CCC/USDA property has been used only for non-residential purposes since the CCC/USDA grain storage operations were terminated (by 1974), the indoor inhalation pathway is incomplete at the former facility, and no receptors have historically been, or presently are, at risk of exposure by this route.

- Samples of groundwater recovered at two locations at the former CCC/USDA facility, SB34 and SB38, contained carbon tetrachloride at concentrations of 3.8-6.4 μg/L. The identified concentrations are either slightly less than or slightly exceed the EPA MCL and the MRBCA DTL values for carbon tetrachloride (5.0 μg/L) in groundwater used for domestic purposes.

- Sixteen private wells were identified within approximately 0.5 mi of the former CCC/USDA facility. Argonne confirmed that 3 of these wells are damaged or otherwise inaccessible, and 9 of the wells are not used for any purpose. Two wells (Morgan and Clizer "old") are currently used for lawn and garden watering, and 2 (Moore and Clizer "new") are used for domestic purposes. Argonne was denied access for sampling for 1 well (Vanschoiack) identified as not in use.

- The Moore and Clizer "new" wells (used for domestic purposes) were confirmed to be free of carbon tetrachloride contamination.

- Only 2 of the private wells tested in Phase I contained carbon tetrachloride: the Morgan well (13 μg/L) and the MoDOT well (150 μg/L). The carbon tetrachloride levels at these locations have decreased since the wells were originally sampled in 1998 and 2000, respectively.

- The carbon tetrachloride contamination identified in groundwater at the Morgan well appears to lie generally downgradient from the carbon tetrachloride contamination identified in groundwater and soils at the former CCC/USDA facility. The carbon tetrachloride concentration presently identified at the Morgan well is generally comparable to the concentration in the groundwater at the former CCC/USDA facility. This pattern is consistent with migration of carbon tetrachloride from the former CCC/USDA facility to the Morgan well.

- Present data suggest only a weak component of possible groundwater flow from the former CCC/USDA facility toward the east, in the direction of the contaminated MoDOT well. The present concentration of carbon tetrachloride identified in the MoDOT well is greater by approximately an order of magnitude than the concentration observed at the former CCC/USDA facility. Seasonal or other transient fluctuations in groundwater levels may influence the apparent hydraulic gradients and flow directions near the former CCC/USDA facility over time. Nevertheless, migration of carbon tetrachloride from the former facility (with its lower concentrations) toward the MoDOT well (with its higher concentrations), appears unlikely under the

conditions observed thus far. Continued water level monitoring will help to resolve the longer-term flow direction(s) in this area.

- Except for the Moore residence, all other occupied residential and commercial properties within approximately 0.5 mi of the former CCC/USDA facility have confirmed access to and obtain water for domestic purposes from a public water supply. The Moore well is free of carbon tetrachloride and chloroform contamination.

- Both surface water obtained by the city of Savannah from a municipal reservoir approximately 0.75 mi southwest of the former CCC/USDA facility and water sampled from the Savannah public distribution system were confirmed to be free of carbon tetrachloride contamination.

The results of the Phase I studies at Savannah indicate that additional characterization activities are required to further development of the conceptual model for this site and particularly to investigate the hydrogeologic factors influencing vertical and lateral groundwater movement and hence possible carbon tetrachloride migration associated with the former CCC/USDA grain storage facility. The recommended technical objectives and investigative activities to be addressed in Phase II of the investigation at Savannah will be presented in a separate Phase II work plan.

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Appendix A:

Chronological Summary of Investigation Activities

TABLE A.1 Sequence of sampling activities during the 2007-2008 investigation at Savannah.

Sample Date	Time	Location	Sample	Medium	Type[a]	Depth (ft TOC)[b]	Chain of Custody	Shipping Date	Sample Description
10/25/07	11:30	Morgan	SVMORGAN-W-25360	Water	DW	60.58	3999	10/25/07	Morgan private well. Hydrant east of house. Water clear. Depth to water from TOC = 32.71 ft. Depth of well = 60.58 ft TOC. Diameter = 2.5 ft, decreasing with depth. Sample collected after purging of 800 gal. Lawn and garden use only.
10/25/07	13:14	SB16	SVSB16-S-25160	Soil	CPT	1	6300	10/25/07	
10/25/07	13:25	SB16	SVSB16-S-25161	Soil	CPT	4	6300	10/25/07	
10/25/07	13:26	SB16	SVSB16A-S-25161	Soil	CPT	4	6301	10/25/07	EnCore™ sample.
10/25/07	13:35	SB16	SVSB16-S-25162	Soil	CPT	8	6300	10/25/07	
10/25/07	13:37	SB16	SVSB16-S-25163	Soil	CPT	12	6300	10/25/07	
10/25/07	14:02	SB02	SVSB2-S-25164	Soil	CPT	1	6300	10/25/07	
10/25/07	14:12	SB02	SVSB2-S-25165	Soil	CPT	4	6300	10/25/07	
10/25/07	14:13	SB02	SVSB2-S-25168	Soil	CPT	4	6300	10/25/07	Replicate of sample SVSB2-S-25165.
10/25/07	14:21	SB02	SVSB2-S-25166	Soil	CPT	8	6300	10/25/07	
10/25/07	14:22	SB02	SVSB2A-S-25166	Soil	CPT	8	6301	10/25/07	EnCore™ sample.
10/25/07	14:30	Moore	SVMOORE-W-25361	Water	DW	–	3999	10/25/07	Moore private well. Tap at kitchen sink. Water clear. Let water run into sink for 30 min. Well used for all domestic purposes.
10/25/07	14:34	SB02	SVSB2-S-25167	Soil	CPT	12	6302	10/25/07	
10/25/07	14:52	SB14	SVSB14-S-25169	Soil	CPT	1	6300	10/25/07	
10/25/07	15:04	SB14	SVSB14-S-25170	Soil	CPT	4	6300	10/25/07	
10/25/07	15:17	SB14	SVSB14-S-25171	Soil	CPT	8	6300	10/25/07	
10/25/07	15:28	SB14	SVSB14-S-25172	Soil	CPT	12	6300	10/25/07	
10/25/07	15:29	SB14	SVSB14A-S-25172	Soil	CPT	12	6301	10/25/07	EnCore™ sample.
10/25/07	15:47	SB22	SVSB22-S-25173	Soil	CPT	1	6300	10/25/07	
10/25/07	15:48	SB22	SVSB22A-S-25173	Soil	CPT	1	6301	10/25/07	EnCore™ sample.
10/25/07	15:57	SB22	SVSB22-S-25174	Soil	CPT	4	6300	10/25/07	
10/25/07	16:06	SB22	SVSB22-S-25175	Soil	CPT	8	6300	10/25/07	
10/25/07	16:17	SB22	SVSB22-S-25176	Soil	CPT	12	6302	10/25/07	
10/25/07	16:39	SB31	SVSB31-S-25177	Soil	CPT	1	6302	10/25/07	
10/25/07	16:40	SB31	SVSB31A-S-25177	Soil	CPT	1	6301	10/25/07	EnCore™ sample.
10/25/07	16:49	SB31	SVSB31-S-25178	Soil	CPT	4	6302	10/25/07	

TABLE A.1 (Cont.)

Sample Date	Time	Location	Sample	Medium	Type[a]	Depth (ft TOC)[b]	Chain of Custody	Shipping Date	Sample Description
10/25/07	16:58	SB31	SVSB31-S-25179	Soil	CPT	8	6302	10/25/07	
10/25/07	17:13	SB31	SVSB31-S-25180	Soil	CPT	12	6302	10/25/07	
10/25/07	17:15	QC	SVQCTB-S-25186	Soil	TB	–	6302	10/25/07	Trip blank sent to the AGEM Laboratory with soil samples preserved on dry ice and listed on chain-of-custody (COC) forms 6300 and 6302.
10/25/07	17:30	QC	SVTB-W-25362	Water	TB	–	3999	10/25/07	Trip blank sent to the AGEM Laboratory with water samples listed on COC 3999.
10/25/07	17:45	SB26	SVSB26-S-25181	Soil	CPT	1	6302	10/25/07	
10/25/07	17:53	SB26	SVSB26-S-25182	Soil	CPT	4	6302	10/25/07	
10/25/07	17:54	SB26	SVSB26A-S-25182	Soil	CPT	4	6301	10/25/07	EnCore™ sample.
10/25/07	18:05	SB26	SVSB26-S-25183	Soil	CPT	8	6302	10/25/07	
10/25/07	18:15	SB26	SVSB26-S-25184	Soil	CPT	12	6302	10/25/07	
10/26/07	8:43	SB32	SVSB32-S-25187	Soil	CPT	1	6304	10/26/07	
10/26/07	8:51	SB32	SVSB32-S-25188	Soil	CPT	4	6304	10/26/07	
10/26/07	9:01	SB32	SVSB32-S-25189	Soil	CPT	8	6304	10/26/07	
10/26/07	9:02	SB32	SVSB32A-S-25189	Soil	CPT	8	6303	10/26/07	EnCore™ sample.
10/26/07	9:12	SB32	SVSB32-S-25190	Soil	CPT	12	6304	10/26/07	
10/26/07	9:27	SB33	SVSB33-S-25191	Soil	CPT	1	6304	10/26/07	
10/26/07	9:32	QC	SVQCTB-S-25199	Soil	TB	–	6304	10/26/07	Trip blank sent to the AGEM Laboratory with soil samples preserved on dry ice and listed on COCs 6304 and 6305.
10/26/07	9:34	SB33	SVSB33-S-25192	Soil	CPT	4	6304	10/26/07	
10/26/07	9:34	QC	SVQCTB-S-25200	Soil	TB	–	6303	10/26/07	Trip blank sent to the AGEM Laboratory with EnCoreTM soil samples preserved on regular ice and listed on COC 6303.
10/26/07	9:44	SB33	SVSB33-S-25193	Soil	CPT	8	6304	10/26/07	
10/26/07	9:45	SB33	SVSB33-S-25201	Soil	CPT	8	6304	10/26/07	Replicate of sample SVSB33-S-25193.
10/26/07	9:53	SB33	SVSB33-S-25194	Soil	CPT	12	6304	10/26/07	
10/26/07	9:54	SB33	SVSB33A-S-25194	Soil	CPT	12	6303	10/26/07	EnCore™ sample.

TABLE A.1 (Cont.)

Sample Date	Time	Location	Sample	Medium	Type[a]	Depth (ft TOC)[b]	Chain of Custody	Shipping Date	Sample Description
10/26/07	10:00	Burk	SVBURK-W-25365	Water	DW	37.76	4000	10/26/07	Burk private well. Water clear. Depth to water = 30.9 ft TOC. Depth of well = 37.76 ft TOC. Diameter = 1.5 ft. Sample collected after purging of 120 gal. Well not used by resident.
10/26/07	10:25	SB17	SVSB17-S-25195	Soil	CPT	1	6304	10/26/07	
10/26/07	10:26	SB17	SVSB17A-S-25195	Soil	CPT	1	6303	10/26/07	EnCore™ sample.
10/26/07	10:34	SB17	SVSB17-S-25196	Soil	CPT	4	6304	10/26/07	
10/26/07	10:43	SB17	SVSB17-S-25197	Soil	CPT	8	6304	10/26/07	
10/26/07	10:54	SB17	SVSB17-S-25198	Soil	CPT	12	6304	10/26/07	
10/26/07	11:12	SB12	SVSB12-S-25202	Soil	CPT	1	6304	10/26/07	
10/26/07	11:19	SB12	SVSB12-S-25203	Soil	CPT	4	6305	10/26/07	
10/26/07	11:20	SB12	SVSB12A-S-25203	Soil	CPT	4	6303	10/26/07	EnCore™ sample.
10/26/07	11:25	Marshall	SVMARSHALL-W-25366	Water	DW	37.18	4000	10/26/07	Marshall private well. Water clear. Depth to water from TOC = 21.40 ft. Depth of well = 37.18 ft TOC. Diameter = 1 ft. Sample collected after purging of 120 gal.
10/26/07	11:29	SB12	SVSB12-S-25204	Soil	CPT	8	6305	10/26/07	
10/26/07	11:38	SB12	SVSB12-S-25205	Soil	CPT	12	6305	10/26/07	
10/26/07	12:00	SB06	SVSB6-S-25206	Soil	CPT	1	6305	10/26/07	
10/26/07	12:07	SB06	SVSB6-S-25207	Soil	CPT	4	6305	10/26/07	
10/26/07	12:17	SB06	SVSB6-S-25208	Soil	CPT	8	6305	10/26/07	
10/26/07	12:18	SB06	SVSB6A-S-25208	Soil	CPT	8	6303	10/26/07	EnCore™ sample.
10/26/07	12:28	SB06	SVSB6-S-25209	Soil	CPT	12	6305	10/26/07	
10/26/07	13:41	SB15	SVSB15-S-25210	Soil	CPT	1	6306	10/26/07	
10/26/07	13:50	SB15	SVSB15-S-25211	Soil	CPT	4	6306	10/26/07	
10/26/07	14:00	SB15	SVSB15-S-25212	Soil	CPT	8	6306	10/26/07	
10/26/07	14:12	SB15	SVSB15-S-25213	Soil	CPT	12	6306	10/26/07	
10/26/07	14:13	SB15	SVSB15A-S-25213	Soil	CPT	12	6303	10/26/07	EnCore™ sample.
10/26/07	14:36	SB27	SVSB27-S-25214	Soil	CPT	1	6306	10/26/07	
10/26/07	14:37	SB27	SVSB27A-S-25214	Soil	CPT	1	6303	10/26/07	EnCore™ sample.
10/26/07	14:47	SB27	SVSB27-S-25215	Soil	CPT	4	6306	10/26/07	
10/26/07	14:58	SB27	SVSB27-S-25216	Soil	CPT	8	6306	10/26/07	

TABLE A.1 (Cont.)

Sample Date	Time	Location	Sample	Medium	Type[a]	Depth (ft TOC)[b]	Chain of Custody	Shipping Date	Sample Description
10/26/07	15:09	SB27	SVSB27-S-25217	Soil	CPT	12	6306	10/26/07	
10/26/07	15:38	SB34	SVSB34-S-25218	Soil	CPT	1	6306	10/26/07	
10/26/07	15:46	SB34	SVSB34-S-25219	Soil	CPT	4	6306	10/26/07	
10/26/07	15:56	SB34	SVSB34-S-25220	Soil	CPT	8	6306	10/26/07	
10/26/07	15:57	SB34	SVSB34A-S-25220	Soil	CPT	8	6303	10/26/07	EnCore™ sample.
10/26/07	16:02	QC	SVQCTB-S-25227	Soil	TB	–	6306	10/26/07	Trip blank sent to the AGEM Laboratory with soil samples preserved on dry ice and listed on COCs 6306 and 6307.
10/26/07	16:08	SB34	SVSB34-S-25221	Soil	CPT	12	6306	10/26/07	
10/26/07	16:38	SB28	SVSB28-S-25222	Soil	CPT	1	6306	10/26/07	
10/26/07	16:45	SB28	SVSB28-S-25223	Soil	CPT	4	6306	10/26/07	
10/26/07	16:46	SB28	SVSB28-S-25226	Soil	CPT	4	6307	10/26/07	Replicate of sample SVSB28-S-25223.
10/26/07	16:47	SB28	SVSB28A-S-25223	Soil	CPT	4	6303	10/26/07	EnCoreTM sample.
10/26/07	16:55	SB28	SVSB28-S-25224	Soil	CPT	8	6307	10/26/07	
10/26/07	17:05	SB28	SVSB28-S-25225	Soil	CPT	12	6307	10/26/07	
10/26/07	17:30	MoDOT	SVMDOT-W-25368	Water	DW	44	4000	10/26/07	MoDOT private well in maintenance building. Depth to water from TOC = 22.45 ft. Depth of well = 44.00 ft TOC. Diameter = 2.5 ft. Sample collected after purging of 825 gal.
10/26/07	17:31	MoDOT	SVMDOT-W-25369	Water	DW	44	4000	10/26/07	Replicate of sample SVMDOT-W-25368.
10/26/07	17:36	SB18	SVSB18-S-25228	Soil	CPT	1	6307	10/26/07	
10/26/07	17:42	SB18	SVSB18-S-25229	Soil	CPT	4	6307	10/26/07	
10/26/07	17:50	SB18	SVSB18-S-25230	Soil	CPT	8	6307	10/26/07	
10/26/07	17:59	SB18	SVSB18-S-25231	Soil	CPT	12	6307	10/26/07	
10/26/07	18:00	SB18	SVSB18A-S-25231	Soil	CPT	12	6303	10/26/07	EnCore™ sample.
10/26/07	19:00	QC	SVTB-W-25370	Water	TB	–	4000	10/26/07	Trip blank sent to the AGEM Laboratory with water samples listed on COC 4000.

TABLE A.1 (Cont.)

Sample Date	Time	Location	Sample	Medium	Type[a]	Depth (ft TOC)[b]	Chain of Custody	Shipping Date	Sample Description
10/27/07	10:25	Adkins	SVADKINS-W-25374	Water	DW	–	6316	10/27/07	Adkins private well. Water clear. Sampled at kitchen tap after running sink tap for 10 min. Well used for all domestic purposes.
10/27/07	10:51	SB13	SVSB13-S-25232	Soil	CPT	1	6308	10/27/07	
10/27/07	10:52	SB13	SVSB13A-S-25232	Soil	CPT	1	6314	10/27/07	EnCore™ sample.
10/27/07	10:59	SB13	SVSB13-S-25233	Soil	CPT	4	6308	10/27/07	
10/27/07	11:09	SB13	SVSB13-S-25234	Soil	CPT	8	6308	10/27/07	
10/27/07	11:10	SB13	SVSB13-S-25240	Soil	CPT	8	6308	10/27/07	Replicate of sample SVSB13-S-25234.
10/27/07	11:20	SB13	SVSB13-S-25235	Soil	CPT	12	6308	10/27/07	
10/27/07	11:25	Miller	SVMILLER-W-25372	Water	DW	54.25	6316	10/27/07	Miller private well. Depth to water from TOC = 23.58 ft. Depth of well = 54.25 ft TOC. Diameter = 3 ft. Sample collected after purging of 1800 gal. Well not in use.
10/27/07	11:36	SB08	SVSB8-S-25236	Soil	CPT	1	6308	10/27/07	
10/27/07	11:44	SB08	SVSB8-S-25237	Soil	CPT	4	6308	10/27/07	
10/27/07	11:45	SB08	SVSB8A-S-25237	Soil	CPT	4	6314	10/27/07	EnCore™ sample.
10/27/07	11:54	SB08	SVSB8-S-25238	Soil	CPT	8	6308	10/27/07	
10/27/07	12:03	SB08	SVSB8-S-25239	Soil	CPT	12	6308	10/27/07	
10/27/07	12:07	QC	SVQCTB-S-25245	Soil	TB	–	6308	10/27/07	Trip blank sent to the AGEM Laboratory with soil samples preserved on dry ice and listed on COCs 6308 and 6309.
10/27/07	12:09	QC	SVQCTB-S-25246	Soil	TB	–	6314	10/27/07	Trip blank sent to the AGEM Laboratory with EnCoreTM soil samples preserved on regular ice and listed on COC 6314.
10/27/07	12:17	SB09	SVSB9-S-25241	Soil	CPT	1	6308	10/27/07	
10/27/07	12:28	SB09	SVSB9-S-25242	Soil	CPT	4	6308	10/27/07	
10/27/07	12:37	SB09	SVSB9-S-25243	Soil	CPT	8	6308	10/27/07	
10/27/07	12:38	SB09	SVSB9A-S-25243	Soil	CPT	8	6314	10/27/07	EnCore™ sample.
10/27/07	12:42	SB09	SVSB9-S-25244	Soil	CPT	12	6308	10/27/07	
10/27/07	14:06	SB10	SVSB10-S-25247	Soil	CPT	1	6308	10/27/07	

TABLE A.1 (Cont.)

Sample Date	Time	Location	Sample	Medium	Type[a]	Depth (ft TOC)[b]	Chain of Custody	Shipping Date	Sample Description
10/27/07	14:15	SB10	SVSB10-S-25248	Soil	CPT	4	6309	10/27/07	
10/27/07	14:26	SB10	SVSB10-S-25249	Soil	CPT	8	6309	10/27/07	
10/27/07	14:37	SB10	SVSB10-S-25250	Soil	CPT	12	6309	10/27/07	
10/27/07	14:38	SB10	SVSB10A-S-25250	Soil	CPT	12	6314	10/27/07	EnCore™ sample.
10/27/07	15:06	SB24	SVSB24-S-25251	Soil	CPT	1	6309	10/27/07	
10/27/07	15:07	SB24	SVSB24A-S-25251	Soil	CPT	1	6314	10/27/07	EnCore™ sample.
10/27/07	15:15	SB24	SVSB24-S-25252	Soil	CPT	4	6309	10/27/07	
10/27/07	15:20	SB24	SVSB24-S-25253	Soil	CPT	8	6309	10/27/07	
10/27/07	15:30	QC	SVTB-W-25375	Water	TB	–	6316	10/27/07	Trip blank sent to the AGEM Laboratory with water samples listed on COC 6316.
10/27/07	15:35	SB24	SVSB24-S-25254	Soil	CPT	12	6309	10/27/07	
10/27/07	17:01	SB05	SVSB5-S-25255	Soil	GEO	1	6315	10/29/07	EnCore™ samples not collected at this location because of shipping restrictions on Saturday-Sunday.
10/27/07	17:22	SB05	SVSB5-S-25256	Soil	GEO	4	6315	10/29/07	
10/27/07	17:39	SB05	SVSB5-S-25257	Soil	GEO	8	6315	10/29/07	
10/27/07	17:50	SB05	SVSB5-S-25258	Soil	GEO	12	6315	10/29/07	
10/28/07	8:45	Potter	SVPOTTER-W-25376	Water	DW	51.3	6325	10/29/07	Potter private well. Water clear. Depth to water from TOC = 7.78 ft. Depth of well = 51.30 ft TOC. Diameter = 2.5 ft. Sample collected after purging of 1650 gal.
10/28/07	9:20	McPike	SVMCPIKE-W-25373	Water	DW	48.5	6325	10/29/07	McPike private well. Water clear. Depth to water from TOC = 18.53 ft. Depth of well = 48.5 ft TOC. Diameter = 1.5 ft. Sample collected after purging of 400 gal.
10/28/07	13:00	Barr	SVBARR-W-25377	Water	DW	34.5	6325	10/29/07	Barr private well. Water clear. Depth to water from TOC = 36.95 ft. Depth of well = 34.50 ft TOC. Diameter = 2.5 ft. Sample collected after purging of 300 gal.

TABLE A.1 (Cont.)

Sample Date	Time	Location	Sample	Medium	Type[a]	Depth (ft TOC)[b]	Chain of Custody	Shipping Date	Sample Description
10/28/07	13:21	SB01	SVSB1-S-25259	Soil	GEO	1	6317	10/29/07	
10/28/07	13:33	SB01	SVSB1-S-25260	Soil	GEO	4	6317	10/29/07	
10/28/07	13:59	SB01	SVSB1-S-25261	Soil	GEO	8	6317	10/29/07	
10/28/07	14:00	SB01	SVSB1A-S-25261	Soil	GEO	8	6318	10/29/07	EnCore™ sample.
10/28/07	14:13	SB01	SVSB1-S-25262	Soil	GEO	12	6317	10/29/07	
10/28/07	14:27	SB11	SVSB11-S-25263	Soil	GEO	1	6317	10/29/07	
10/28/07	14:30	Clizer-New	SVCLIZERNEW-W-25378	Water	DW	35.7	6325	10/29/07	Clizer private well (newer well). Depth to water from TOC = 20.25 ft. Depth of well = 35.70 ft TOC. Diameter = 1.5 ft. Sample collected after purging of 250 gal. Household uses rural water when well runs dry.
10/28/07	14:39	SB11	SVSB11-S-25264	Soil	GEO	4	6317	10/29/07	
10/28/07	14:40	SB11	SVSB11A-S-25264	Soil	GEO	4	6318	10/29/07	EnCore™ sample.
10/28/07	14:51	SB11	SVSB11-S-25265	Soil	GEO	8	6317	10/29/07	
10/28/07	15:14	SB11	SVSB11-S-25266	Soil	GEO	12	6317	10/29/07	
10/28/07	15:56	SB25	SVSB25-S-25269	Soil	GEO	1	6317	10/29/07	
10/28/07	16:07	SB25	SVSB25-S-25270	Soil	GEO	4	6317	10/29/07	
10/28/07	16:25	SB25	SVSB25-S-25271	Soil	GEO	8	6317	10/29/07	
10/28/07	16:47	SB25	SVSB25-S-25272	Soil	GEO	12	6317	10/29/07	
10/28/07	16:48	SB25	SVSB25A-S-25272	Soil	GEO	12	6318	10/29/07	EnCore™ sample.
10/28/07	17:11	SB03	SVSB3-S-25273	Soil	GEO	1	6317	10/29/07	
10/28/07	17:16	SB03	SVSB3-S-25274	Soil	GEO	4	6317	10/29/07	
10/28/07	17:17	SB03	SVSB3A-S-25274	Soil	GEO	4	6318	10/29/07	EnCore™ sample.
10/28/07	17:29	SB03	SVSB3-S-25275	Soil	GEO	8	6317	10/29/07	
10/28/07	17:51	SB03	SVSB3-S-25276	Soil	GEO	12	6319	10/29/07	
10/29/07	8:52	SB20	SVSB20-S-25277	Soil	CPT	1	6321	10/29/07	
10/29/07	8:53	SB20	SVSB20A-S-25277	Soil	CPT	1	6322	10/29/07	EnCore™ sample.
10/29/07	9:03	SB20	SVSB20-S-25278	Soil	CPT	4	6321	10/29/07	
10/29/07	9:12	SB20	SVSB20-S-25279	Soil	CPT	8	6321	10/29/07	
10/29/07	9:18	SB20	SVSB20-S-25280	Soil	CPT	12	6321	10/29/07	
10/29/07	9:43	SB21	SVSB21-S-25281	Soil	CPT	1	6321	10/29/07	
10/29/07	9:52	SB21	SVSB21-S-25282	Soil	CPT	4	6321	10/29/07	
10/29/07	9:53	SB21	SVSB21A-S-25282	Soil	CPT	4	6322	10/29/07	EnCore™ sample.
10/29/07	10:04	SB21	SVSB21-S-25283	Soil	CPT	8	6321	10/29/07	

TABLE A.1 (Cont.)

Sample Date	Time	Location	Sample	Medium	Type[a]	Depth (ft TOC)[b]	Chain of Custody	Shipping Date	Sample Description
10/29/07	10:05	SB21	SVSB21-S-25289	Soil	CPT	8	6321	10/29/07	Replicate of sample SVSB21-S-25283.
10/29/07	10:16	SB21	SVSB21-S-25284	Soil	CPT	12	6321	10/29/07	
10/29/07	11:30	Clizer-Old	SVCLIZEROLD-W-25380	Water	DW	35.7	6326	10/29/07	Clizer farmstead well. Depth to water = 20.25 ft TOC. Depth of well = 35.7 ft TOC. Sample collected after purging of 225 gal.
10/29/07	12:50	Hughes	SVHUGHES-W-25381	Water	DW	56.4	6326	10/29/07	Hughes private well. Water clear. Depth to water from TOC = 11.2 ft. Depth of well = 56.4 ft TOC. Diameter = 4 ft. Sample collected after purging of 4300 gal.
10/29/07	13:10	Hughes Pond	SVHUGHESPD-W-25382	Water	SW	–	6326	10/29/07	Surface water sample from Hughes pond.
10/29/07	14:10	City treated	SVCITYTR-W-25384	Water	PW	–	6326	10/29/07	City water plant (treated water). Combination of lake and well water. Of the two taps, one is treated, and the second is raw (untreated) water.
10/29/07	14:20	City raw	SVCITYSI-W-25385	Water	PW	–	6326	10/29/07	City water plant (raw water). Surface water intake.
10/29/07	14:42	SB40	SVSB40-S-25290	Soil	CPT	1	6321	10/29/07	SB40 on north rectangular foundation; 48 ft from east edge and 14 ft, 3 in., from north edge.
10/29/07	14:45	SB40	SVSB40-S-25291	Soil	CPT	4	6321	10/29/07	Drilled through foundation by using Geoprobe hammer/rotation, 3.25-in. bit, 2-ft steel.
10/29/07	14:56	SB40	SVSB40-S-25292	Soil	CPT	8	6321	10/29/07	Dug at north edge of foundation with shovel. About 12 in. thick.
10/29/07	14:57	SB40	SVSB40A-S-25292	Soil	CPT	8	6322	10/29/07	EnCoreTM sample.
10/29/07	15:00	QC	SVTB-W-25383	Water	TB	–	6326	10/29/07	Trip blank sent to the AGEM Laboratory with water samples listed on COCs 6325 and 6326.

TABLE A.1 (Cont.)

Sample Date	Time	Location	Sample	Medium	Type[a]	Depth (ft TOC)[b]	Chain of Custody	Shipping Date	Sample Description
10/29/07	15:06	SB40	SVSB40-S-25293	Soil	CPT	12	6321	10/29/07	Photoionization detector readings at zero throughout drilling and breaching of foundation.
10/29/07	15:31	SB07	SVSB7-S-25294	Soil	GEO	1	6321	10/29/07	
10/29/07	15:36	SB07	SVSB7-S-25295	Soil	GEO	4	6321	10/29/07	
10/29/07	15:47	SB07	SVSB7-S-25296	Soil	GEO	8	6324	10/29/07	
10/29/07	16:10	SB07	SVSB7-S-25297	Soil	GEO	10.5	6324	10/29/07	Could only penetrate to 10.5 ft depth.
10/29/07	16:39	SB04	SVSB4-S-25298	Soil	GEO	1	6324	10/29/07	
10/29/07	16:40	SB04	SVSB4A-S-25298	Soil	GEO	1	6322	10/29/07	EnCore™ sample.
10/29/07	16:41	SB04	SVSB4-S-25299	Soil	GEO	4	6324	10/29/07	
10/29/07	16:50	SB04	SVSB4-S-25300	Soil	GEO	8	6324	10/29/07	
10/29/07	16:55	SB04	SVSB4-S-25301	Soil	GEO	12	6324	10/29/07	
10/29/07	18:00	QC	SVTB-S-25302	Soil	TB	–	6324	10/29/07	Trip blank sent to the AGEM Laboratory with soil samples preserved on dry ice and listed on COCs 6321 and 6324.
10/29/07	18:01	QC	SVTB-S-25303	Soil	TB	–	6328	10/29/07	Trip blank sent to the AGEM Laboratory with soil samples preserved on dry ice and listed on COCs 6315, 6317, 6319, and 6328.
10/29/07	18:02	QC	SVTB-S-25304	Soil	TB	–	6322	10/29/07	Trip blank sent to the AGEM Laboratory with EnCoreTM soil samples preserved on regular ice and listed on COC 6322.
10/29/07	18:30	QC	SVTB-W-25387	Water	TB	–	6327	10/29/07	Trip blank sent to Envirosystems, Inc., for verification organic analysis with water samples listed on COC 6327.
10/30/07	8:26	SB30	SVSB30-S-25285	Soil	CPT	1	6323	10/30/07	
10/30/07	8:35	SB30	SVSB30-S-25286	Soil	CPT	4	6323	10/30/07	
10/30/07	8:46	SB30	SVSB30-S-25287	Soil	CPT	8	6323	10/30/07	
10/30/07	8:47	SB30	SVSB30A-S-25287	Soil	CPT	8	6320	10/30/07	EnCore™ sample.
10/30/07	8:59	SB30	SVSB30-S-25288	Soil	CPT	12	6323	10/30/07	
10/30/07	9:15	SB38	SVSB38-S-25305	Soil	CPT	1	6323	10/30/07	

TABLE A.1 (Cont.)

Sample Date	Time	Location	Sample	Medium	Type[a]	Depth (ft TOC)[b]	Chain of Custody	Shipping Date	Sample Description
10/30/07	9:23	QC	SVQCTB-S-25309	Soil	TB	–	6323	10/30/07	Trip blank sent to the AGEM Laboratory with soil samples preserved on dry ice and listed on COCs 6310, 6323, and 6311.
10/30/07	9:25	SB38	SVSB38-S-25306	Soil	CPT	4	6323	10/30/07	
10/30/07	9:26	SB38	SVSB38A-S-25306	Soil	CPT	4	6320	10/30/07	EnCore™ sample.
10/30/07	9:37	SB38	SVSB38-S-25307	Soil	CPT	8	6323	10/30/07	
10/30/07	9:48	QC	SVQCTB-S-25310	Soil	TB	–	6320	10/30/07	Trip blank sent to the AGEM Laboratory with EnCoreTM soil samples preserved on regular ice and listed on COC 6320.
10/30/07	9:49	SB38	SVSB38-S-25308	Soil	CPT	12	6323	10/30/07	
10/30/07	10:08	SB39	SVSB39-S-25311	Soil	CPT	1	6323	10/30/07	
10/30/07	10:18	SB39	SVSB39-S-25312	Soil	CPT	4	6323	10/30/07	
10/30/07	10:28	SB39	SVSB39-S-25313	Soil	CPT	8	6323	10/30/07	
10/30/07	10:29	SB39	SVSB39A-S-25313	Soil	CPT	8	6320	10/30/07	EnCore™ sample.
10/30/07	10:46	SB39	SVSB39-S-25314	Soil	CPT	12	6323	10/30/07	
10/30/07	11:13	SB29	SVSB29-S-25315	Soil	CPT	1	6323	10/30/07	
10/30/07	11:22	SB29	SVSB29-S-25316	Soil	CPT	4	6310	10/30/07	
10/30/07	11:32	SB29	SVSB29-S-25317	Soil	CPT	8	6310	10/30/07	
10/30/07	11:42	SB29	SVSB29-S-25318	Soil	CPT	12	6310	10/30/07	
10/30/07	11:43	SB29	SVSB29A-S-25318	Soil	CPT	12	6320	10/30/07	EnCore™ sample.
10/30/07	13:14	SB35	SVSB35-S-25319	Soil	GEO	1	6310	10/30/07	
10/30/07	13:19	SB35	SVSB35-S-25320	Soil	GEO	4	6310	10/30/07	
10/30/07	13:20	SB35	SVSB35A-S-25320	Soil	GEO	4	6320	10/30/07	EnCore™ sample.
10/30/07	13:25	SB35	SVSB35-S-25321	Soil	GEO	7	6310	10/30/07	Only 20.5-in. recovery from initial attempt for interval at 6-10 ft. Collected 25321 at 7 ft.
10/30/07	14:01	SB35	SVSB35-S-25322	Soil	GEO	12	6310	10/30/07	
10/30/07	14:20	SB35	SVSB35-S-25323	Soil	GEO	8	6310	10/30/07	Moved off original hole approximately 1 ft to return with 2-ft core barrel and collect 8-ft sample (25323) from interval at 7-9 ft.
10/30/07	14:25	SB36	SVSB36-S-25324	Soil	GEO	1	6310	10/30/07	
10/30/07	14:26	SB36	SVSB36A-S-25324	Soil	GEO	1	6320	10/30/07	EnCore™ sample.

TABLE A.1 (Cont.)

Sample Date	Time	Location	Sample	Medium	Type[a]	Depth (ft TOC)[b]	Chain of Custody	Shipping Date	Sample Description
10/30/07	14:35	SB36	SVSB36-S-25325	Soil	GEO	4	6310	10/30/07	
10/30/07	14:46	SB36	SVSB36-S-25326	Soil	GEO	8	6310	10/30/07	
10/30/07	15:02	SB36	SVSB36-S-25327	Soil	GEO	12	6310	10/30/07	
10/30/07	15:03	SB36	SVSB36-S-25332	Soil	GEO	12	6310	10/30/07	Replicate of sample SVSB36-S-25327.
10/30/07	15:14	SB37	SVSB37-S-25328	Soil	GEO	1	6310	10/30/07	
10/30/07	15:15	QC	SVWWTANK1-W-25388	Water	BT	–	6330	10/30/07	Waste purge water from private well sampling. Tank #1. Tanker truck.
10/30/07	15:22	SB37	SVSB37-S-25329	Soil	GEO	4	6310	10/30/07	
10/30/07	15:23	SB37	SVSB37A-S-25329	Soil	GEO	4	6320	10/30/07	EnCore™ sample.
10/30/07	15:30	QC	SVWWTANK2-W-25389	Water	BT	–	6330	10/30/07	Waste purge water from private well sampling. Tank #2. 1500 gal.
10/30/07	15:37	SB37	SVSB37-S-25330	Soil	GEO	8	6311	10/30/07	
10/30/07	15:45	QC	SVWWTANK3-W-25390	Water	BT	–	6330	10/30/07	Waste purge water from private well sampling. Tank #3. 900 gal.
10/30/07	16:00	QC	SVWWTANK4-W-25392	Water	BT	–	6330	10/30/07	Waste purge water from private well sampling. Tank #4. Smaller tank ~200 gal.
10/30/07	16:06	SB37	SVSB37-S-25331	Soil	GEO	12	6311	10/30/07	
10/30/07	16:10	QC	SVTB-W-25395	Water	TB	–	6330	10/30/07	Trip blank sent to the AGEM Laboratory with wastewater samples listed on COC 6330.
10/30/07	16:26	SB19	SVSB19-S-25333	Soil	GEO	1	6311	10/30/07	
10/30/07	16:34	SB19	SVSB19-S-25334	Soil	GEO	4	6311	10/30/07	
10/30/07	16:47	SB19	SVSB19-S-25335	Soil	GEO	8	6311	10/30/07	
10/30/07	16:48	SB19	SVSB19A-S-25335	Soil	GEO	8	6320	10/30/07	EnCore™ sample.
10/30/07	16:55	SB19	SVSB19-S-25336	Soil	GEO	12	6311	10/30/07	
10/31/07	10:09	SB24	SVSB24-S-25340	Soil	CPT	16	6313	10/31/07	Vertical-profile subsurface soil sampling.
10/31/07	10:26	SB24	SVSB24-S-25341	Soil	CPT	20	6313	10/31/07	
10/31/07	10:43	SB24	SVSB24-S-25342	Soil	CPT	24	6313	10/31/07	
10/31/07	11:00	SB24	SVSB24-S-25343	Soil	CPT	28	6313	10/31/07	
10/31/07	13:47	SB24	SVSB24-S-25344	Soil	CPT	32	6313	10/31/07	
10/31/07	14:07	SB24	SVSB24-S-25345	Soil	CPT	36	6313	10/31/07	

TABLE A.1 (Cont.)

Sample Date	Time	Location	Sample	Medium	Type[a]	Depth (ft TOC)[b]	Chain of Custody	Shipping Date	Sample Description
10/31/07	15:22	QC	SVQCTB-S-25354	Soil	TB	–	6313	10/31/07	Trip blank sent to the AGEM Laboratory with soil samples preserved on dry ice and listed on COCs 6313 and 6334.
10/31/07	15:38	SB24	SVSB24-S-25346	Soil	CPT	40	6313	10/31/07	
10/31/07	16:03	SB24	SVSB24-S-25347	Soil	CPT	44	6313	10/31/07	
10/31/07	16:31	SB24	SVSB24-S-25348	Soil	CPT	48	6313	10/31/07	
10/31/07	16:58	SB24	SVSB24-S-25349	Soil	CPT	52	6313	10/31/07	
10/31/07	17:10	SB41	SVSB41-S-25350	Soil	CPT	1	6313	10/31/07	SB41 location on south foundation; 49 ft from east edge and 18.5 ft from south edge. Collected during MoDNR visit.
10/31/07	17:15	SB41	SVSB41-S-25351	Soil	CPT	4	6313	10/31/07	
10/31/07	17:20	SB41	SVSB41-S-25352	Soil	CPT	8	6313	10/31/07	
10/31/07	17:25	SB41	SVSB41-S-25353	Soil	CPT	12	6313	10/31/07	
10/31/07	17:35	SB24	SVSB24-S-25355	Soil	CPT	56	6334	10/31/07	
10/31/07	18:09	SB24	SVSB24-W-25357	Water	CPT	54-59	6336	11/01/07	CPT temporary screen and riser; sampled through open borehole. Water level at 33.5 ft TOC at 18:00 hr, rising to 31.8 ft TOC at 18:26 hr.
10/31/07	18:19	QC	SVQCTB-W-25358	Water	TB	–	6336	11/01/07	Trip blank sent to the AGEM Laboratory with water sample listed on COC 6336.
11/1/07	8:46	SB24	SVSB24-S-25356	Soil	CPT	64	6335	11/01/07	
11/1/07	9:26	SB24	SVSB24-S-25359	Soil	CPT	68	6335	11/01/07	
11/1/07	9:30	QC	SV-S-Meoh-01Nov07	Soil	TB	–	3440	11/01/07	Trip blank sent to Severn-Trent Laboratories for verification organic analysis with soil samples listed on COC 3440.
11/1/07	10:32	SB24	SVSB24-S-25560	Soil	CPT	76	6335	11/01/07	
11/1/07	15:00	SB24	SVSB24-S-25561	Soil	CPT	80	6335	11/01/07	
11/1/07	15:14	QC	SVQCTB-S-25564	Soil	TB	–	6335	11/01/07	Trip blank sent to Severn-Trent Laboratories with soil samples preserved on dry ice and listed on COC 6335.
11/1/07	15:25	SB24	SVSB24-S-25562	Soil	CPT	84	6335	11/01/07	
11/1/07	15:53	SB24	SVSB24-S-25563	Soil	CPT	60	6335	11/01/07	

TABLE A.1 (Cont.)

Sample Date	Time	Location	Sample	Medium	Type[a]	Depth (ft TOC)[b]	Chain of Custody	Shipping Date	Sample Description
11/1/07	16:27	SB24	SVSB24-S-25565	Soil	CPT	72	6335	11/01/07	
11/1/07	16:50	QC	SVTANK1-W-25408	Water	BT	–	6331	11/01/07	Waste sample from Tank #1 (tanker truck) for total nitrogen and heavy metals analyses per treatment facility and MoDNR requirements.
11/1/07	16:55	QC	SVCOMB-W-25409	Water	BT	–	6331	11/01/07	Composite waste sample from Tanks #2-#4 for total nitrogen and heavy metals analyses per treatment facility and MoDNR requirements.
11/1/07	17:00	SB24	SVSB24-S-25566	Soil	CPT	88	6335	11/01/07	
11/1/07	17:01	SB24	SVSB24-S-25567	Soil	CPT	88	6335	11/01/07	Replicate of sample SVSB24-S-25566.
11/1/07	18:04	SB24	SVSB24-S-25568	Soil	CPT	90.5	6335	11/01/07	
11/2/07	9:08	SB42	SVSB42-S-25570	Soil	CPT	16	6332	11/02/07	Vertical-profile subsurface soil sampling.
11/2/07	9:22	SB42	SVSB42-S-25571	Soil	CPT	20	6332	11/02/07	
11/2/07	9:41	SB42	SVSB42-S-25572	Soil	CPT	24	6332	11/02/07	
11/2/07	10:00	SB42	SVSB42-S-25573	Soil	CPT	28	6332	11/02/07	
11/2/07	10:35	SB42	SVSB42-S-25574	Soil	CPT	36	6332	11/02/07	
11/2/07	10:58	SB42	SVSB42-S-25575	Soil	CPT	44	6332	11/02/07	
11/2/07	11:14	QC	SVQCTB-S-25580	Soil	TB	–	6332	11/02/07	Trip blank sent to the AGEM Laboratory with soil samples preserved on dry ice and listed on COC 6332.
11/2/07	11:22	SB42	SVSB42-S-25576	Soil	CPT	52	6332	11/02/07	
11/2/07	11:23	SB42	SVSB42-S-25577	Soil	CPT	52	6332	11/02/07	Replicate of sample SVSB42-S-25576.
11/2/07	11:52	SB42	SVSB42-S-25578	Soil	CPT	60	6332	11/02/07	
11/2/07	13:54	SB42	SVSB42-S-25579	Soil	CPT	68	6332	11/02/07	
11/2/07	14:30	SB42	SVSB42-S-25581	Soil	CPT	76	6332	11/02/07	
11/2/07	15:16	SB42	SVSB42-S-25582	Soil	CPT	84	6332	11/02/07	
11/2/07	17:12	SB42	SVSB42-S-25583	Soil	CPT	90.5	6332	11/02/07	
11/3/07	7:30	QC	SVTANK2-W-25411	Water	BT	–	6010	11/09/07	Resampling of waste purge water tank #2 for total nitrogen and heavy metals analyses.

TABLE A.1 (Cont.)

Sample Date	Time	Location	Sample	Medium	Type[a]	Depth (ft TOC)[b]	Chain of Custody	Shipping Date	Sample Description
11/3/07	8:50	SB24ts	SVSB24S-W-25409	Water	CPT/P	53-58	6011	11/05/07	Shallow temporary piezometer. Water level rising after installation, though initially dry. Not purged because of long recharge time. Water clear.
11/5/07	10:50	QC	SVQCTB-W-25415	Water	TB	–	6011	11/05/07	Trip blank sent to the AGEM Laboratory with water samples listed on COC 6011.
11/6/07	9:00	QC	SV-S-Meoh-06Nov07	Soil	TB	–	4044	11/06/07	Trip blank sent to Severn-Trent Laboratories for verification organic analysis with soil samples listed on COC 4044.
11/9/07	13:01	QC	SVTANK2-W-25412	Water	BT	–	6021	11/09/07	Resampling of waste purge water tank #2 for VOCs analyses at the AGEM Laboratory.
11/9/07	16:08	QC	SVQCTB-W-25413	Water	TB	–	6021	11/09/07	Trip blank sent to the AGEM Laboratory with waste sample listed on COC 6021.
12/5/07	11:25	SB24ts	SV-24S-W-25400	Water	CPT/P	53-58	6378	12/06/07	Shallow temporary piezometer.
12/5/07	11:30	QC	SV-TB-W-25403	Water	TB	–	6378	12/06/07	Trip blank sent to the AGEM Laboratory with water sample listed on COC 6378.
1/28/08	9:18	SB42	SVSB42-S-25584	Soil	CPT	32	6049	01/29/08	
1/28/08	9:40	SB42	SVSB42-S-25585	Soil	CPT	40	6049	01/29/08	
1/28/08	9:59	SB42	SVSB42-S-25586	Soil	CPT	48	6049	01/29/08	
1/28/08	10:00	SB42	SVSB42-S-25587	Soil	CPT	48	6049	01/29/08	Replicate of sample SVSB42-S-25586.
1/28/08	10:25	SB42	SVSB42-S-25588	Soil	CPT	56	6049	01/29/08	
1/28/08	10:55	SB42	SVSB42-S-25589	Soil	CPT	64	6049	01/29/08	
1/28/08	11:23	QC	SVQCTB-S-25591	Soil	TB	–	6049	01/29/08	Trip blank sent to the AGEM Laboratory with soil samples listed on COCs 6049 and 6050.
1/28/08	11:28	SB42	SVSB42-S-25590	Soil	CPT	72	6049	01/29/08	
1/28/08	13:48	SB42	SVSB42-S-25592	Soil	CPT	80	6049	01/29/08	
1/28/08	14:25	SB42	SVSB42-S-25593	Soil	CPT	88	6049	01/29/08	

TABLE A.1 (Cont.)

Sample Date	Time	Location	Sample	Medium	Type[a]	Depth (ft TOC)[b]	Chain of Custody	Shipping Date	Sample Description
1/28/08	15:18	SB38	SVSB38-S-25594	Soil	CPT	16	6049	01/29/08	Vertical-profile subsurface soil sampling. Southeast corner of former CCC/USDA facility, near driveway.
1/28/08	15:29	SB38	SVSB38-S-25595	Soil	CPT	20	6049	01/29/08	
1/28/08	15:44	SB38	SVSB38-S-25596	Soil	CPT	24	6049	01/29/08	
1/28/08	15:57	SB38	SVSB38-S-25597	Soil	CPT	28	6049	01/29/08	
1/28/08	16:14	SB38	SVSB38-S-25598	Soil	CPT	36	6050	01/29/08	
1/28/08	16:35	SB38	SVSB38-S-25599	Soil	CPT	44	6050	01/29/08	
1/28/08	16:55	SB38	SVSB38-S-25600	Soil	CPT	52	6050	01/29/08	
1/28/08	17:17	SB38	SVSB38-S-25601	Soil	CPT	60	6050	01/29/08	
1/28/08	17:18	SB38	SVSB38-S-25602	Soil	CPT	60	6050	01/29/08	Replicate of sample SVSB38-S-25601.
1/28/08	17:43	SB38	SVSB38-S-25603	Soil	CPT	68	6050	01/29/08	
1/29/08	8:44	SB38	SVSB38-S-25604	Soil	CPT	76	4778	01/29/08	
1/29/08	9:15	SB38	SVSB38-S-25605	Soil	CPT	84	4778	01/29/08	
1/29/08	9:59	SB38	SVSB38-S-25606	Soil	CPT	92	4778	01/29/08	
1/29/08	10:41	SB38	SVSB38-S-25607	Soil	CPT	32	4778	01/29/08	
1/29/08	10:42	SB38	SVSB38-S-25608	Soil	CPT	32	4778	01/29/08	Replicate of sample SVSB38-S-25607.
1/29/08	11:04	SB38	SVSB38-S-25609	Soil	CPT	48	4778	01/29/08	
1/29/08	11:25	SB38	SVSB38-S-25610	Soil	CPT	56	4778	01/29/08	
1/29/08	11:53	SB38	SVSB38-S-25611	Soil	CPT	64	4778	01/29/08	
1/29/08	13:09	QC	SVQCTB-S-25612	Soil	TB	–	4778	01/29/08	Trip blank sent to the AGEM Laboratory with soil samples listed on COCs 4778 and 4779.
1/29/08	13:37	SB38	SVSB38-S-25613	Soil	CPT	72	4778	01/29/08	
1/29/08	14:00	SB38	SVSB38-S-25614	Soil	CPT	40	4778	01/29/08	
1/29/08	14:34	SB38	SVSB38-S-25615	Soil	CPT	80	4778	01/29/08	
1/29/08	15:23	SB38	SVSB38-S-25616	Soil	CPT	88	4778	01/29/08	
1/29/08	16:01	SB38	SVSB38-S-25617	Soil	CPT	96	4778	01/29/08	
1/29/08	16:35	SB29	SVSB29-S-25618	Soil	CPT	16	4778	01/29/08	Vertical-profile subsurface soil sampling. South edge of south rectangular foundation.
1/29/08	17:02	SB29	SVSB29-S-25619	Soil	CPT	20	4779	01/29/08	
1/29/08	17:17	SB29	SVSB29-S-25620	Soil	CPT	24	4779	01/29/08	
1/29/08	17:32	SB29	SVSB29-S-25621	Soil	CPT	28	4779	01/29/08	

TABLE A.1 (Cont.)

Sample Date	Time	Location	Sample	Medium	Type[a]	Depth (ft TOC)[b]	Chain of Custody	Shipping Date	Sample Description
1/29/08	17:51	SB29	SVSB29-S-25622	Soil	CPT	32	4779	01/29/08	
1/30/08	7:53	SB29	SVSB29-S-25623	Soil	CPT	40	4780	02/04/08	
1/30/08	8:08	QC	SVQCTB-S-25625	Soil	TB	–	4780	02/04/08	Trip blank sent to the AGEM Laboratory with soil samples listed on COCs 4780 and 4781.
1/30/08	8:19	SB29	SVSB29-S-25624	Soil	CPT	48	4780	02/04/08	
1/30/08	8:44	SB29	SVSB29-S-25626	Soil	CPT	36	4780	02/04/08	
1/30/08	9:06	SB29	SVSB29-S-25627	Soil	CPT	44	4780	02/04/08	
1/30/08	9:31	SB29	SVSB29-S-25628	Soil	CPT	52	4780	02/04/08	
1/30/08	10:01	SB29	SVSB29-S-25630	Soil	CPT	60	4780	02/04/08	
1/30/08	10:02	SB29	SVSB29-S-25629	Soil	CPT	60	4780	02/04/08	Replicate of sample SVSB29-S-25630.
1/30/08	10:29	SB29	SVSB29-S-25631	Soil	CPT	68	4780	02/04/08	
1/30/08	11:10	SB29	SVSB29-S-25632	Soil	CPT	76	4780	02/04/08	
1/30/08	11:46	SB29	SVSB29-S-25633	Soil	CPT	84	4780	02/04/08	
1/30/08	11:47	SB29	SVSB29-S-25634	Soil	CPT	84	4780	02/04/08	Replicate of sample SVSB29-S-25633.
1/31/08	8:19	SB29	SVSB29-S-25635	Soil	CPT	56	4781	02/04/08	
1/31/08	8:51	SB29	SVSB29-S-25636	Soil	CPT	64	4781	02/04/08	
1/31/08	9:24	SB29	SVSB29-S-25637	Soil	CPT	72	4781	02/04/08	
1/31/08	9:59	SB29	SVSB29-S-25638	Soil	CPT	80	4781	02/04/08	
1/31/08	10:50	SB29	SVSB29-S-25639	Soil	CPT	80	4781	02/04/08	Replicate of sample SVSB29-S-25638.
2/8/08	9:55	QC	SV-TB-020708	Soil	TB	–	4045	02/08/08	Trip blank sent to TestAmerica for verification organic analysis with soil samples listed on COC 4045.
3/21/08	11:04	QC	SVQCTB-W-25407	Water	TB	–	6101	03/24/08	Trip blank sent to the AGEM Laboratory with water sample listed on COC 6101.

TABLE A.1 (Cont.)

Sample Date	Time	Location	Sample	Medium	Type[a]	Depth (ft TOC)[b]	Chain of Custody	Shipping Date	Sample Description
3/21/08	11:56	SB38	SVSB38-W-25397	Water	CPT/P	50-90	6101	03/24/08	Depth to water from TOC = 37.61 ft. Sampled by using Waterra tubing and foot valve as bailer, with no purging. Depth to water after sampling = 41.25 ft TOC.

[a] Sample types: BT, wastewater composite; CPT, cone penetrometer; CPT/P, piezometer; DW, domestic well; GEO, Geoprobe; PW, public water supply; SW, surface water; TB, trip blank.

[b] Feet below the top of the casing.

Appendix B:

Piezometer Certification Forms for Piezometers SB24 and SB38

STATE OF MISSOURI
MISSOURI DEPARTMENT OF NATURAL RESOURCES
GEOLOGICAL SURVEY PROGRAM
WELLHEAD PROTECTION SECTION

MONITORING WELL CERTIFICATION RECORD

OFFICE USE ONLY	DATE RECEIVED
REF NO.	
C.R. NO.	CHECK NO.
STATE WELL NUMBER	REVENUE NO.
ENTERED Ph1 Ph2 Ph3	APPROVED BY / ROUTE

INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR

OWNER NAME: USDA/CCC		WELL NUMBER: 24		VARIANCE GRANTED BY THE DNR: ☐ NO ☒ YES, ATTACH A COPY OF THE VARIANCE
OWNER ADDRESS: 1400 Independence Ave. SW	CITY: Washington	STATE: DC	ZIP CODE: 20250	
SITE NAME: Former USDA/CCC Grain Storage Site	CONTACT NAME: Steve Gilmore			
SITE ADDRESS: HWY 71 & CR 160	CITY: Savannah	STATE: MO	ZIP CODE: 64485	VARIANCE NUMBER: 3820

PROPOSED USE OF WELL: ☐ Gas Monitoring Well ☒ Monitoring ☐ Extraction Well ☒ Piezometers

TYPE OF POTENTIAL SITE: ☒ Hazardous Material ☐ Landfill ☒ Initial Site Assessment ☐ L.U.S.T. ☒ Water Level Drawdown

MONITORING FOR: (CHECK ALL THAT APPLY) ☐ Radionuclides ☐ Petroleum Products Only ☐ Explosives ☐ Metals ☒ V.O.C. ☐ SVOCS ☐ Pesticides/Herbicides

SKETCH LOCATION OF WELL INCLUDING MILEAGE ON ALL ROADS TRAVELLED FROM NEAREST TOWNS.

LOCATION OF WELL: Lat. 39 57' 15.8394" Long. -94 50' 56.04"

AREA: 3 ELEVATION: 1158. COUNTY: Andrew

SMALLEST NE ¼ SW ¼ SE ¼ LARGEST

Sec. 5 Township 59 North Range 35 ☐ East ☒ West

DESCRIBE LOCATION OF THE WELL SO WE WOULD BE ABLE TO VISIT THE WELL SITE

DRILLER NOTES:

TYPE OF SURFACE COMPLETION	LENGTH OF PROTECTIVE CASING	DIAMETER OF PROTECTIVE CASING	DIAMETER AND DEPTH OF THE HOLE PROTECTIVE CASING WAS PLACED	PROTECTIVE CASING MATERIAL	LOCKING CAP?
☐ Above Ground ☒ Flush Mount	N/A FT.	N/A IN.	N/A IN. N/A FT.	☐ Steel ☐ Aluminum ☐ Plastic	☒ Yes ☐ No

WEEP HOLE?	VENTED CAP?	LENGTH OF FLUSH MOUNT	DIAMETER OF FLUSH MOUNT	DIAMETER AND DEPTH OF THE HOLE FLUSH MOUNT WAS PLACED	SURFACE COMPLETION GROUT
☐ Yes ☒ No	☒ Yes ☐ No	2 FT.	2 FT.	24 IN. 3 FT.	☒ Concrete ☐ Other ____

RISER PIPE DETAIL	LENGTH	DIAMETER	WEIGHT OR SDR#	DIAMETER OF DRILL HOLE	MATERIAL
	50 FT.	1 IN.	41	3.25 FT.	☐ Steel ☒ Thermoplastic (PVC) ☐ Other ____

BENTONITE SEAL	LENGTH OF SEAL	MATERIAL
	48 FT.	☒ Slurry ☐ Pellets ☐ Granular ☒ Chips

GLUED: ☐ Yes ☒ No

SECONDARY FILTER PACK: ☐ Saturated Zone ☒ Unsaturated Zone Hydrated ☒ Yes ☐ No ☐ Both Zones If Yes, Hydrated ☐ Yes ☐ No

PRIMARY FILTER PACK	LENGTH	DEPTH TO TOP OF PRIMARY FILTER PACK	SECONDARY FILTER PACK LENGTH
	10 FT.	50 FT.	2 FT.

ANNULAR SEAL		LENGTH
☒ Bentonite Slurry ☐ Non Slurry Bentonite Type	☐ Cement/Bentonite Slurry ☐ Bags of Cement Used ____ ☐ % of Bentonite Used ____ ☒ Water Used/Bag 18 gal	48 FT.

WELL SCREEN	LENGTH	DIAMETER	DIAMETER OF DRILL HOLE	DEPTH TO TOP OF SCREEN	MATERIAL
	10 FT.	1" FT.	3.25 IN.	50 FT.	☐ Steel ☒ Thermoplastic (PVC) ☐ Other ____

DEPTH FROM	DEPTH TO	FORMATION DESCRIPTION
0'	60'	See Attached

Multiple Cased Wells ☐ Yes ☒ No Pump Installed for Remediation ☐ Yes ☒ No

Submit additional as built diagrams showing well construction details including type and size of all casing, hole diameters and grout used

TOTAL DEPTH:

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER	STATIC WATER LEVEL	DATE WELL DRILLING WAS COMPLETED
	004395-M	None FEET FROM MEASURING POINT	4/28/2008

I hereby certify that the monitoring well herein described was constructed in accordance with the Department of Natural Resources requirements for the construction of monitoring wells.

SIGNATURE (WELL DRILLER)	PERMIT NUMBER	DATE	SIGNATURE (PUMP INSTALLER)	PERMIT NUMBER	DATE
	004395-M	5/4/2008		N/A	N/A

Savannah SB24 10/31-11/1/07		
Depth, ft	Recovery, in	Description
0-2	21.5	Silt with clay and fine sand, black (10YR), organic rich, fine roots
2-6	42	Silt with clay and fine sand, dark yellowish brown (10YR), dry, friable, with orange (iron) staining and black (manganese/iron) specks
6-10	45	As above
10-14	36	As above, light yellowish brown (10YR), slightly firmer with depth
14-18	42.5	Silty clay, pale brown (10YR), dry, friable with orange stain and black specks 14'-16'. Brown, damp, more dense and stiff 16'-18' with black specks and streaks, non-calcareous
18-22	46	Silty clay, brown (10YR) with orange staining 18'-20.2'. Light yellowish brown (10YR) 20.2'-22' with orange/black streaks and patchy orange stain, dense, firm, stiff, damp
22-26	46	As 20.2'-22'. Becomes light brownish gray (2.5Y) to light yellowish brown (10YR) with depth
26-30	47.5	Silty clay, yellowish brown (10YR), dense, stiff, damp, slightly softer 28.9'-30-
30-34	47.5	Silty clay, uniform dark yellowish brown to yellowish brown (10YR), stiff, dense, slightly softer, more sticky 33'-34'
34-38	37.5	Silty clay, yellowish brown to dark yellowish brown (10YR), stiff, dense, faint orange staining, non-calcareous
38-42	47.5	Silty clay, brown (10YR), stiff, damp, orange/black mottling and black streaks; streaks prominent 40'-40.8'
42-46	47.5	Silty clay, pale brown (10YR) to light gray (2.5Y), stiff, dense, damp, with faint orange stain, occasional black streaks.
46-50	47.5	As above, light gray (2.5Y)
50-54	47.5	As above. Softer, more sticky 50'-50.6', non-calcareous
54-58	47.5	Silty clay, uniform light gray (2.5Y), dense, firm, damp, with faint orange stain. Free water in barrel at ~56.5', at (open) separation in core? Core slightly softer above below water interval,.
58-60	23.5	Silty clay, uniform light gray (2.5Y), firm, stiff, dense, damp, occasional faint orange stain, and corroded nodules, occasional thin black streaks

Monitor Well SB-24: Savannah, MO

NE 1/4 of SW 1/4 of SE 1/4 of Section 5, Twp. 59 North, Rge. 35 West
Andrew County, State of Missouri
Elevation: 1158.06'
Latitude: 39° 57' 15.8394" Longitude: -94° 50' 56.04"

Date: 04/28/2008

WELL HEAD PROTECTION
12" Morrison Brothers, Co. Model 418XA flush mount cover. Top of the well casing is fitted with a (J-Plug) Koby (KOBY 01) and padlock.

CONCRETE PAD
Minimum of 8" thick and extends at least 8" larger than the flush mount (28" minimum). Sloped at top to prevent pooling of water, vegetation around well, and allows for placement of a surveyor pin.

IMPERVIOUS GROUT
The well is grouted with impervious bentonite grout and tremied in the hole, mixed with clean fresh water to have a minimum density of 9.4 lbs. per gallon.

WELL CASING
Well casing is terminated as high as possible inside the flush mount and is capped with a (J-Plug) locking plug and padlock.

1" PVC Schedule 40 threaded casing and a Mill Slot (0.010") PVC well screen were installed.

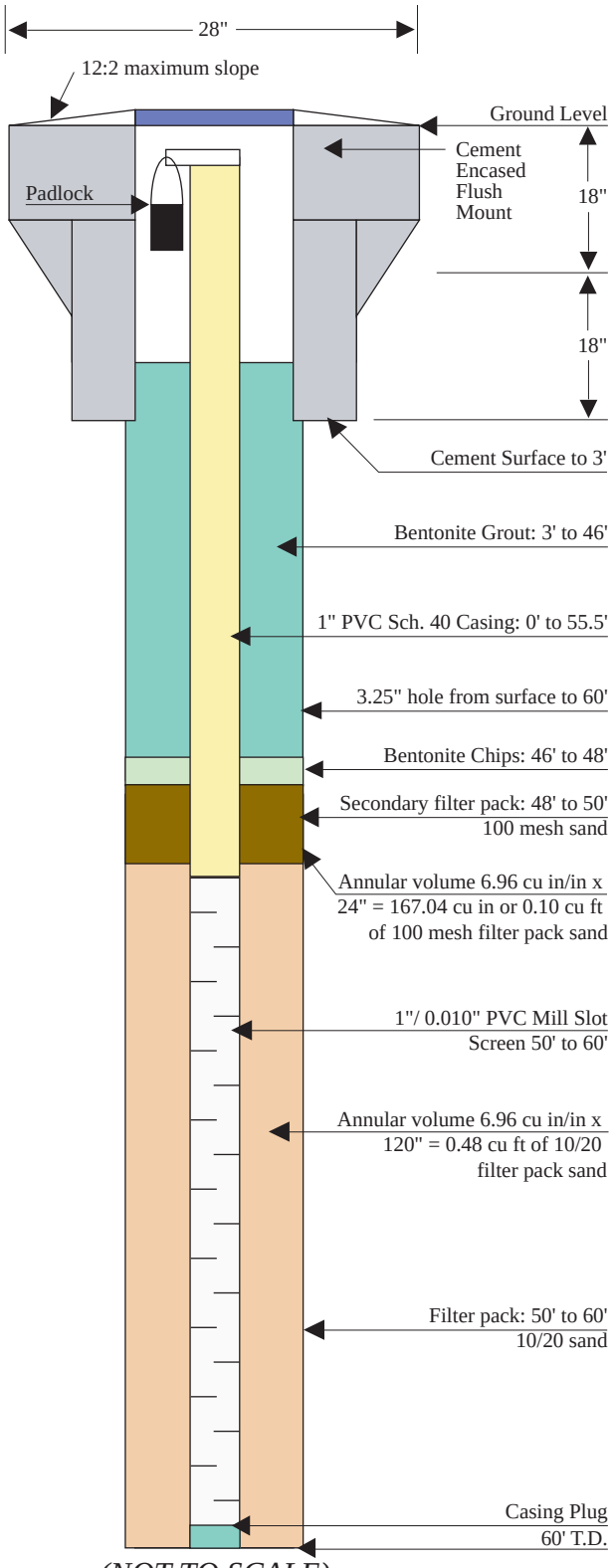
HOLE SIZE
The hole is 3.25" in diameter from the surface of the ground to T.D. (total depth).

PRIMARY GRAVEL/SAND PACK:
10/20 sand, from the bottom of the hole to the top of the screen.

SECONDARY GRAVEL/SAND PACK:
100 mesh sand from the top of the screen extending upward for at least 2' above the top of the screen.

CONTRACTOR LICENSING
The well was constructed under the direction of a licensed monitor well contractor as specified under the Missouri Department of Natural Resources Division of Environmental Quality (permit #004395-M).

CERTIFICATION
The well is certified with the Missouri Department of Natural Resources Division of Environmental Quality.



(NOT TO SCALE)

Federal Communications Commission

Audio Division

(202)-418-2700
Fax: 202-418-1411

Degrees, Minutes, Seconds and Decimal Degrees Latitude/Longitude Conversions

This utility permits the user to convert latitude and longitude between decimal degrees and degrees, minutes, and seconds. For convenience, a link is included to the National Geodetic Survey's NADCON program, which allows conversions between the NAD83 / WGS84 coordinate system and the older NAD27 coordinate system. NAD27 coordinates are presently used for broadcast authorizations and applications.

This utility requires that Javascript be enabled to perform the calculations. The older non-Javascript version remains available.

Degrees Minutes Seconds to Decimal Degrees

Enter Degrees Minutes Seconds latitude:

Enter Degrees Minutes Seconds longitude:

Convert to Decimal | Clear Values

Results: Latitude: 0 Longitude: 0

Decimal Degrees to Degrees Minutes Seconds

Enter Decimal Latitude: 39.9544

Enter Decimal Longitude: -94.8489

Convert to Degrees Minutes Seconds | Clear Values

Results: Latitude: 39° 57' 15.8394" Longitude: -94° 50' 56.04"

NADCON NAD27 - NAD83 Coordinate Conversions
from the National Geodetic Survey

forms MUST be electronically filed: FCC Forms 301, 301-CA, 302-CA, 302-FM, 302-DTV, 302-TV, 303-S, 314, 315, 316, 318, 319, 323, 323-E, 337, 340, 346, 347, 349, 350, 381

- EEO Forms 395-A and 395-B have been suspended by Commission Order FCC 01-34.

- CDBS Users Guide or call (202)-418-2662

- CDBS System Status

Call Sign Reservations & Authorizations for broadcast station call signs

Antenna Structure Registration via ULS

USA.gov Government Made Easy

Easy, one-stop access to all online U.S. Federal Government resources www.USA.gov

FCC Home | Search | Updates | E-Filing | Initiatives | For Consumers | Find People

Please send comments via standard mail to the Federal Communications Commission, Consumer and Governmental Affairs Bureau, 445 12th Street, S.W., Washington, D.C., 20554. Questions can also be answered by calling the FCC's National Call Center, toll free, at 1-888-Call FCC (1-888-225-5322).

Federal Communications Commission
445 12th Street SW
Washington, DC 20554
More FCC Contact Information...

Phone: 1-888-CALL-FCC (1-888-225-5322)
TTY: 1-888-TELL-FCC (1-888-835-5322)
Fax: 1-866-418-0232
E-mail: fccinfo@fcc.gov

- Privacy Policy
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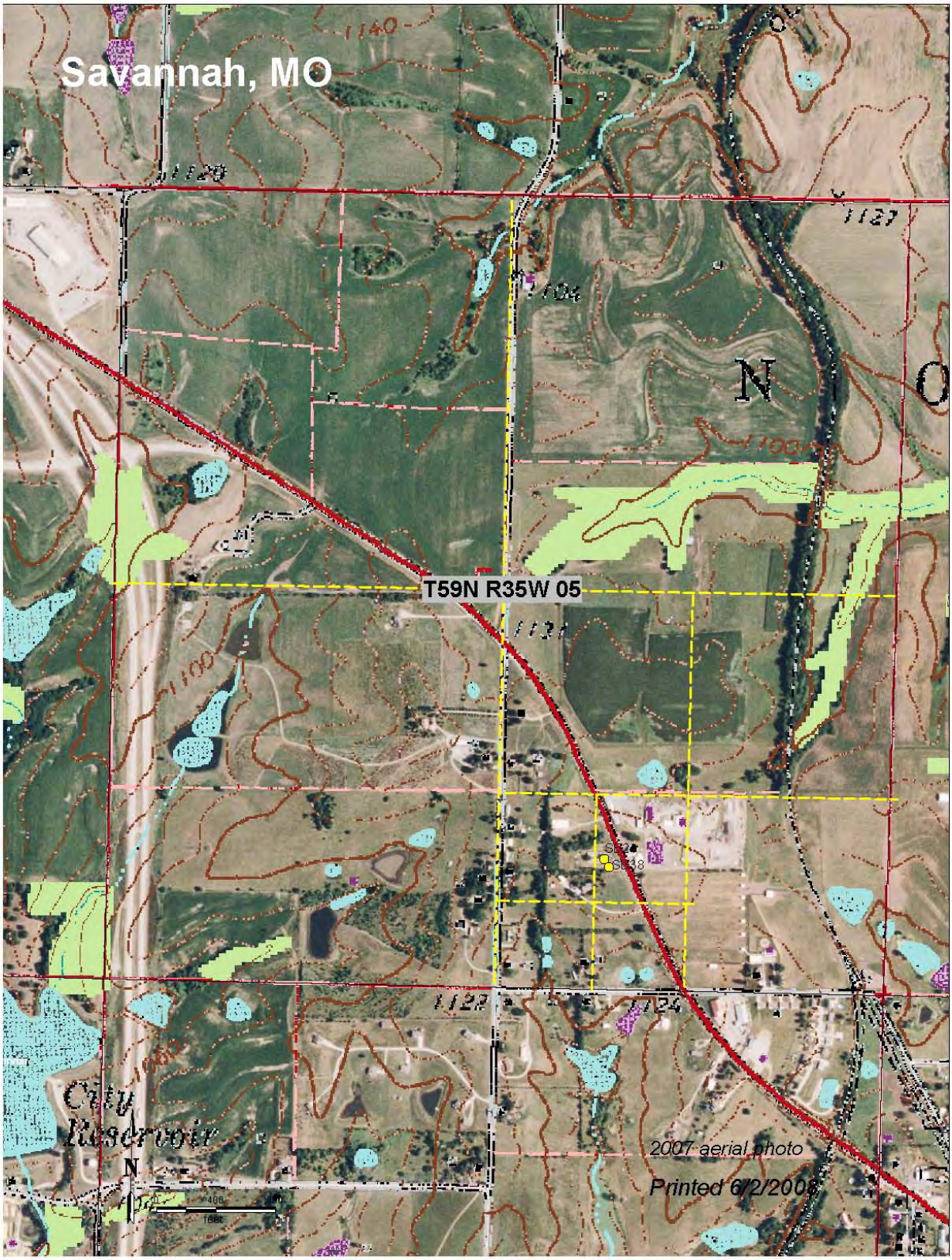

Savannah, MO
T59N R35W 05
City Reservoir
N
2007 aerial photo
Printed 6/2/2008

STATE OF MISSOURI
Matt Blunt, Governor • Doyle Childers, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov
P.O. Box 250 111 Fairgrounds Rd. Rolla, MO 65402-0250
(573) 368-2165
FAX(573) 368-2317

VARIANCE: Approved

VARIANCE NUMBER: 3820

WELL OWNER INFORMATION					
NAME:	USDA/ CCC, STOP 0513, ROOM 4717-S				
ADDRESS:	1400 INDEPENDENCE AVE SW			FAX:	
CITY:	WASHINGTON	STATE: DC	ZIP: 20250	TELEPHONE:	

WELL LOCATION								
COUNTY:	ANDREW	LAT.	39	57	15.0	LONG.	94	50	56.0
1/4 NE	1/4 SW	1/4 SE	SEC. 5	TWN. 59	N	RNG. 35W			

CONTRACTOR INFORMATION			
COMPANY NAME:	ARGONNE NATIONAL LAB/DELTA ENV	PERMIT NUMBER:	004395
CONTRACTOR NAME:	DAVID SURGNIER		
ADDRESS:	9700 S CASS AVE	FAX:	
CITY:	LEMONT	STATE: IL ZIP: 60439	TELEPHONE: 630-408-7114

VARIANCE INFORMATION

VARIANCE EXPLANATION

APPROVAL GRANTED TO CONSTRUCT TWO PERMANENT MONITORING WELLS USING DIRECT PUSH TECHNOLOGY WITH 1 INCH DIAMETER SCHEDULE 40 PVC SET INTO A 3 ¼ INCH BOREHOLE. REQUIRED: IF A DNR AND/OR EPA PROJECT MANAGER HAS BEEN ASSIGNED TO THIS PROJECT, HIS OR HER CONCURRENCE WITH WELL CONSTRUCTION PARAMETERS MUST ALSO BE GAINED. WELL MUST UTILIZE A PRIMARY AND SECONDARY FILTER PACK. WELL MUST BE GROUTED USING SLURRY GROUT MATERIAL INTRODUCED VIA TREMIE FROM THE TOP OF THE SECONDARY FILTER PACK UPWARDS. SURFACE COMPLETIONS AS REQUIRED UNDER 10 CSR 23-4.060.

RULE NUMBER MODIFIED: 10 CSR 23-4.010

REASON FOR VARIANCE

CURRENT REGULATIONS DO NOT ADDRESS THE CONSTRUCTION OF WELLS USING DIRECT PUSH TECHNOLOGY. CURRENT REGULATIONS REQUIRE THAT THE BOREHOLE BE A MINIMUM OF 4 INCHES IN DIAMETER LARGER THAN THE OUTSIDE DIAMETER OF THE RISER PIPE.

DATE APPROVED:	02/06/2008	BY:	MATTHEW HICKS mph
COPY SENT TO OWNER (DATE):		BY:	
COPY SENT TO CONTRACTOR (DATE):		BY:	
Cc:	Cc:		

STATE OF MISSOURI
MATTHEW PARKER
RG
2005016820
REGISTERED GEOLOGIST

Recycled Paper

STATE OF MISSOURI
MISSOURI DEPARTMENT OF NATURAL RESOURCES
GEOLOGICAL SURVEY PROGRAM
WELLHEAD PROTECTION SECTION

MONITORING WELL CERTIFICATION RECORD

OFFICE USE ONLY	DATE RECEIVED
REF NO.	
C.R. NO.	CHECK NO.
STATE WELL NUMBER	REVENUE NO.
ENTERED Ph1 Ph2 Ph3	APPROVED BY / ROUTE

INFORMATION SUPPLIED BY PRIMARY CONTRACTOR OR DRILLING CONTRACTOR

OWNER NAME	WELL NUMBER			VARIANCE GRANTED BY THE DNR
USDA/CCC	38			☐ NO
OWNER ADDRESS	CITY	STATE	ZIP CODE	☒ YES, ATTACH A COPY OF THE VARIANCE
1400 Independence Ave. SW	Washington	DC	20250	
SITE NAME	CONTACT NAME			
Former USDA/CCC Grain Storage Site	Steve Gilmore			
SITE ADDRESS	CITY	STATE	ZIP CODE	VARIANCE NUMBER
HWY 71 & CR 160	Savannah	MO	64485	3820

PROPOSED USE OF WELL: ☐ Gas Monitoring Well ☒ Monitoring ☐ Extraction Well ☒ Piezometers

TYPE OF POTENTIAL SITE: ☒ Hazardous Material ☐ Landfill ☒ Initial Site Assessment ☐ L.U.S.T. ☐ Water Level Drawdown

MONITORING FOR: (CHECK ALL THAT APPLY) ☐ Radionuclides ☐ Petroleum Products Only ☐ Explosives ☐ Metals ☒ V.O.C. ☐ SVOCS ☐ Pesticides/Herbicides

SKETCH LOCATION OF WELL INCLUDING MILEAGE ON ALL ROADS TRAVELLED FROM NEAREST TOWNS.

LOCATION OF WELL: Lat. 39 57' 15 15.4" Long. -94 50' 55.679"

AREA: 3 ELEVATION: 1158. COUNTY: Andrew

SMALLEST NE ¼ SW ¼ SE ¼ LARGEST

Sec. 5 Township 59 North Range 35 ☐ East ☒ West

DESCRIBE LOCATION OF THE WELL SO WE WOULD BE ABLE TO VISIT THE WELL SITE

DRILLER NOTES:

TYPE OF SURFACE COMPLETION	LENGTH OF PROTECTIVE CASING	DIAMETER OF PROTECTIVE CASING	DIAMETER AND DEPTH OF THE HOLE PROTECTIVE CASING WAS PLACED	PROTECTIVE CASING MATERIAL	LOCKING CAP?
☐ Above Ground ☒ Flush Mount	N/A FT.	N/A IN.	N/A IN. N/A FT.	☐ Steel ☐ Aluminum ☐ Plastic	☒ Yes ☐ No

WEEP HOLE?	VENTED CAP?	LENGTH OF FLUSH MOUNT	DIAMETER OF FLUSH MOUNT	DIAMETER AND DEPTH OF THE HOLE FLUSH MOUNT WAS PLACED	SURFACE COMPLETION GROUT
☐ Yes ☒ No	☒ Yes ☐ No	2 FT.	2 FT.	24 IN. 3 FT.	☒ Concrete ☐ Other ____

RISER PIPE DETAIL	LENGTH	DIAMETER	WEIGHT OR SDR#	DIAMETER OF DRILL HOLE	MATERIAL
	90 FT.	1 IN.	41	3.25 FT.	☐ Steel ☒ Thermoplastic (PVC) ☐ Other ____

BENTONITE SEAL	LENGTH OF SEAL	MATERIAL
	48 FT.	☒ Slurry ☐ Pellets ☐ Granular ☒ Chips

GLUED	SECONDARY FILTER PACK
☐ Yes ☒ No	☐ Saturated Zone ☒ Unsaturated Zone Hydrated ☒ Yes ☐ No ☐ Both Zones If Yes, Hydrated ☐ Yes ☐ No

PRIMARY FILTER PACK	LENGTH	DEPTH TO TOP OF PRIMARY FILTER PACK	SECONDARY FILTER PACK LENGTH
	40 FT.	50 FT.	2 FT.

ANNULAR SEAL			LENGTH
	☒ Bentonite Slurry ☐ Non Slurry Bentonite Type	☐ Cement/Bentonite Slurry ☐ Bags of Cement Used ____ ☐ % of Bentonite Used ____ ☒ Water Used/Bag 18 gal	48 FT.

WELL SCREEN	LENGTH	DIAMETER	DIAMETER OF DRILL HOLE	DEPTH TO TOP OF SCREEN	MATERIAL
	10 FT.	1" FT.	3.25 IN.	50 FT.	☐ Steel ☒ Thermoplastic (PVC) ☐ Other ____

DEPTH FROM	DEPTH TO	FORMATION DESCRIPTION
0'	90'	See Attached

Multiple Cased Wells ☐ Yes ☒ No Pump Installed for Remediation ☐ Yes ☒ No

Submit additional as built diagrams showing well construction details including type and size of all casing, hole diameters and grout used

TOTAL DEPTH:

SIGNATURE (PRIMARY CONTRACTOR)	PERMIT NUMBER	STATIC WATER LEVEL	DATE WELL DRILLING WAS COMPLETED
	004395-M	None FEET FROM MEASURING POINT	4/28/2008

I hereby certify that the monitoring well herein described was constructed in accordance with the Department of Natural Resources requirements for the construction of monitoring wells.

SIGNATURE (WELL DRILLER)	PERMIT NUMBER	DATE	SIGNATURE (PUMP INSTALLER)	PERMIT NUMBER	DATE
	004395-M	5/4/2008		N/A	N/A

Savannah SB38 1/28-29/08

Depth, ft	Recovery, in	Description
0-2	24	Silt with clay and fine sand, black to dark yellowish brown (5YR), dry, fine roots
2-6	39	Clayey silt with fine sand, dark yellowish brown (10YR), soft, abundant orange (iron) staining and black (manganese/iron) specks
6-10	46.5	Clayey silt, dark yellowish brown to yellowish brown (10YR), dry, friable, faint orange staining and black specks
10-14	46	Clayey silt to silty clay, yellowish brown (10YR) 10'-13.9', to light gray (2.5Y) 13.9'-14', occasional patchy orange staining and black specks
14-18	46.5	Silty clay, light gray (2.5Y) to light yellowish brown (10YR), dry, friable, becomes more firm, damp with depth, non-calcareous, faint orange stain with depth
18-22	47.5	As above, yellowish brown (10YR), dense and firm from 18'-20' with uniform orange staining. Very pale brown (10YR), slightly more friable 20'-22' with less, mottled orange staining
22-26	47.5	As above, pale brown (10YR) with slight orange and black staining in streaks and patches with depth, damp, slightly softer from 24'-26'
26-30	47.5	Silty clay, light yellowish brown (10YR), soft, sticky 26'-28', little to no staining, non-calcareous
30-34*	47.5	As above, uniform yellowish brown (10YR), soft, slightly sticky
34-38	47.5	Silty clay, uniform yellowish brown (10YR), soft, sticky
38-42*	47.5	Silty clay, pale brown (10YR), dense, firm, damp, occasional orange/black streaks and patches
42-46	47.5	Silty clay, pale brown (10YR), dense, firm, damp, with orange/black streaks and patches. Core barrel came up wet, core damp.
46-50*	47.5	As above, pale brown to brown (10YR), damp, faint orange staining and increasingly prominent black streaks with depth.
50-54	47.5	Silty clay, light gray (2.5Y), firm, dense, damp, faint orange staining and black streaks that become abundant 50'-52', non-calcareous
54-58*	47.5	Silty clay, light gray (2.5Y), dense, firm, damp, occasional orange/black streaks and nodules 54'-56', more uniform gray 56'-58'
58-62	47.5	Silty clay, light gray (2.5Y), firm, dense, damp, occasional faint orange staining and thin black streaks
62-66*	47.5	Diagonal (closed) fractures at 63', 63.35', 64.8', damp.
66-70	47.5	Silty clay till, light gray (2.5Y), damp, faint orange/black streaks and nodules. At 67.6', softer, paler gray horizon across core. White/pale gray granular, calcareous interval at 68.4'-68.6'. Sample for physical properties at 67.6'-68'.
70-74*	47.5	Silty clay till, light gray (2.5Y), dense, firm, damp, breaks apart from 70'-72', minimal orange/black staining, non-calcareous.
74-78	47.5	Silty clay till, uniform light gray (2.5Y) 74'-76', firm, dense, damp. Silty clay with minor sand 76'-78', orange/black streaks, occasional calcareous nodules and non-calcareous pebbles. Granular, calcareous intervals at 76.2'-76.3' and in barrel tip at 77.9'-78'
78-82*	47.5	Silty clay till with sand, light gray (2.5Y), orange mottling and occasional black streaks, calcareous nodules and non-calcareous pebbles to ~1" at 80.5'
82-86	47.5	Silty clay till with sand, light gray (2.5Y), dense, firm, calcareous nodules and non-calcareous pebbles to 0.5in, variable orange/black streaks and mottling 83.6'-86'
86-90*	46	Silty clay till with sand, light gray (2.5Y), dense, firm, damp, black streaks and occasional orange nodules and patchy staining, frequent calcareous nodules

* Intervals cored in second push hole offset ~1ft west from original hole, to help reduce sloughing from above.

Monitor Well SB-38: Savannah, MO

NE 1/4 of SW 1/4 of SE 1/4 of Section 5, Twp. 59 North, Rge. 35 West
Andrew County, State of Missouri
Elevation: 1158.4'
Latitude: 39° 57' 15.48" Longitude: -94° 50' 55.6794"

Date: 04/28/2008

WELL HEAD PROTECTION
12" Morrison Brothers, Co. Model 418XA flush mount cover. Top of the well casing is fitted with a (J-Plug) Koby (KOBY 01) and padlock.

CONCRETE PAD
Minimum of 8" thick and extends at least 8" larger than the flush mount (28" minimum). Sloped at top to prevent pooling of water, vegetation around well, and allows for placement of a surveyor pin.

IMPERVIOUS GROUT
The well is grouted with impervious bentonite grout and tremied in the hole, mixed with clean fresh water to have a minimum density of 9.4 lbs. per gallon.

WELL CASING
Well casing is terminated as high as possible inside the flush mount and is capped with a (J-Plug) locking plug and padlock.

1" PVC Schedule 40 threaded casing and a Mill Slot (0.010") PVC well screen were installed.

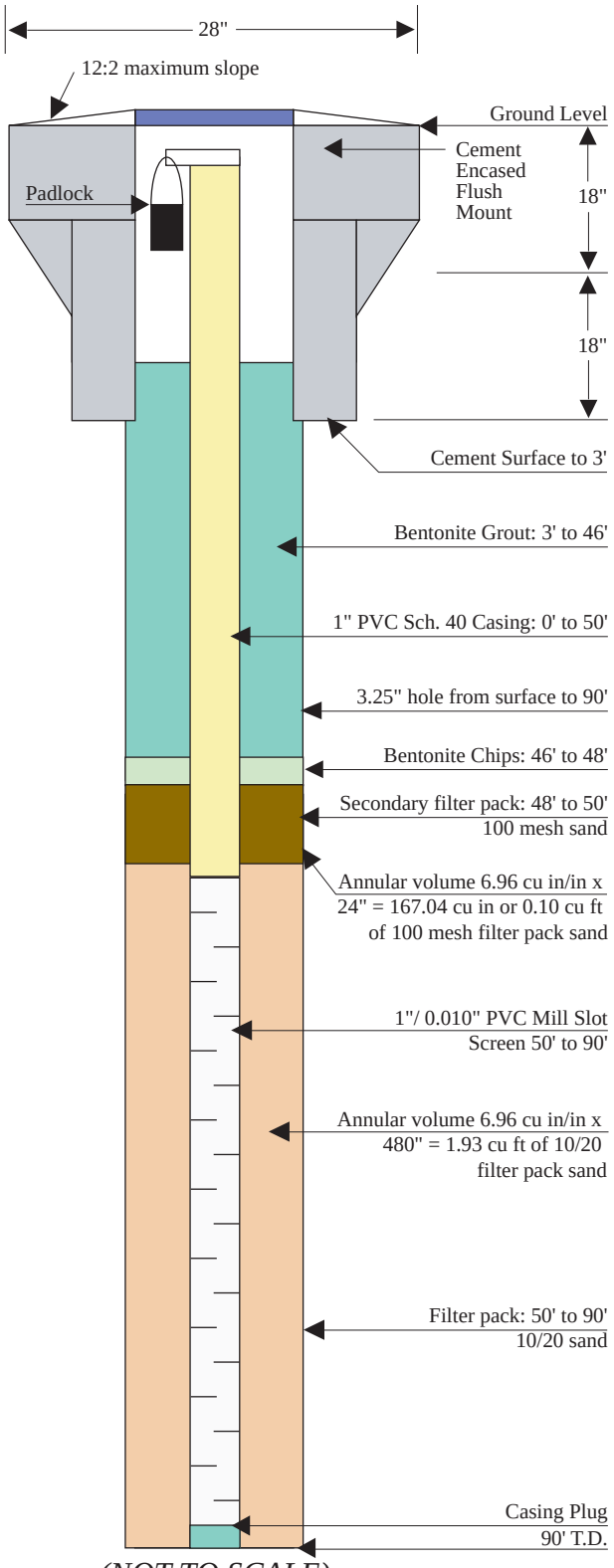
HOLE SIZE
The hole is 3.25" in diameter from the surface of the ground to T.D. (total depth).

PRIMARY GRAVEL/SAND PACK:
10/20 sand, from the bottom of the hole to the top of the screen.

SECONDARY GRAVEL/SAND PACK:
100 mesh sand from the top of the screen extending upward for at least 2' above the top of the screen.

CONTRACTOR LICENSING
The well was constructed under the direction of a licensed monitor well contractor as specified under the Missouri Department of Natural Resources Division of Environmental Quality (permit #004395-M).

CERTIFICATION
The well is certified with the Missouri Department of Natural Resources Division of Environmental Quality.



(NOT TO SCALE)

FCC Federal Communications Commission

Audio Division

(202)-418-2700
Fax: 202-418-1411

Degrees/Minutes/Seconds to/from Decimal Latitude/Longitude

Degrees, Minutes, Seconds and Decimal Degrees Latitude/Longitude Conversions

This utility permits the user to convert latitude and longitude between decimal degrees and degrees, minutes, and seconds. For convenience, a link is included to the National Geodetic Survey's NADCON program, which allows conversions between the NAD83 / WGS84 coordinate system and the older NAD27 coordinate system. NAD27 coordinates are presently used for broadcast authorizations and applications.

This utility requires that Javascript be enabled to perform the calculations. The older non-Javascript version remains available.

Degrees Minutes Seconds to Decimal Degrees

Enter Degrees Minutes Seconds latitude:

Enter Degrees Minutes Seconds longitude:

Convert to Decimal | Clear Values

Results: Latitude: Longitude:

Decimal Degrees to Degrees Minutes Seconds

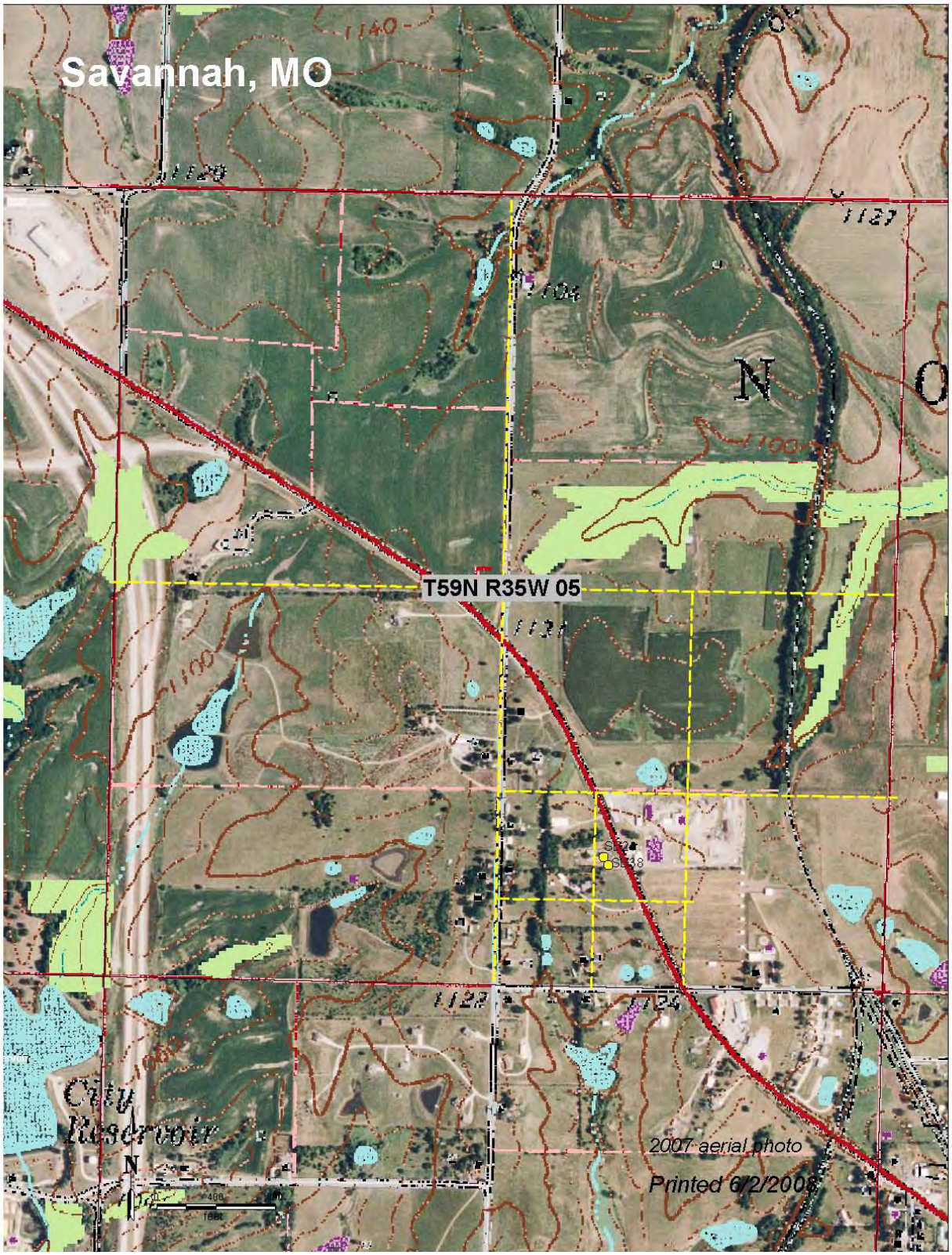
Enter Decimal Latitude: 39.9543

Enter Decimal Longitude: -94.8488

Convert to Degrees Minutes Seconds | Clear Values

Results: Latitude: 39° 57' 15.48" Longitude: -94° 50' 55.6794"

NADCON NAD27 - NAD83 Coordinate Conversions
from the National Geodetic Survey


Savannah, MO
T59N R35W 05
City Reservoir
N
2007 aerial photo
Printed 6/2/2008

STATE OF MISSOURI
Matt Blunt, Governor • Doyle Childers, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov
P.O. Box 250 111 Fairgrounds Rd. Rolla, MO 65402-0250
(573) 368-2165
FAX(573) 368-2317

VARIANCE: Approved

VARIANCE NUMBER: 3820

WELL OWNER INFORMATION					
NAME:	USDA/ CCC, STOP 0513, ROOM 4717-S				
ADDRESS:	1400 INDEPENDENCE AVE SW			**FAX:**	
CITY:	WASHINGTON	**STATE:** DC	**ZIP:** 20250	**TELEPHONE:**	

WELL LOCATION									
COUNTY:	ANDREW		**LAT.**	39	57	15.0	**LONG.**	94	50	56.0
1/4 NE	1/4 SW	1/4 SE	**SEC.** 5				**TWN.** 59	N	**RNG.** 35W	

CONTRACTOR INFORMATION			
COMPANY NAME:	ARGONNE NATIONAL LAB/DELTA ENV	**PERMIT NUMBER:**	004395
CONTRACTOR NAME:	DAVID SURGNIER		
ADDRESS:	9700 S CASS AVE	**FAX:**	
CITY:	LEMONT	**STATE:** IL	**ZIP:** 60439	**TELEPHONE:** 630-408-7114

VARIANCE INFORMATION

VARIANCE EXPLANATION

APPROVAL GRANTED TO CONSTRUCT TWO PERMANENT MONITORING WELLS USING DIRECT PUSH TECHNOLOGY WITH 1 INCH DIAMETER SCHEDULE 40 PVC SET INTO A 3 ¼ INCH BOREHOLE. REQUIRED: IF A DNR AND/OR EPA PROJECT MANAGER HAS BEEN ASSIGNED TO THIS PROJECT, HIS OR HER CONCURRENCE WITH WELL CONSTRUCTION PARAMETERS MUST ALSO BE GAINED. WELL MUST UTILIZE A PRIMARY AND SECONDARY FILTER PACK. WELL MUST BE GROUTED USING SLURRY GROUT MATERIAL INTRODUCED VIA TREMIE FROM THE TOP OF THE SECONDARY FILTER PACK UPWARDS. SURFACE COMPLETIONS AS REQUIRED UNDER 10 CSR 23-4.060.

RULE NUMBER MODIFIED: 10 CSR 23-4.010

REASON FOR VARIANCE

CURRENT REGULATIONS DO NOT ADDRESS THE CONSTRUCTION OF WELLS USING DIRECT PUSH TECHNOLOGY. CURRENT REGULATIONS REQUIRE THAT THE BOREHOLE BE A MINIMUM OF 4 INCHES IN DIAMETER LARGER THAN THE OUTSIDE DIAMETER OF THE RISER PIPE.

DATE APPROVED:	02/06/2008	**BY:**	MATTHEW HICKS mjh
COPY SENT TO OWNER (DATE):		**BY:**	
COPY SENT TO CONTRACTOR (DATE):		**BY:**	
Cc:	**Cc:**		

STATE OF MISSOURI
MATTHEW PARKER
RG
2005016826
REGISTERED GEOLOGIST

Recycled Paper

Appendix C:

Morgan Well Documentation

MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL QUALITY
(573) 368-2165

DOMESTIC/MULTIFAMILY WELL RECORD AND PUMP INFORMATION DATA

REF NO 00061671	DATE RECEIVED 03/11/1992	
CR NO 00063525		
STATE CERT NO APPROVED DATE A024211 05/19/1992	CHECK NO. 1020	
DATE ENTERED PHASE 1 PHASE 2 PHASE 3 03/19/1992 01/01/1000 12/28/2005	ROUTE WO1 / PCD / PLT	REVENUE NO. 661654

INFORMATION SUPPLIED BY WELL OR PUMP INSTALLATION CONTRACTOR

DNR VARIANCE NUMBER _____
CASING DEPTH NUMBER _____
Applicable only if casing depth or variance were obtained from DNR

OWNER NAME	TELEPHONE (OPTIONAL)	CITY	STATE	ZIP
CHARLES & ALICE MORGAN	303-680-0811			
OWNER ADDRESS 6560'S BILLINGSWAY		ENGLEWOOD	CO	80111
ADDRESS OF WELL (IF DIFFERENT THAN ABOVE)		CITY	STATE MO	ZIP

PROPOSED USE OF WELL **SEE BACK OF FORM FOR WELL CLASSIFICATIONS**

- [X] WATER SUPPLY TO A PRIVATE RESIDENCE OR UP TO 3 PRIVATE RESIDENCES (DOMESTIC WELL)
- [ ] WATER SUPPLY TO 4 PRIVATE RESIDENCES OR UP TO 14 PRIVATE RESIDENCES AT A NON-COMMERICIAL FACILITY (MULTIFAMILY WELL)
- [ ] WATER SUPPLY TO A CHURCH WITH A CONGREGATION LESS THAN 25 PEOPLE (DOMESTIC WELL-CHURCH)

WATER USE INFORMATION VERIFIED BY OWNER SIGNATURE X_____
ALL WELLS MUST PRODUCE LESS THAN 70 GPM TO THE SURFACE, SERVE LESS THAN 25 PEOPLE AND HAVE LESS THAN 15 CONNECTIONS-otherwise use high yield/public well record (SIGNATURE REQUIRED) DATE: _____

CASING DETAILS

CASING LENGTH 65 FT. O.D. OF CASING 36.0 IN DIAMETER OF DRILL HOLE 42.0 IN

CASING MATERIAL [ ] STEEL [ ] PLASTIC [ ] CONCRETE

POSITION OF GROUT SEAL [ ] BOTTOM [ ] FULL LENGTH [X] TOP

CASING GROUT MATERIAL
CEMENT: [ ] TYPE 1 [ ] HI-EARLY
BENTONITE: [ ] SLURRY CHIPS [ ] GRANULAR PELLETS
METHOD OF GROUT INSTALLATION: [ ] GRAVITY [ ] OPEN HOLE [ ] POS. DISPLACEMENT [ ] TREMIE
PRESSURE GROUT: [ ] THROUGH CASING [ ] THROUGH TREMIE
DRILLING SUSPENDED: [X] NO [ ] YES 0 HRS

NO. OF SACKS USED 0.0 POUNDS PER SACK _____

COPY

LINER DETAILS

LENGTH 0 FT. O.D. OF LINER 0.0 IN LINER MATERIAL [ ] STEEL [ ] PLASTIC POSITION OF SEAL [ ] FULL LENGTH [ ] BOTTOM [ ] TOP

LINER GROUT MATERIAL
CEMENT: [ ] TYPE 1 [ ] HI-EARLY
BENTONITE: [ ] SLURRY CHIPS [ ] GRANULAR PELLETS
METHOD OF GROUT INSTALLATION: [ ] GRAVITY [ ] OPEN HOLE [ ] POS. DISPLACEMENT [ ] TREMIE
LINER USED TO: [ ] HOLD BACK FORMATION [ ] SEAL OUT UNDESIREABLE AQUIFER CONDITIONS [ ] PREVENT RUST

NO. OF SACKS USED 0.0 POUNDS PER SACK _____ ABANDONED WELL ON SITE? [ ] YES PLUGGED? [ ] YES

GPS LOCATION OF WELL

LAT 39 ° 57' 13.7"
LONG 94 ° 50' 55.9"
COUNTY ANDREW

DEPTH TO FIRST GROUNDWATER 0.0 FEET	PUMP RATE 10.0 GPM
WELL YIELD 3.0 GPM	PUMP SET DEPTH 41.0 FEET
STATIC WATER LEVEL 38.0 FEET	PUMP INSTALLATION DATE
WELL COMPLETION DATE 01/23/1992	pump info required this record or on pump card

DEPTH FROM	DEPTH TO	FORMATION DESCRIPTION
0	13	BRN WIND BLOWN
13	38	HRD YLW CLY
38	51	WHT CLY W/SND
51	65	BLU CLY

DEPTH TO BEDROCK 0.0 FEET
TOTAL DEPTH 65.0 FEET

(OPTIONAL) ELEVATION 0 FT.
LEGAL LOCATION (OPTIONAL) ____ 1/4 SW 1/4 SE 1/4 SEC 5 TWN 59 RNG 36 W
AREA A3
C DATA REQ'D [ ]

OTHER INFORMATION OR LOCATION DATA (OPTIONAL)

I HEREBY CERTIFY THE WELL/PUMP INFORMATION DESCRIBED HEREIN IS TRUE AND ACCURATE

PRIMARY CONTRACTOR SIGNATURE JERRY D POPPLEWELL	PERMIT NUMBER 001650	DATE
WELL DRILLER SIGNATURE JERRY D POPPLEWELL	PERMIT NUMBER 001650	DATE
PUMP INSTALLER SIGNATURE	PERMIT NUMBER	DATE

STATEMENT

DATE 1-22-92

NUMBER

JERRY POPPLEWELL
Well Boring & Drilling
Route 1 Box 63-A
AMITY, MISSOURI 64422

Clarksdale (816) 393-5253

MRS. CHAS. MORGAN
6560 S. BILLINGS WAY
ENGLEWOOD, COLORADO 80111

upon receipt

TERMS: Bills are due within ~~30 days of the date~~ of this statement. After 30 days interest will be charged at the rate of 1.5 % per month.

PLEASE DETACH AND RETURN WITH YOUR REMITTANCE $

DATE	CHARGES AND CREDITS	BALANCE	
	BALANCE FORWARD		
	TEST DRILLING		
	60 ft @ $5	300	00
	DIGGING & TILING WELL		
	W. 36" I.D. TILE - 50 ft @ 34	1700	00
	W. 25" 12 @ 28	336	00
	LID	NO CHARGE	
	STATE CERTIFICATION FEE	35	00
	Please fill out the attached form where X's appear and return it to me.		
	pd 1-29-92		
		2371	00

Thank You

PAY LAST AMOUNT IN THIS COLUMN

JERRY POPPLEWELL

Appendix D:

Field Measurements and Inorganic Data for Water Samples

TABLE D.1 Field measurements made during Phase I groundwater sampling at Savannah.

Location	Sample	Depth (ft BGL)	Sample Date	Type[a]	Temperature (°C)	pH	Conductivity (µS/cm)
Adkins	SVADKINS-W-25374	–	10/27/07	DW	12.2	7.10	1085
Barr	SVBARR-W-25377	34.5	10/28/07	DW	10.7	7.31	482
Burks	SVBURK-W-25365	37.76	10/26/07	DW	8.5	7.37	518
City reservoir	SVCITYSI-W-25385	–	10/29/07	PW	NR[b]	NR	NR
City treated	SVCITYTR-W-25384	–	10/29/07	PW	14.2	7.95	1088
Clizer-New	SVCLIZERNEW-W-25378	35.7	10/28/07	DW	9.2	7.31	655
Clizer-Old	SVCLIZEROLD-W-25380	35.7	10/29/07	DW	8.9	7.11	910
Hughes	SVHUGHES-W-25381	56.4	10/29/07	DW	8.9	7.10	855
Hughes Pond	SVHUGHESPD-W-25382	–	10/29/07	SW	NR	NR	NR
Marshall	SVMARSHALL-W-25366	37.18	10/26/07	DW	10.9	7.11	889
McPike	SVMCPIKE-W-25373	48.5	10/28/07	DW	10.8	7.10	610
Miller	SVMILLER-W-25372	54.25	10/27/07	DW	9.9	7.26	763
MoDOT	SVMDOT-W-25368	44	10/26/07	DW	11.2	7.35	695
Moore	SVMOORE-W-25361	–	10/25/07	DW	10.4	7.76	1085
Morgan	SVMORGAN-W-25360	60.58	10/25/07	DW	10.0	7.38	869
Potter	SVPOTTER-W-25376	51.3	10/28/07	DW	10.9	7.22	810
SB24	SVSB24-W-25357	59	10/31/07	CPT	14.1	6.66	463
SB24ts	SV-24S-W-25400	58	12/5/07	CPT/P(t)	4.3	6.47	717
SB38	SVSB38-W-25397	90	3/21/08	CPT/P	18.5	6.43	404

a Sample types: CPT, cone penetrometer; CPT/P, permanent piezometer; CPT/P(t), temporary piezometer; DW, domestic well; PW, public water supply; SW, surface water.

b NR, not recorded.

TABLE D.2 Inorganic results from TestAmerica for Phase I groundwater and surface water samples collected at Savannah.

Location	Sample	Sample Date	Depth (ft BGL)	Concentration (mg/L)						
				Aluminum	Calcium	Chloride[a]	Iron	Magnesium	Manganese[a]	Nitrate[a]
Adkins	SVADKINS-W-25374	10/27/07	–	–	–	–	–	–	–	–
Barr	SVBARR-W-25377	10/28/07	34.5	U[b]<0.2	61.7	5.6	U<0.2	11.7	0.0361	0.28 H[b]
Burks	SVBURK-W-25365	10/26/07	37.76	U<0.2	51.3	23	U<0.2	14	0.234	0.11 H
City reservoir	SVCITYSI-W-25385	10/29/07	–	U<0.2	41.7	36	U<0.2	22.3	U<0.015	0.21 H
City treated	SVCITYTR-W-25384	10/29/07	–	U<0.2	25.9	30	U<0.2	25.4	U<0.015	0.24 H
Clizer-New	SVCLIZERNEW-W-25378	10/28/07	35.7	U<0.2	25.1	2.2	U<0.2	7.72	U<0.015	4.2 H
Clizer-Old	SVCLIZEROLD-W-25380	10/29/07	35.7	U<0.2	24.5	7.5	U<0.2	7.71	0.0534	2.1 H
Hughes	SVHUGHES-W-25381	10/29/07	56.4	U<0.2	57.9	25	U<0.2	12.8	U<0.015	4.4 H
Hughes Pond	SVHUGHESPD-W-25382	10/29/07	–	–	–	–	–	–	–	–
Marshall	SVMARSHALL-W-25366	10/26/07	37.18	U<0.2	62.7	32	U<0.2	16.5	0.105	0.69 H
McPike	SVMCPIKE-W-25373	10/28/07	48.5	U<0.2	30.2	4.2	U<0.2	6.03	U<0.015	1.7 H
Miller	SVMILLER-W-25372	10/27/07	54.25	U<0.2	191	510	U<0.2	54.5	U<0.015	2.2 H
MoDOT	SVMDOT-W-25368	10/26/07	44	U<0.2	69.5	200	U<0.2	21.8	U<0.015	1.4 H
Moore	SVMOORE-W-25361	10/25/07	–	U<0.2	93.1	93	U<0.2	28.9	U<0.015	28 H
Morgan	SVMORGAN-W-25360	10/25/07	60.58	U<0.2	58.8	12	U<0.2	5.73	U<0.015	5.4 H
Potter	SVPOTTER-W-25376	10/28/07	51.3	U<0.2	50.8	11	U<0.2	10.2	0.115	0.13 H

TABLE D.2 (Cont.)

Location	Sample	Concentration (mg/L)							
		Nitrate-Nitrite Nitrogen	Phosphate	Phosphorus	Potassium	Silicon	Sodium	Sulfate	Zinc
Adkins	SVADKINS-W-25374	0.62	–	–	–	–	–	–	–
Barr	SVBARR-W-25377	0.15	U<0.2	U<0.25	U<5	14.5	12.1	18	0.143
Burks	SVBURK-W-25365	<0.1 (0.03 J[b])	U<0.2	U<0.25	U<5	5.57	21.1	26	0.544
City reservoir	SVCITYSI-W-25385	<0.1 (0.076 J)	U<0.2	U<0.25	U<5	0.904	22.9	14	U<0.02
City treated	SVCITYTR-W-25384	0.1	U<0.2	U<0.25	U<5	5.79	24	20	U<0.02
Clizer-New	SVCLIZERNEW-W-25378	4.2	U<0.2	U<0.25	U<5	15.8	11.6	18	U<0.02
Clizer-Old	SVCLIZEROLD-W-25380	3.9	U<0.2	U<0.25	U<5	13.8	14.1	41	0.0329
Hughes	SVHUGHES-W-25381	1.9	U<0.2	U<0.25	U<5	12.4	17.7	40	U<0.02
Hughes Pond	SVHUGHESPD-W-25382	<0.1	–	–	–	–	–	–	–
Marshall	SVMARSHALL-W-25366	0.49	U<0.2	U<0.25	U<5	11.2	23.1	33	0.244
McPike	SVMCPIKE-W-25373	1.5	U<0.2	U<0.25	U<5	15.8	9.03	15	U<0.02
Miller	SVMILLER-W-25372	1	U<0.2	U<0.25	U<5	16.1	37	39	U<0.02
MoDOT	SVMDOT-W-25368	1.6	U<0.2	U<0.25	U<5	17.6	19.1	23	0.0494
Moore	SVMOORE-W-25361	29	U<0.2	U<0.25	U<5	7.36	50.6	89	U<0.02
Morgan	SVMORGAN-W-25360	5.8	U<0.2	U<0.25	U<5	15.3	12.3	26	0.0302
Potter	SVPOTTER-W-25376	<0.1 (0.041 J)	U<0.2	U<0.25	U<5	13.2	14.8	38	U<0.02

[a] Secondary MCL values (mg/L):

Chloride	250
Manganese	0.05
Nitrate	10

[b] Qualifiers:
- H Holding time exceeded.
- J Estimated concentration below method reporting limit.
- U Not detected at method detection limit.

Appendix E:

Analytical Data for Soil Samples

TABLE E.1 Analytical results for volatile organic compounds in surficial and shallow subsurface soil samples collected during the Phase I investigation at Savannah, preserved on dry ice.[a]

				Concentration by Headspace Method (µg//kg)		Concentration by Purge-and-Trap Method (µg/kg)		
Location	Sample	Sample Date	Depth (ft BGL)	Carbon Tetrachloride	Chloroform	Carbon Tetrachloride	Chloroform	Methylene Chloride
SB01	SVSB1-S-25259	10/28/07	1	0.2	ND[b]	ND	ND	ND
SB01	SVSB1-S-25260	10/28/07	4	0.1	ND	ND	ND	ND
SB01	SVSB1-S-25261	10/28/07	8	0.8	ND	ND	ND	ND
SB01	SVSB1-S-25262	10/28/07	12	0.1	ND	ND	ND	ND
SB02	SVSB2-S-25164	10/25/07	1	0.2	ND	ND	ND	ND
SB02	SVSB2-S-25165	10/25/07	4	0.1	ND	ND	ND	ND
SB02	SVSB2-S-25166	10/25/07	8	ND	ND	ND	ND	ND
SB02	SVSB2-S-25167	10/25/07	12	0.2	ND	ND	ND	ND
SB03	SVSB3-S-25273	10/28/07	1	0.1	ND	3.0 J[c]	ND	ND
SB03	SVSB3-S-25274	10/28/07	4	ND	ND	ND	ND	ND
SB03	SVSB3-S-25275	10/28/07	8	0.2	ND	ND	ND	ND
SB03	SVSB3-S-25276	10/28/07	12	2.7	ND	ND	ND	ND
SB04	SVSB4-S-25298	10/29/07	1	1.5	ND	ND	ND	ND
SB04	SVSB4-S-25299	10/29/07	4	1.4	ND	ND	ND	ND
SB04	SVSB4-S-25300	10/29/07	8	1.6	ND	ND	ND	ND
SB04	SVSB4-S-25301	10/29/07	12	15.1	ND	4.8 J	ND	ND
SB05	SVSB5-S-25255	10/27/07	1	ND	ND	ND	ND	ND
SB05	SVSB5-S-25256	10/27/07	4	ND	ND	ND	ND	ND
SB05	SVSB5-S-25257	10/27/07	8	ND	ND	ND	ND	ND
SB05	SVSB5-S-25258	10/27/07	12	ND	ND	ND	ND	ND
SB06	SVSB6-S-25206	10/26/07	1	ND	ND	ND	ND	ND
SB06	SVSB6-S-25207	10/26/07	4	ND	ND	ND	ND	ND
SB06	SVSB6-S-25208	10/26/07	8	ND	ND	ND	ND	ND
SB06	SVSB6-S-25209	10/26/07	12	ND	ND	ND	ND	ND

TABLE E.1 (Cont.)

Location	Sample	Sample Date	Depth (ft BGL)	Concentration by Headspace Method (µg//kg)		Concentration by Purge-and-Trap Method (µg/kg)		
				Carbon Tetrachloride	Chloroform	Carbon Tetrachloride	Chloroform	Methylene Chloride
SB07	SVSB7-S-25294	10/29/07	1	0.5	ND	ND	ND	ND
SB07	SVSB7-S-25295	10/29/07	4	ND	ND	ND	ND	ND
SB07	SVSB7-S-25296	10/29/07	8	ND	ND	ND	ND	ND
SB07	SVSB7-S-25297	10/29/07	10.5	ND	ND	ND	ND	ND
SB08	SVSB8-S-25236	10/27/07	1	ND	ND	ND	ND	ND
SB08	SVSB8-S-25237	10/27/07	4	ND	ND	ND	ND	ND
SB08	SVSB8-S-25238	10/27/07	8	0.1	ND	ND	ND	ND
SB08	SVSB8-S-25239	10/27/07	12	0.4	ND	ND	ND	ND
SB09	SVSB9-S-25241	10/27/07	1	ND	ND	ND	ND	ND
SB09	SVSB9-S-25242	10/27/07	4	ND	ND	ND	ND	ND
SB09	SVSB9-S-25243	10/27/07	8	ND	ND	ND	ND	ND
SB09	SVSB9-S-25244	10/27/07	12	0.3	ND	ND	ND	ND
SB10	SVSB10-S-25247	10/27/07	1	ND	ND	ND	ND	ND
SB10	SVSB10-S-25248	10/27/07	4	ND	ND	ND	ND	ND
SB10	SVSB10-S-25249	10/27/07	8	ND	ND	ND	ND	ND
SB10	SVSB10-S-25250	10/27/07	12	0.2	1.2	ND	ND	ND
SB11	SVSB11-S-25263	10/28/07	1	ND	ND	ND	ND	ND
SB11	SVSB11-S-25264	10/28/07	4	ND	ND	ND	ND	ND
SB11	SVSB11-S-25265	10/28/07	8	ND	ND	ND	ND	ND
SB11	SVSB11-S-25266	10/28/07	12	ND	ND	ND	ND	ND
SB12	SVSB12-S-25202	10/26/07	1	ND	ND	ND	ND	ND
SB12	SVSB12-S-25203	10/26/07	4	ND	ND	ND	ND	ND
SB12	SVSB12-S-25204	10/26/07	8	ND	ND	ND	ND	ND
SB12	SVSB12-S-25205	10/26/07	12	ND	ND	ND	ND	ND
SB13	SVSB13-S-25232	10/27/07	1	0.8	ND	ND	ND	ND
SB13	SVSB13-S-25233	10/27/07	4	0.8	ND	ND	ND	ND
SB13	SVSB13-S-25234	10/27/07	8	1.4	ND	ND	ND	ND
SB13	SVSB13-S-25235	10/27/07	12	2.8	ND	ND	ND	ND

TABLE E.1 (Cont.)

Location	Sample	Sample Date	Depth (ft BGL)	Concentration by Headspace Method (µg//kg)		Concentration by Purge-and-Trap Method (µg/kg)		
				Carbon Tetrachloride	Chloroform	Carbon Tetrachloride	Chloroform	Methylene Chloride
SB14	SVSB14-S-25169	10/25/07	1	ND	ND	ND	ND	ND
SB14	SVSB14-S-25170	10/25/07	4	ND	ND	ND	ND	ND
SB14	SVSB14-S-25171	10/25/07	8	ND	1.0	ND	ND	ND
SB14	SVSB14-S-25172	10/25/07	12	ND	ND	ND	ND	ND
SB15	SVSB15-S-25210	10/26/07	1	0.2	ND	ND	ND	ND
SB15	SVSB15-S-25211	10/26/07	4	0.1	ND	ND	ND	ND
SB15	SVSB15-S-25212	10/26/07	8	ND	ND	ND	ND	ND
SB15	SVSB15-S-25213	10/26/07	12	0.3	ND	ND	ND	ND
SB16	SVSB16-S-25160	10/25/07	1	ND	ND	ND	ND	ND
SB16	SVSB16-S-25161	10/25/07	4	ND	0.8	ND	ND	ND
SB16	SVSB16-S-25162	10/25/07	8	ND	ND	ND	ND	ND
SB16	SVSB16-S-25163	10/25/07	12	ND	ND	ND	ND	ND
SB17	SVSB17-S-25195	10/26/07	1	ND	ND	ND	ND	ND
SB17	SVSB17-S-25196	10/26/07	4	ND	ND	ND	ND	ND
SB17	SVSB17-S-25197	10/26/07	8	0.3	ND	ND	ND	ND
SB17	SVSB17-S-25198	10/26/07	12	1.7	ND	ND	ND	ND
SB18	SVSB18-S-25228	10/26/07	1	ND	ND	ND	ND	ND
SB18	SVSB18-S-25229	10/26/07	4	ND	ND	ND	ND	ND
SB18	SVSB18-S-25230	10/26/07	8	ND	ND	ND	ND	ND
SB18	SVSB18-S-25231	10/26/07	12	0.1	ND	ND	ND	ND
SB19	SVSB19-S-25333	10/30/07	1	ND	ND	ND	ND	ND
SB19	SVSB19-S-25334	10/30/07	4	ND	ND	ND	ND	ND
SB19	SVSB19-S-25335	10/30/07	8	ND	ND	ND	ND	ND
SB19	SVSB19-S-25336	10/30/07	12	ND	ND	ND	ND	ND
SB20	SVSB20-S-25277	10/29/07	1	0.7	ND	ND	ND	ND
SB20	SVSB20-S-25278	10/29/07	4	0.5	ND	ND	ND	ND
SB20	SVSB20-S-25279	10/29/07	8	1.0	ND	ND	ND	ND
SB20	SVSB20-S-25280	10/29/07	12	3.9	ND	ND	ND	ND

TABLE E.1 (Cont.)

Location	Sample	Sample Date	Depth (ft BGL)	Concentration by Headspace Method (µg//kg)		Concentration by Purge-and-Trap Method (µg/kg)		
				Carbon Tetrachloride	Chloroform	Carbon Tetrachloride	Chloroform	Methylene Chloride
SB21	SVSB21-S-25281	10/29/07	1	0.3	ND	ND	ND	ND
SB21	SVSB21-S-25282	10/29/07	4	ND	ND	ND	ND	ND
SB21	SVSB21-S-25283	10/29/07	8	0.2	ND	ND	ND	ND
SB21	SVSB21-S-25284	10/29/07	12	0.8	ND	ND	ND	ND
SB22	SVSB22-S-25173	10/25/07	1	ND	1.1	ND	ND	ND
SB22	SVSB22-S-25174	10/25/07	4	ND	ND	ND	ND	ND
SB22	SVSB22-S-25175	10/25/07	8	ND	ND	ND	ND	ND
SB22	SVSB22-S-25176	10/25/07	12	ND	ND	ND	ND	ND
SB24	SVSB24-S-25251	10/27/07	1	0.9	ND	ND	ND	ND
SB24	SVSB24-S-25252	10/27/07	4	0.5	ND	ND	ND	ND
SB24	SVSB24-S-25253	10/27/07	8	2.0	ND	ND	ND	ND
SB24	SVSB24-S-25254	10/27/07	12	3.5	ND	ND	ND	ND
SB25	SVSB25-S-25269	10/28/07	1	ND	ND	ND	ND	ND
SB25	SVSB25-S-25270	10/28/07	4	ND	ND	ND	ND	ND
SB25	SVSB25-S-25271	10/28/07	8	ND	ND	ND	ND	ND
SB25	SVSB25-S-25272	10/28/07	12	ND	ND	ND	ND	ND
SB26	SVSB26-S-25181	10/25/07	1	ND	ND	ND	ND	ND
SB26	SVSB26-S-25182	10/25/07	4	ND	ND	ND	ND	ND
SB26	SVSB26-S-25183	10/25/07	8	ND	ND	ND	ND	ND
SB26	SVSB26-S-25184	10/25/07	12	ND	ND	ND	ND	ND
SB27	SVSB27-S-25214	10/26/07	1	0.2	ND	ND	ND	ND
SB27	SVSB27-S-25215	10/26/07	4	0.2	ND	ND	ND	ND
SB27	SVSB27-S-25216	10/26/07	8	ND	ND	ND	ND	ND
SB27	SVSB27-S-25217	10/26/07	12	0.3	ND	ND	ND	ND
SB28	SVSB28-S-25222	10/26/07	1	ND	ND	ND	ND	ND
SB28	SVSB28-S-25223	10/26/07	4	ND	ND	ND	ND	ND
SB28	SVSB28-S-25224	10/26/07	8	ND	ND	ND	ND	ND
SB28	SVSB28-S-25225	10/26/07	12	0.2	ND	ND	ND	ND

TABLE E.1 (Cont.)

Location	Sample	Sample Date	Depth (ft BGL)	Concentration by Headspace Method (µg//kg)		Concentration by Purge-and-Trap Method (µg/kg)		
				Carbon Tetrachloride	Chloroform	Carbon Tetrachloride	Chloroform	Methylene Chloride
SB29	SVSB29-S-25315	10/30/07	1	0.4	ND	ND	ND	ND
SB29	SVSB29-S-25316	10/30/07	4	0.4	ND	ND	ND	ND
SB29	SVSB29-S-25317	10/30/07	8	1.6	ND	ND	ND	ND
SB29	SVSB29-S-25318	10/30/07	12	3.4	ND	ND	ND	ND
SB30	SVSB30-S-25285	10/30/07	1	ND	ND	ND	ND	ND
SB30	SVSB30-S-25286	10/30/07	4	ND	ND	ND	ND	ND
SB30	SVSB30-S-25287	10/30/07	8	0.8	ND	ND	ND	ND
SB30	SVSB30-S-25288	10/30/07	12	2.7	ND	ND	ND	ND
SB31	SVSB31-S-25177	10/25/07	1	ND	ND	ND	ND	ND
SB31	SVSB31-S-25178	10/25/07	4	ND	ND	ND	ND	ND
SB31	SVSB31-S-25179	10/25/07	8	ND	ND	ND	ND	ND
SB31	SVSB31-S-25180	10/25/07	12	ND	ND	ND	ND	ND
SB32	SVSB32-S-25187	10/26/07	1	ND	ND	ND	ND	ND
SB32	SVSB32-S-25188	10/26/07	4	ND	ND	ND	ND	ND
SB32	SVSB32-S-25189	10/26/07	8	ND	ND	ND	ND	ND
SB32	SVSB32-S-25190	10/26/07	12	ND	ND	ND	ND	ND
SB33	SVSB33-S-25191	10/26/07	1	ND	ND	ND	ND	ND
SB33	SVSB33-S-25192	10/26/07	4	ND	ND	ND	ND	ND
SB33	SVSB33-S-25193	10/26/07	8	ND	ND	ND	ND	ND
SB33	SVSB33-S-25194	10/26/07	12	ND	ND	ND	ND	ND
SB34	SVSB34-S-25218	10/26/07	1	ND	ND	ND	ND	ND
SB34	SVSB34-S-25219	10/26/07	4	ND	ND	ND	ND	ND
SB34	SVSB34-S-25220	10/26/07	8	ND	ND	ND	ND	ND
SB34	SVSB34-S-25221	10/26/07	12	0.1	ND	ND	ND	ND

TABLE E.1 (Cont.)

Location	Sample	Sample Date	Depth (ft BGL)	Concentration by Headspace Method (µg//kg)		Concentration by Purge-and-Trap Method (µg/kg)		
				Carbon Tetrachloride	Chloroform	Carbon Tetrachloride	Chloroform	Methylene Chloride
SB35	SVSB35-S-25319	10/30/07	1	ND	ND	ND	ND	ND
SB35	SVSB35-S-25320	10/30/07	4	ND	ND	ND	ND	ND
SB35	SVSB35-S-25321	10/30/07	7	ND	ND	ND	ND	ND
SB35	SVSB35-S-25323	10/30/07	8	ND	ND	ND	ND	ND
SB35	SVSB35-S-25322	10/30/07	12	0.3	ND	ND	ND	ND
SB36	SVSB36-S-25324	10/30/07	1	ND	ND	ND	ND	ND
SB36	SVSB36-S-25325	10/30/07	4	ND	ND	ND	ND	ND
SB36	SVSB36-S-25326	10/30/07	8	ND	ND	ND	ND	ND
SB36	SVSB36-S-25327	10/30/07	12	ND	ND	ND	ND	ND
SB37	SVSB37-S-25328	10/30/07	1	ND	ND	ND	ND	ND
SB37	SVSB37-S-25329	10/30/07	4	ND	ND	ND	ND	ND
SB37	SVSB37-S-25330	10/30/07	8	0.1	ND	ND	ND	ND
SB37	SVSB37-S-25331	10/30/07	12	0.6	ND	ND	ND	ND
SB38	SVSB38-S-25305	10/30/07	1	0.3	ND	ND	ND	ND
SB38	SVSB38-S-25306	10/30/07	4	0.3	ND	ND	ND	ND
SB38	SVSB38-S-25307	10/30/07	8	1.9	ND	ND	ND	ND
SB38	SVSB38-S-25308	10/30/07	12	9.4	ND	ND	ND	ND
SB39	SVSB39-S-25311	10/30/07	1	ND	ND	ND	ND	ND
SB39	SVSB39-S-25312	10/30/07	4	0.2	ND	ND	ND	ND
SB39	SVSB39-S-25313	10/30/07	8	1.4	ND	ND	ND	ND
SB39	SVSB39-S-25314	10/30/07	12	4.4	ND	ND	ND	ND
SB40	SVSB40-S-25290	10/29/07	1	0.2	ND	ND	ND	ND
SB40	SVSB40-S-25291	10/29/07	4	ND	ND	ND	ND	ND
SB40	SVSB40-S-25292	10/29/07	8	0.1	ND	ND	ND	ND
SB40	SVSB40-S-25293	10/29/07	12	0.3	ND	ND	ND	ND

TABLE E.1 (Cont.)

Location	Sample	Sample Date	Depth (ft BGL)	Concentration by Headspace Method (µg//kg)		Concentration by Purge-and-Trap Method (µg/kg)		
				Carbon Tetrachloride	Chloroform	Carbon Tetrachloride	Chloroform	Methylene Chloride
SB41	SVSB41-S-25350	10/31/07	1	0.2	ND	ND	ND	ND
SB41	SVSB41-S-25351	10/31/07	4	ND	ND	ND	ND	ND
SB41	SVSB41-S-25352	10/31/07	8	0.1	ND	ND	ND	ND
SB41	SVSB41-S-25353	10/31/07	12	0.3	ND	ND	ND	ND

[a] Concentration limits (µg/kg):

Headspace method reporting limit for carbon tetrachloride	0.1
Headspace method reporting limit for chloroform	0.75
Purge-and-trap method detection limits for carbon tetrachloride and chloroform	1.0
Purge-and-trap method quantitation limits for carbon tetrachloride and chloroform	10

[b] ND, not detected at the instrument detection limit.

[c] Qualifier J indicates an estimated concentration below the purge-and-trap method quantitation limit of 10 µg/kg.

TABLE E.2 Comparison of analytical results for volatile organic compounds in surficial and shallow subsurface soil samples collected during the Phase I investigation at Savannah, preserved with dry ice or EnCore devices.[a]

				Concentration in Aliquots Preserved on Dry Ice (µg/kg)				Concentration in Aliquots Preserved with EnCore Samplers (µg/kg)			
				Headspace Method		Purge-and-Trap Method		Headspace Method		Purge-and-Trap Method	
Location	Sample[b]	Sample Date	Depth (ft BGL)	Carbon Tetrachloride	Chloroform	Carbon Tetrachloride	Chloroform	Carbon Tetrachloride	Chloroform	Carbon Tetrachloride	Chloroform
SB01	SVSB1-S-25261	10/28/07	8	0.8	ND[c]	ND	ND	1.2	ND	ND	ND
SB02	SVSB2-S-25166	10/25/07	8	ND	ND	ND	ND	ND	ND	ND	ND
SB03	SVSB3-S-25274	10/28/07	4	ND	ND	ND	ND	ND	ND	ND	ND
SB04	SVSB4-S-25298	10/29/07	1	1.5	ND	ND	ND	1.7	ND	ND	ND
SB06	SVSB6-S-25208	10/26/07	8	ND	ND	ND	ND	ND	ND	ND	ND
SB08	SVSB8-S-25237	10/27/07	4	ND	ND	ND	ND	ND	ND	ND	ND
SB09	SVSB9-S-25243	10/27/07	8	ND	ND	ND	ND	ND	ND	ND	ND
SB10	SVSB10-S-25250	10/27/07	12	0.2	1.2	ND	ND	0.2	1.3	ND	ND
SB11	SVSB11-S-25264	10/28/07	4	ND	ND	ND	ND	ND	ND	ND	ND
SB12	SVSB12-S-25203	10/26/07	4	ND	ND	ND	ND	ND	ND	ND	ND
SB13	SVSB13-S-25232	10/27/07	1	0.8	ND	ND	ND	0.9	ND	ND	ND
SB14	SVSB14-S-25172	10/25/07	12	ND	ND	ND	ND	ND	ND	ND	ND
SB15	SVSB15-S-25213	10/26/07	12	0.3	ND	ND	ND	0.3	ND	ND	ND
SB16	SVSB16-S-25161	10/25/07	4	ND	0.8	ND	ND	ND	ND	ND	ND
SB17	SVSB17-S-25195	10/26/07	1	ND	ND	ND	ND	ND	ND	ND	ND
SB18	SVSB18-S-25231	10/26/07	12	0.1	ND	ND	ND	0.2	ND	ND	ND
SB19	SVSB19-S-25335	10/30/07	8	ND	ND	ND	ND	ND	ND	ND	ND
SB20	SVSB20-S-25277	10/29/07	1	0.7	ND	ND	ND	0.6	ND	ND	ND
SB21	SVSB21-S-25282	10/29/07	4	ND	ND	ND	ND	0.1	ND	ND	ND
SB22	SVSB22-S-25173	10/25/07	1	ND	1.1	ND	ND	ND	ND	ND	ND
SB24	SVSB24-S-25251	10/27/07	1	0.9	ND	ND	ND	0.6	ND	ND	ND
SB25	SVSB25-S-25272	10/28/07	12	ND	ND	ND	ND	ND	ND	ND	ND

TABLE E.2 (Cont.)

				Concentration in Aliquots Preserved on Dry Ice (µg/kg)				Concentration in Aliquots Preserved with EnCore Samplers (µg/kg)			
				Headspace Method		Purge-and-Trap Method		Headspace Method		Purge-and-Trap Method	
Location	Sample[b]	Sample Date	Depth (ft BGL)	Carbon Tetrachloride	Chloroform	Carbon Tetrachloride	Chloroform	Carbon Tetrachloride	Chloroform	Carbon Tetrachloride	Chloroform
SB26	SVSB26-S-25182	10/25/07	4	ND	ND	ND	ND	ND	ND	ND	ND
SB27	SVSB27-S-25214	10/26/07	1	0.2	ND	ND	ND	0.2	ND	ND	ND
SB28	SVSB28-S-25223	10/26/07	4	ND	ND	ND	ND	ND	ND	ND	ND
SB29	SVSB29-S-25318	10/30/07	12	3.4	ND	ND	ND	4.1	ND	ND	ND
SB30	SVSB30-S-25287	10/30/07	8	0.8	ND	ND	ND	0.7	ND	ND	ND
SB31	SVSB31-S-25177	10/25/07	1	ND	ND	ND	ND	ND	ND	ND	ND
SB32	SVSB32-S-25189	10/26/07	8	ND	ND	ND	ND	ND	ND	ND	ND
SB33	SVSB33-S-25194	10/26/07	12	ND	ND	ND	ND	ND	ND	ND	ND
SB34	SVSB34-S-25220	10/26/07	8	ND	ND	ND	ND	ND	ND	ND	ND
SB35	SVSB35-S-25320	10/30/07	4	ND	ND	ND	ND	ND	ND	ND	ND
SB36	SVSB36-S-25324	10/30/07	1	ND	ND	ND	ND	ND	ND	ND	ND
SB37	SVSB37-S-25329	10/30/07	4	ND	ND	ND	ND	ND	ND	ND	ND
SB38	SVSB38-S-25306	10/30/07	4	0.3	ND	ND	ND	0.4	ND	ND	ND
SB39	SVSB39-S-25313	10/30/07	8	1.4	ND	ND	ND	1.4	ND	ND	ND
SB40	SVSB40-S-25292	10/29/07	8	0.1	ND	ND	ND	0.1	ND	ND	ND

[a] Concentration limits (µg/kg):

Method	Analyte	Limit	Value
Headspace	Carbon tetrachloride	Reporting	0.1
	Chloroform	Reporting	0.75
Purge and trap	Carbon tetrachloride	Detection	1.0
	Chloroform	Detection	1.0
	Carbon tetrachloride	Quantitation	10
	Chloroform	Quantitation	10

[b] Samples preserved with the EnCore devices are desginated by an 'A' suffix attached to their sample numbers.

[c] ND, not detected.

TABLE E.3 Analytical results for volatile organic compounds in deeper subsurface soil samples collected during the Phase I investigation at Savannah.

				Headspace Method		Purge-and-Trap Method		
Location	Sample	Sample Date	Depth (ft BGL)	Carbon Tetrachloride (µg/kg)	Chloroform (µg/kg)	Carbon Tetrachloride (µg/kg)	Chloroform (µg/kg)	Methylene Chloride (µg/kg)
SB24[a]	SVSB24-S-25251	10/27/07	1	0.9	ND[b]	ND	ND	ND
SB24[a]	SVSB24-S-25252	10/27/07	4	0.5	ND	ND	ND	ND
SB24[a]	SVSB24-S-25253	10/27/07	8	2.0	ND	ND	ND	ND
SB24[a]	SVSB24-S-25254	10/27/07	12	3.5	ND	ND	ND	ND
SB24	SVSB24-S-25340	10/31/07	16	4.8	ND	ND	ND	ND
SB24	SVSB24-S-25341	10/31/07	20	3.4	ND	ND	ND	ND
SB24	SVSB24-S-25342	10/31/07	24	8.6	ND	1.3 J[c]	ND	ND
SB24	SVSB24-S-25343	10/31/07	28	5.8	ND	ND	ND	ND
SB24	SVSB24-S-25344	10/31/07	32	4.5	ND	ND	ND	ND
SB24	SVSB24-S-25345	10/31/07	36	4.7	0.8	1.2 J	ND	ND
SB24	SVSB24-S-25346	10/31/07	40	4.0	ND	ND	ND	ND
SB24	SVSB24-S-25347	10/31/07	44	2.9	0.8	ND	ND	ND
SB24	SVSB24-S-25348	10/31/07	48	3.9	ND	6.3 J	ND	ND
SB24	SVSB24-S-25349	10/31/07	52	13.7	ND	2.9 J	ND	ND
SB24	SVSB24-S-25355	10/31/07	56	13.5	ND	2.9 J	ND	ND
SB24	SVSB24-S-25563	11/1/07	60	6.5	ND	2.5 J	ND	ND
SB24	SVSB24-S-25356	11/1/07	64	4.0	ND	ND	ND	ND
SB24	SVSB24-S-25359	11/1/07	68	0.7	ND	ND	ND	ND
SB24	SVSB24-S-25565	11/1/07	72	ND	ND	ND	ND	ND
SB24	SVSB24-S-25560	11/1/07	76	ND	ND	ND	ND	ND
SB24	SVSB24-S-25561	11/1/07	80	ND	ND	ND	ND	ND
SB24	SVSB24-S-25562	11/1/07	84	ND	ND	ND	ND	ND
SB24	SVSB24-S-25566	11/1/07	88	ND	ND	ND	ND	ND
SB24	SVSB24-S-25568	11/1/07	90.5	ND	ND	ND	ND	ND
SB29[a]	SVSB29-S-25315	10/30/07	1	0.4	ND	ND	ND	ND
SB29[a]	SVSB29-S-25316	10/30/07	4	0.4	ND	ND	ND	ND
SB29[a]	SVSB29-S-25317	10/30/07	8	1.6	ND	ND	ND	ND
SB29[a]	SVSB29-S-25318	10/30/07	12	3.4	ND	ND	ND	ND
SB29	SVSB29-S-25618	1/29/08	16	5.3	ND	ND	ND	ND
SB29	SVSB29-S-25619	1/29/08	20	2.0	ND	ND	ND	ND
SB29	SVSB29-S-25620	1/29/08	24	2.4	ND	ND	ND	ND
SB29	SVSB29-S-25621	1/29/08	28	0.9	ND	ND	ND	ND

TABLE E.3 (Cont.)

				Headspace Method		Purge-and-Trap Method		
Location	Sample	Sample Date	Depth (ft BGL)	Carbon Tetrachloride (µg/kg)	Chloroform (µg/kg)	Carbon Tetrachloride (µg/kg)	Chloroform (µg/kg)	Methylene Chloride (µg/kg)
SB29	SVSB29-S-25622	1/29/08	32	0.9	ND	ND	ND	ND
SB29	SVSB29-S-25626	1/30/08	36	0.5	ND	ND	ND	ND
SB29	SVSB29-S-25623	1/30/08	40	0.4	ND	ND	ND	ND
SB29	SVSB29-S-25627	1/30/08	44	0.6	ND	ND	ND	ND
SB29	SVSB29-S-25624	1/30/08	48	3.2	ND	3.2 J	ND	ND
SB29	SVSB29-S-25628	1/30/08	52	3.1	ND	2.2 J	ND	ND
SB29	SVSB29-S-25635	1/31/08	56	2.3	ND	ND	ND	ND
SB29	SVSB29-S-25630	1/30/08	60	1.4	ND	1.5 J	ND	ND
SB29	SVSB29-S-25636	1/31/08	64	0.5	ND	ND	ND	ND
SB29	SVSB29-S-25631	1/30/08	68	0.2	ND	ND	ND	ND
SB29	SVSB29-S-25637	1/31/08	72	ND	ND	ND	ND	ND
SB29	SVSB29-S-25632	1/30/08	76	ND	ND	ND	ND	ND
SB29	SVSB29-S-25638	1/31/08	80	ND	ND	ND	ND	ND
SB29	SVSB29-S-25633	1/30/08	84	ND	ND	ND	ND	ND
SB38[a]	SVSB38-S-25305	10/30/07	1	0.3	ND	ND	ND	ND
SB38[a]	SVSB38-S-25306	10/30/07	4	0.3	ND	ND	ND	ND
SB38[a]	SVSB38-S-25307	10/30/07	8	1.9	ND	ND	ND	ND
SB38[a]	SVSB38-S-25308	10/30/07	12	9.4	ND	ND	ND	ND
SB38	SVSB38-S-25594	1/28/08	16	7.4	ND	3.3 J	ND	ND
SB38	SVSB38-S-25595	1/28/08	20	33.4	ND	22	ND	ND
SB38	SVSB38-S-25596	1/28/08	24	44.1	ND	19	ND	ND
SB38	SVSB38-S-25597	1/28/08	28	86.0	0.8	42	ND	ND
SB38	SVSB38-S-25607	1/29/08	32	84.2	1.1	24	ND	ND
SB38	SVSB38-S-25598	1/28/08	36	23.8	0.8	7.4 J	ND	ND
SB38	SVSB38-S-25614	1/29/08	40	7.0	ND	ND	ND	ND
SB38	SVSB38-S-25599	1/28/08	44	3.6	ND	2.6 J	ND	ND
SB38	SVSB38-S-25609	1/29/08	48	42.6	ND	16	ND	ND
SB38	SVSB38-S-25600	1/28/08	52	28.2	ND	12	ND	ND
SB38	SVSB38-S-25610	1/29/08	56	32.8	ND	16	ND	ND
SB38	SVSB38-S-25601	1/28/08	60	15.5	ND	6.2 J	ND	ND
SB38	SVSB38-S-25611	1/29/08	64	18.2	ND	10	ND	ND
SB38	SVSB38-S-25603	1/28/08	68	3.9	ND	3 J	ND	ND
SB38	SVSB38-S-25613	1/29/08	72	4.8	ND	ND	ND	ND

TABLE E.3 (Cont.)

				Headspace Method		Purge-and-Trap Method		
Location	Sample	Sample Date	Depth (ft BGL)	Carbon Tetrachloride (µg/kg)	Chloroform (µg/kg)	Carbon Tetrachloride (µg/kg)	Chloroform (µg/kg)	Methylene Chloride (µg/kg)
SB38	SVSB38-S-25604	1/29/08	76	0.7	ND	ND	ND	ND
SB38	SVSB38-S-25615	1/29/08	80	ND	ND	ND	ND	ND
SB38	SVSB38-S-25605	1/29/08	84	ND	ND	ND	ND	ND
SB38	SVSB38-S-25616	1/29/08	88	ND	ND	ND	ND	ND
SB38	SVSB38-S-25606	1/29/08	92	ND	ND	ND	ND	ND
SB38	SVSB38-S-25617	1/29/08	96	ND	ND	ND	ND	ND
SB04[a,d]	SVSB4-S-25298	10/29/07	1	1.5	ND	ND	ND	ND
SB04[a,d]	SVSB4-S-25299	10/29/07	4	1.4	ND	ND	ND	ND
SB04[a,d]	SVSB4-S-25300	10/29/07	8	1.6	ND	ND	ND	ND
SB04[a,d]	SVSB4-S-25301	10/29/07	12	15.1	ND	4.8 J	ND	ND
SB42	SVSB42-S-25570	11/2/07	16	18.2	ND	4.1 J	ND	ND
SB42	SVSB42-S-25571	11/2/07	20	15.1	ND	ND	ND	ND
SB42	SVSB42-S-25572	11/2/07	24	12.7	ND	ND	ND	ND
SB42	SVSB42-S-25573	11/2/07	28	13.5	ND	ND	ND	ND
SB42	SVSB42-S-25584	1/28/08	32	12.8	ND	6 J	ND	ND
SB42	SVSB42-S-25574	11/2/07	36	12.3	ND	2.2 J	ND	ND
SB42	SVSB42-S-25585	1/28/08	40	20.8	ND	7.3 J	ND	ND
SB42	SVSB42-S-25575	11/2/07	44	323	0.9	171	ND	ND
SB42	SVSB42-S-25586	1/28/08	48	286	0.8	126	3.3 J	ND
SB42	SVSB42-S-25576	11/2/07	52	69.0	ND	15	1.6 J	ND
SB42	SVSB42-S-25588	1/28/08	56	170	ND	77	ND	ND
SB42	SVSB42-S-25578	11/2/07	60	4.1	ND	ND	ND	ND
SB42	SVSB42-S-25589	1/28/08	64	0.2	ND	ND	ND	ND
SB42	SVSB42-S-25579	11/2/07	68	ND	ND	ND	ND	ND
SB42	SVSB42-S-25590	1/28/08	72	ND	ND	ND	ND	ND
SB42	SVSB42-S-25581	11/2/07	76	ND	ND	ND	ND	ND
SB42	SVSB42-S-25592	1/28/08	80	ND	ND	ND	ND	ND

TABLE E.3 (Cont.)

				Headspace Method		Purge-and-Trap Method		
Location	Sample	Sample Date	Depth (ft BGL)	Carbon Tetrachloride (µg/kg)	Chloroform (µg/kg)	Carbon Tetrachloride (µg/kg)	Chloroform (µg/kg)	Methylene Chloride (µg/kg)
SB42	SVSB42-S-25582	11/2/07	84	0.1	ND	ND	ND	ND
SB42	SVSB42-S-25593	1/28/08	88	ND	ND	ND	ND	ND
SB42	SVSB42-S-25583	11/2/07	90.5	ND	ND	ND	ND	ND

[a] Surficial and shallow subsurface data are included to illustrate the complete vertical profile.

[b] NC, not detected at the following instrument detection limits (µg/kg):

Carbon tetrachloride by headspace method	0.1
Chloroform by headspace method	0.75
Carbon tetrachloride by purge-and-trap method	1.0
Chloroform by purge-and-trap method	1.0

[c] Qualifier J indicates an estimated concentration below the purge-and-trap method quantitation limit of 10 µg/kg.

[d] Deep boring SB42 was advanced as a lateral offset at 6 ft from shallow boring SB04, to facilitate deeper sampling with the CPT.

Appendix F:

Soil Core Descriptions and Results of Physical Property Analyses

Argonne National Laboratory

Boring ID: TP-01

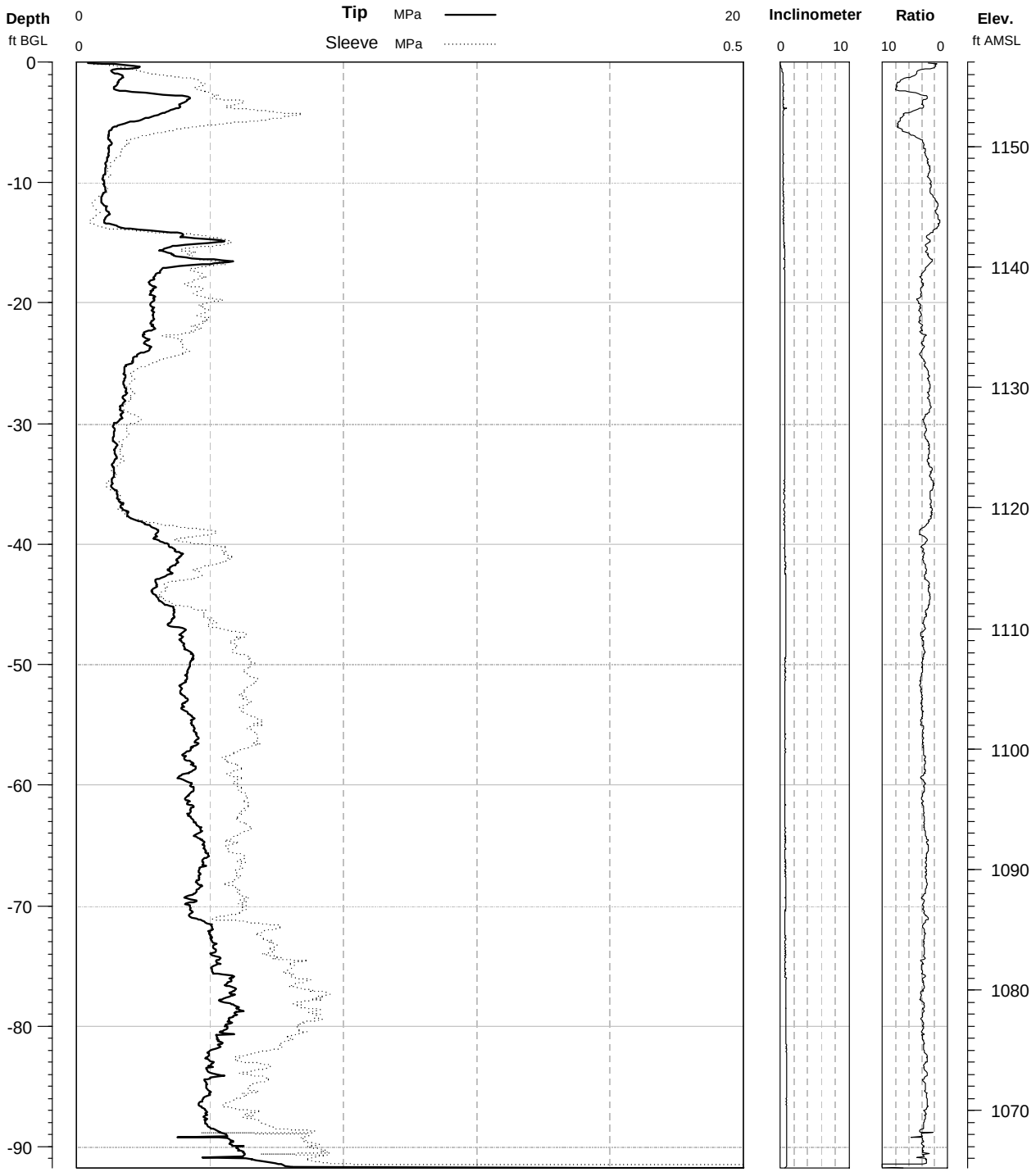
Project: Savannah, MO Phase I

Elevation: 1157 ft

Geologist: Bob Sedivy

Depth: 91.797 ft BGL

Log Date: 10/25/2007

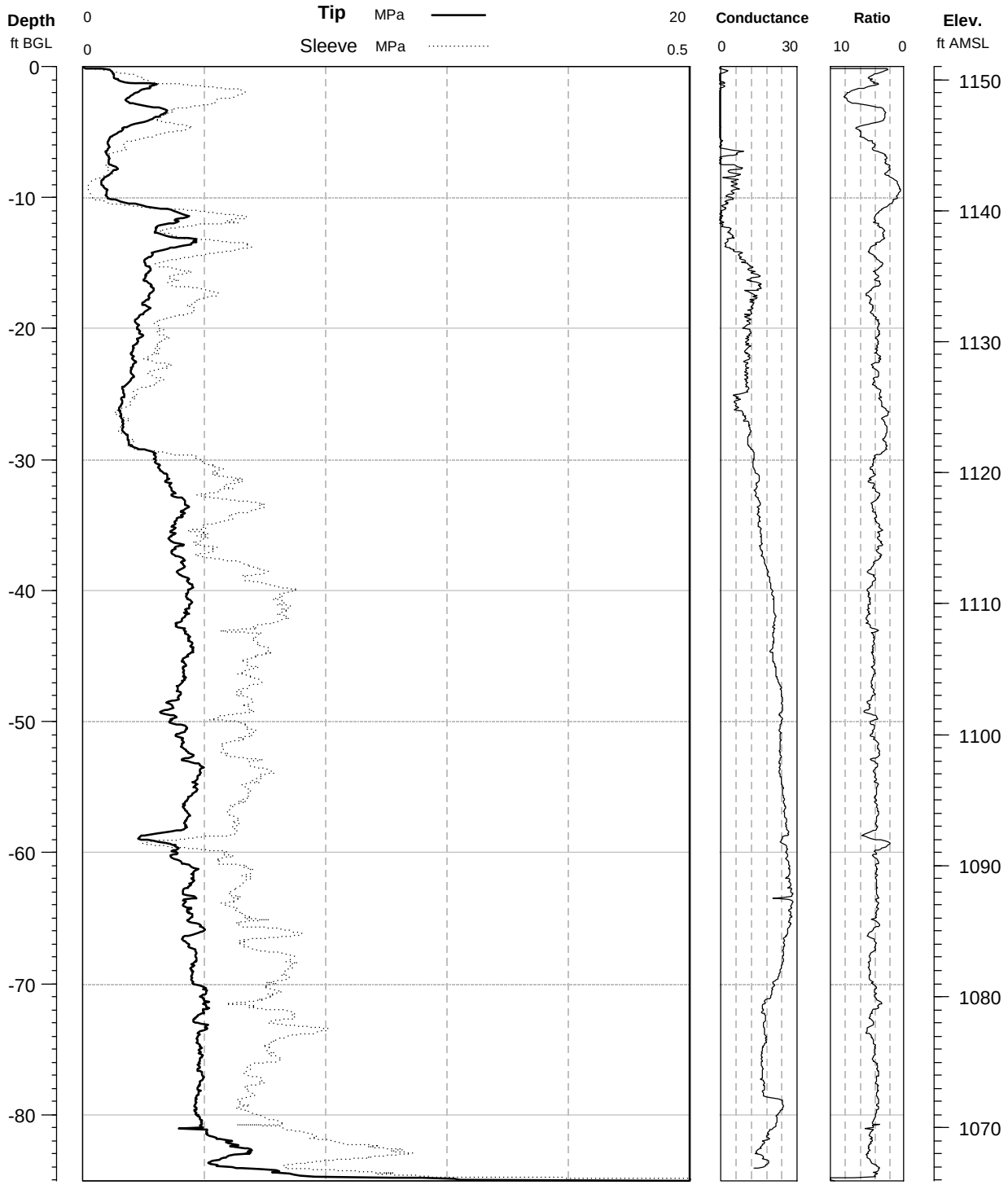


Argonne National Laboratory

Boring ID: TP-02

Project: Savannah, MO Phase I **Elevation:** 1151 ft

Geologist: Bob Sedivy **Depth:** 85.039 ft BGL **Log Date:** 10/25/2007

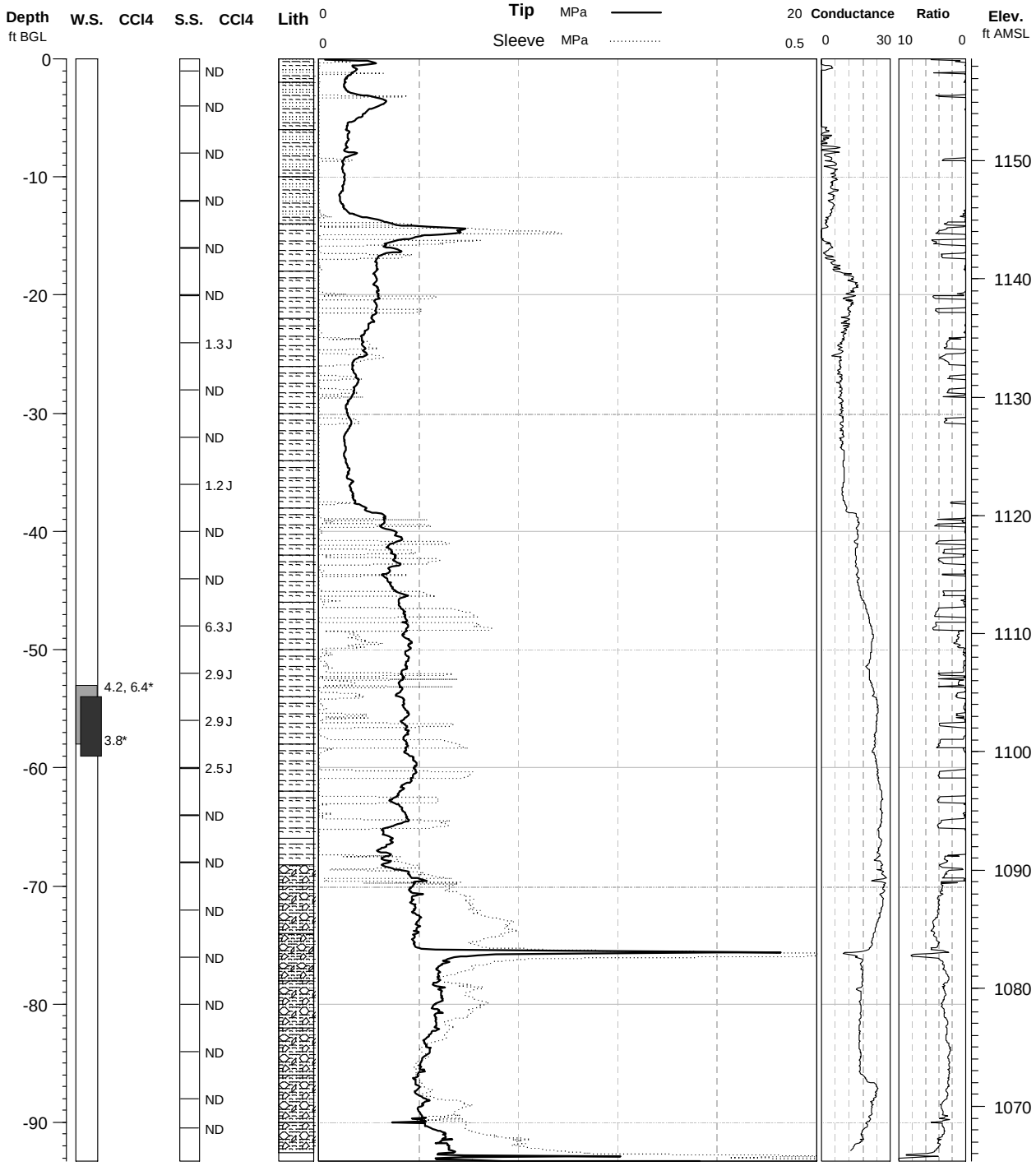


Argonne National Laboratory

Boring ID: SB24

Project: Savannah, MO Phase I **Elevation:** 1158.646 ft

Geologist: Bob Sedivy **Depth:** 93.307 ft BGL **Log Date:** 10/31/2007



*A temporary piezometer at 53-58 ft sampled twice on different dates yielded results of 4.2ppb and 6.4ppb.
A grab sample from 54-59 ft yielded results of 3.8ppb.

Argonne National Laboratory

Boring ID: SB24

Project: Savannah, MO Phase I

Elevation: 1158.646 ft

Geologist: Bob Sedivy

Depth: 92.56 ft BGL

Log Date: 10/31/2007

Depth ft BGL	Water Sample	CCl4 W.S.	Soil Sample	CCl4 S.S.	Lithology	LITHOLOGY DESCRIPTION	Elev ft AMSL
0				ND		SILT, CLAY, AND SAND: Fine sand, black (10YR), organic rich, fine roots.	
-5				ND		SILT, CLAY, AND SAND: Fine sand, dark yellowish brown (10YR), dry, friable, with orange (iron) staining and black (manganese/iron) specks.	1155
-10				ND		SILT, CLAY, AND SAND: As above.	1150
				ND		SILT, CLAY, AND SAND: As above, light yellowish brown (10YR), slightly firmer with depth.	1145
-15				ND		SILTY CLAY: Pale brown (10YR), dry, friable with orange stain and black specks 14'-16'. Brown, damp, more dense and stiff 16'-18' with black specks and streaks, non-calcareous.	
-20				ND		SILTY CLAY: Brown (10YR) with orange staining 18'-20.2'. Light yellowish brown (10YR) 20.2'-22' with orange/black streaks and patchy orange stain, dense, firm, stiff, damp.	1140
-25				1.3 J		SILTY CLAY: As 20.2'-22'. Becomes light brownish gray (2.5Y) to light yellowish brown (10YR) with depth.	1135
-30				ND		SILTY CLAY: Yellowish brown (10YR), dense, stiff, damp, slightly softer 28.9'-30'.	1130
-35				ND		SILTY CLAY: Uniform dark yellowish brown to yellowish brown (10YR), stiff, dense, slightly softer, more sticky 33'-34'.	1125
-40				1.2 J		SILTY CLAY: Yellowish brown to dark yellowish brown (10YR), stiff, dense, faint orange staining, non-calcareous.	1120
-45				ND		SILTY CLAY: Brown (10YR), stiff, damp, orange/black mottling and black streaks; streaks prominent 40'-40.8'.	1115
				ND		SILTY CLAY: Pale brown (10YR) to light gray (2.5Y), stiff, dense, damp, with faint orange stain, occasional black streaks.	

Carbon tetrachloride in soil sample = micrograms/kg

SB24 Pg. 2

Depth	W.S.	CCl4 WS	S.S.	CCl4 SS	LITH	LITHOLOGY	Elev
				6.3 J		SILTY CLAY: As above, light gray (2.5Y).	1110
-50				2.9 J		SILTY CLAY: As above. Softer, more sticky 50'-50.6', non-calcareous.	1105
-55		4.2, 6.4*		2.9 J		SILTY CLAY: Uniform light gray (2.5Y), dense, firm, damp, with faint orange stain. Free water in barrel at ~56.5', at (open) separation in core? Core slightly softer above and below water interval.	
-60		3.8*		2.5 J		SILTY CLAY: Uniform light gray (2.5Y), firm, stiff, dense, damp, occasional faint orange stain, and corroded nodules, occasional thin black streaks.	1100
-65				ND		SILTY CLAY: As above.	1095
				ND		SILTY CLAY: As above.	
-70				ND		SILTY CLAY TILL: Uniform light gray (2.5Y), firm, damp, with frequent white calcareous nodules and patches and thin black streaks.	1090
-75				ND		SILTY CLAY TILL: Uniform light gray (2.5Y), firm, stiff, damp, occasional thin black streaks, very faint, pathy orange staining 73.4'-74', rare small white calcareous nodules.	1085
-80				ND		SILTY CLAY TILL WITH SAND: With occasional sand grains, uniform light gray (2.5Y), firm, stiff, dense, damp 74'-75.3'. Silty clay, light yellowish brown (2.5Y) with sand 75.3'-78' with frequent small calcareous nodules. Larger calcareous, granular patches at 75.8'-76.1', 76.8', 77.8'-78'.	1080
-85				ND		SILTY CLAY TILL: Light gray (2.5Y), with pale orange mottling, dense, firm, damp, with occasional calcareous nodules. Softer, stickier interval 78'-78.8'. Some free water in bottom rod, core damp.	1075
-90				ND		SILTY CLAY TILL: As above, with calcareous nodules and non-calcareous pebbles to 0.75in. Top of core slightly softer, sticky. Brief water flow up through rods. Core damp.	1070
				ND		SILTY CLAY TILL: As above, light brownish gray (2.5Y). Frequent calcareous nodules and non-calcareous pebbles to 1in. Large granular calcareous patch at 87.7'-87.9'.	
				ND		SILTY CLAY TILL: As above, light gray (2.5Y), granular, calcareous material in tip.. Refusal at 92.1ft, but 4ft recovery-expansion? Reach 92.56' in 2nd attempt to tag bedrock, recover only small amount of coarse gravel in tip. Some free water in barrel.	

*A temporary piezometer at 53-58 ft sampled twice on different dates yielded results of 4.2ppb and 6.4ppb.
A grab sample from 54-59 ft yielded results of 3.8ppb.

Argonne National Laboratory

Boring ID: SB29

Project: Savannah, MO Phase I

Elevation: 1158 ft

Geologist: Bob Sedivy

Depth: 92.76 ft BGL

Log Date: 1/29-31/2008

Depth ft BGL	Soil Sample	CCl4 S.S.	Lithology	LITHOLOGY DESCRIPTION	Elev ft AMSL
0		ND		SILT, CLAY, AND SAND: Fine sand, black (10YR), organic rich, fine roots, dry.	
-5		ND		CLAYEY SILT WITH SAND: Fine sand, dark yellowish brown, (10YR), friable, abundant orange (iron) stain.	1155
-10		ND		CLAYEY SILT WITH SAND: Fine sand, dark yellowish brown (10YR), friable, variable light orange stain.	1150
-15		ND		CLAYEY SILT: To silty clay, grayish brown to yellowish brown (10YR), friable, variable orange stain.	1145
-20		ND		SILTY CLAY: Pale brown (10YR) , black (manganese/iron) specks, dry, friable 14'-16', more dense, firm, damp 16'-end of core, non-calcareous.	1140
-25		ND		SILTY CLAY: Light brown (7.5YR), black specks, damp, dense, firm, with slight orange staining.	1135
-30		ND		SILTY CLAY: Slightly siltier?, light brown (7.5YR) , softer, sticky, damp.	1130
-35		ND		SILTY CLAY: As above, brown (7.5YR).	1125
-40		ND		SILTY CLAY: As above.	1120
-45		ND		SILTY CLAY: As above, light yellowish brown (10YR).	1115
				SILTY CLAY: Light gray (2.5Y), dense, firm, damp, orange/black stain in streaks and patches. Collect sample for physical properties at 41'-41.5'.	
				SILTY CLAY: Light gray (2.5Y), damp, dense, firm, stiff, orange/black streaks, non-calcareous.	

Carbon tetrachloride in soil sample = micrograms/kg

SB29 Pg. 2

Depth	S.S.	CCl4 SS	LITH	LITHOLOGY	Elev
		3.2 J		SILTY CLAY: As above, light brownish gray (2.5Y).	1110
-50		2.2 J		SILTY CLAY: Light brownish gray (2.5Y), dense, damp, firm, black streaks, few orange streaks.	1105
-55		ND		SILTY CLAY: Light gray (2.5Y), dense. firm, diagonal (closed) fractures at 54.8', 55.4', soft interval part way across core at 56.1'-56.3'. Minor black streaks.	1100
-60		1.5 J		SILTY CLAY: Light gray (2.5Y), dense, damp, firm, black streaks, few orange streaks, non-calcareous.	
-65		ND		SILTY CLAY: Light brownish gray (2.5Y), dense, firm, diagonal (closed) fractures at 63.5', 63.9', 64.4', 64.8', soft interval across full core at 65.1'.	1095
-70		ND		SILTY CLAY TILL WITH SAND: Light gray (2.5Y), soft/wet spots on outside of core at 66.2'-66.6', 66.8'-67.6'. Soft spots are lighter gray. Center of core is dense, firm, damp, slightly soft at 67.2'-67.5'. Large calcareous nodules at 68.4', 68.7', 69.2'. Collect samples at 67.2'-67.5' (soft) and 68'-68.5' (firm) for physical properties.	1090
-75		ND		SILTY CLAY TILL WITH SAND: Light brownish gray (2.5Y), dense, firm, damp, pale black streaks. Large calcareous patches at 70.2'-70.4', 70.9', 71.6'-71.7', along with several large non-calcareous pebbles.	1085
-80		ND		SILTY CLAY TILL WITH SAND: Light brownish gray (2.5Y), dense, firm, damp, black streaks and orange staining. Large calcareous patches at 74.1'-74.3', 74.8'-74.9', with numerous non-calcareous pebbles to ~0.5in.	1080
-85		ND		SILTY CLAY TILL WITH SAND: Light olive brown (2.5Y), dense, firm, damp, with orange staining and black/orange streaks, and occasional non-calcareous pebbles to ~1.25in.	
-90		ND		SILTY CLAY TILL WITH SAND: Light brownish gray (2.5Y), dense, firm, damp, black streaks and orange staining. Small calcareous nodules and several non-calcareous pebbles to ~0.75in. Collect sample at 85'-85.5' for physical properties.	1075
				SILTY CLAY TILL WITH SAND: Light gray (2.5Y), dense, firm, damp, black streaks and orange staining. Occasional small calcareous nodules and non-calcareous pebbles to 0.75in. Calcareous patches at 88.9', 89.2', and in barrel tip.	1070
				NO RECOVERY: Refusal at 92.76', broke rods.	

Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: SB38

Project: Savannah, MO Phase I **Elevation:** 1158.867 ft

Geologist: Bob Sedivy **Depth:** 96.3 ft BGL **Log Date:** 1/28-29/2008

Depth ft BGL	Water Sample	CCl4 W.S.	Soil Sample	CCl4 S.S.	Lithology	LITHOLOGY DESCRIPTION	Elev ft AMSL
0				ND		SILT, CLAY, AND SAND: Fine sand, black to dark yellowish brown (5YR), dry, fine roots.	
-5				ND		CLAYEY SILT WITH SAND: Fine sand, dark yellowish brown (10YR), soft, abundant orange (iron) staining and black (manganese/iron) specks.	1155
-10				ND		CLAYEY SILT: Dark yellowish brown to yellowish brown (10YR), dry, friable, faint orange staining and black specks.	1150
-15				ND		CLAYEY SILT: To silty clay, yellowish brown (10YR) 10'-13.9', to light gray (2.5Y) 13.9'-14', occasional patchy orange staining and black specks.	1145
-20				3.3 J		SILTY CLAY: Light gray (2.5Y) to light yellowish brown (10YR), dry, friable, becomes more firm, damp with depth, non-calcareous, faint orange stain with depth.	1140
-25				22		SILTY CLAY: As above, yellowish brown (10YR), dense and firm from 18'-20' with uniform orange staining. Very pale brown (10YR), slightly more friable 20'-22' with less, mottled orange staining.	1135
-30				19		SILTY CLAY: As above, pale brown (10YR) with slight orange and black staining in streaks and patches with depth, damp, slightly softer from 24'-26'.	1130
-35				42		SILTY CLAY: Light yellowish brown (10YR), soft, sticky 26'-28', little to no staining, non-calcareous.	1125
-40				24		SILTY CLAY: As above, uniform yellowish brown (10YR), soft, slightly sticky.	1120
-45				7.4 J		SILTY CLAY: Uniform yellowish brown (10YR), soft, sticky.	1115
				ND		SILTY CLAY: Pale brown (10YR), dense, firm, damp, occasional orange/black streaks and patches.	
				2.6 J		SILTY CLAY: Pale brown (10YR), dense, firm, damp, with orange/black streaks and patches. Core barrel came up wet, core damp.	

Carbon tetrachloride in soil sample = micrograms/kg

SB38 Pg. 2

Depth	W.S.	CCl4 WS	S.S.	CCl4 SS	LITH	LITHOLOGY	Elev
				16		SILTY CLAY: As above, pale brown to brown (10YR), damp, faint orange staining and increasingly prominent black streaks with depth.	1110
-50				12		SILTY CLAY: Light gray (2.5Y), firm, dense, damp, faint orange staining and black streaks that become abundant 50'-52', non-calcareous.	1105
-55				16		SILTY CLAY: Light gray (2.5Y), dense, firm, damp, occasional orange/black streaks and nodules 54'-56', more uniform gray 56'-58'.	
-60				6.2 J		SILTY CLAY: Light gray (2.5Y), firm, dense, damp, occasional faint orange staining and thin black streaks.	1100
-65				10		SILTY CLAY: As above. Light gray (2.5Y), occasional orange and black nodules, softer horizons at 64.2'-64.3' and 65.1'-65.2'. No visible free water. Diagonal (closed) fractures at 63', 63.35', 64.8', damp.	1095
				3 J		SILTY CLAY TILL: Light gray (2.5Y), damp, faint orange/black streaks and nodules. At 67.6', softer, paler gray horizon across core. White/pale gray granular, calcareous interval at 68.4'-68.6'. Sample for physical properties at 67.6'-68'.	1090
-70		4.9		ND		SILTY CLAY TILL: Light gray (2.5Y), dense, firm, damp, breaks apart from 70'-72', minimal orange/black staining, non-calcareous.	1085
-75				ND		SILTY CLAY TILL: Uniform light gray (2.5Y) 74'-76', firm, dense, damp. Silty clay with minor sand 76'-78', orange/black streaks, occasional calcareous nodules and non-calcareous pebbles. Granular, calcareous intervals at 76.2'-76.3' and in barrel tip at 77.9'-78'.	
-80				ND		SILTY CLAY TILL WITH SAND: Light gray (2.5Y), orange mottling and occasional black streaks, calcareous nodules and non-calcareous pebbles to ~1" at 80.5'.	1080
-85				ND		SILTY CLAY TILL WITH SAND: Light gray (2.5Y), dense, firm, calcareous nodules and non-calcareous pebbles to 0.5in, variable orange/black streaks and mottling 83.6'-86'.	1075
				ND		SILTY CLAY TILL WITH SAND: Light gray (2.5Y), dense, firm, damp, black streaks and occasional orange nodules and patchy staining, frequent calcareous nodules.	1070
-90				ND		SILTY CLAY TILL WITH SAND: Light gray (2.5Y), firm, orange/black streaks and patches 90'-92', orange mottling 92'-94', several non-calcareous pebbles to 1in and small calcareous nodules. Release rod and outside of core liner came up slightly wet, core damp.	
-95				ND		SILTY CLAY TILL WITH SAND: Meet refusal at 96.3', but recover 46" in liner-expansion? Silty clay till with sand 94'-96.9', light gray (2.5Y), damp, firm, orange mottling with abundant calcareous nodules and occasional non-calcareous pebbles to ~1". Sandier 95'-95.7' with more abundant orange staining. Clayey silt and sand 96.9'-98' . Silty sandy clay 96.8'-98' with abundant orange staining 96.9'-97.5', calcareous 97.5'-98', damp/dry.	1065

Carbon tetrachloride in water sample = micrograms/L
Carbon tetrachloride in soil sample = micrograms/kg

Argonne National Laboratory

Boring ID: SB42

Project: Savannah, MO Phase I **Elevation:** 1155.08 ft

Geologist: Bob Sedivy **Depth:** 91.92 ft BGL **Log Date:** 11/2/07, 1/28/08

Depth ft BGL	Soil Sample	CCl4 S.S.	Lithology	LITHOLOGY DESCRIPTION	Elev ft AMSL
0		ND*		*SILT, CLAY, AND SAND: Dark brown to dark yellowish brown (10YR), fine roots.	1155
-5		ND*		*CLAYEY SILT: Light yellowish brown (10YR) 2'-4', occasional orange (iron) staining and black (manganese/iron) specks and streaks, occasional fine roots. Light yellowish brown (2.5Y) '4'-6', occasional pale orange staining.	1150
		ND*		*CLAYEY SILT: Light yellowish brown (2.5Y), occasional pale orange staining.	
-10		4.8 J*		*CLAYEY SILT: To silty clay, light yellowish brown (2.5Y), occasional pale orange staining.	1145
-15		4.1 J		SILTY CLAY: Light yellowish brown (10YR), dense, dry, with patchy orange (iron) staining, friable from 14'-16', firm 16'-end of core, non-calcareous.	1140
-20		ND		SILTY CLAY: Very pale brown (10YR), dense, firm, dry, with patchy orange staining, friable.	1135
-25		ND		SILTY CLAY: As above, light yellowish brown to pale yellow (2.5YR).	1130
-30		ND		SILTY CLAY: Pale yellow (2.5Y), dense, firm, slightly softer, more plastic, non-calcareous.	1125
-35		6 J		SILTY CLAY: Uniform light yellowish brown (10YR), soft, sticky, minor black (manganese/iron) streaks and mottling. Collect sample from 31'-31.5' for physical properties.	1120
-40		2.2 J		SILTY CLAY: Very pale brown (10YR) to light gray (2.5Y) with depth, dense, firm faint orange and occasional black streaks. Hole above was open for short time, rods and outside of barrel came up wet, core was damp.	1115
-45		7.3 J		SILTY CLAY: Light gray (2.5Y), dense, firm, damp with irregular orange staining and black streaks.	1110
		171		SILTY CLAY: Light gray (2.5Y), very dense, firm, stiff, damp, with occasional black nodules and streaks. Rods and barrel came up wet on outside.	

*Carbon tetrachloride results and lithology descriptions shown for 0-14 ft BGL came from the SB04 location, a slight offset to SB42.
Carbon tetrachloride in soil sample = micrograms/kg

SB42 Pg. 2

Depth	S.S.	CCl4 SS	LITH	LITHOLOGY	Elev
		126		SILTY CLAY: Light gray(2.5Y), dense, firm, damp with orange staining, occasional black nodules and streaks (most abundant 48.4'-49.5'), non-calcareous.	
-50		15		SILTY CLAY: Uniform light gray (2.5Y), dense, firm, damp, minor black streaks and rare nodules, diagonal (closed) fractures across core at 51.5', 52.9', 53.2'. Thin softer, slightly more silty horizon at 52.4'-52.5', damp.	1105
-55		77		SILTY CLAY: Light gray (2.5Y), dense, firm, damp with occasional orange staining and black streaks. Collect sample from 56'-56.5' for soil properties.	1100
-60		ND		SILTY CLAY: Light gray to light brownish gray (2.5Y), dense, firm, very stiff, damp, non-calcareous, staining/streaks as above.	1095
-65		ND		SILTY CLAY TILL WITH SAND: Light gray (2.5Y), dense, stiff, damp, black streaks, little to no orange stain, abundant small calcareous nodules to large granular, calcareous patches 63.8'-66'.	1090
-70		ND		SILTY CLAY TILL WITH SAND: Light gray (2.5Y), dense, damp, stiff, occasional patchy orange stain, with calcareous nodules and non-calcareous pebbles. Diagonal (closed) fractures across core at 66.5', 67.2', 68.2'. One thin softer horizon at 69.1', damp. Thin (~0.4in) sandier lense at 69.6', damp.	1085
-75		ND		SILTY CLAY TILL WITH SAND: Light gray (2.5Y), dense, stiff, damp, sparse, occasional patchy orange stain increases with depth, small calcareous patches and occasional rounded, black to gray non-calcareous pebbles to ~1in at 72'.	1080
-80		ND		SILTY CLAY TILL WITH SAND: Light gray (2.5Y), dense, stiff, damp, with calcareous nodules and non-calcareous pebbles, abundant orange staining 74'-76' and black streaks 76'-76.6'.	1075
-85		ND		SILTY CLAY TILL WITH SAND: Light gray to light brownish (2.5Y), dense, occasional non-calcareous pebbles to ~1.5in at 78.4', occasional small (to 0.5in) calcareous nodules. Approx. 1.5in of fine to coarse, loose, dry, sand with calcareous matrix in tip of core barrel.	1070
-90		ND		SILTY CLAY TILL WITH SAND: As above, light gray (2.5Y), with white calcareous, corroded orange, and black nodules. Sandy, calcareous patch at 82'. Patchy orange stain 84'-86'. Core swells, jams in barrel.	1065
		ND		SILTY CLAY TILL WITH SAND: Light gray to light brownish gray (2.5Y), dense, stiff, damp, with orange/black streaks, abundant calcareous nodules and non-calcareous pebbles.	
		ND		SAND: Recover ~0.5 ft of dry, loose, fine to coarse, angular to subrounded light olive brown (2.5Y) sand.	
		ND		NO RECOVERY: Refusal at 91.92ft.	

Carbon tetrachloride in soil sample = micrograms/kg

HWS CONSULTING Fax:402-479-2276 May 9 2008 08:48am P001/015

HWS
Solutions Through Service

HWS Consulting Group
825 J Street, Box 80358
Lincoln, NE 68501-0358
402.479.2200 • Fax: 402.479.2276
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To Bob Sedivy	Date
Co./Dept.	From Ray Dellen
Phone #	Co.
Fax # 465-4239	Phone #
	Fax #

# of pages ▶

May 2, 2008

Mr. Bob Sedivy
Argonne National Laboratory ER203
9700 South Cass Avenue
Argonne, IL 60439

REFERENCE: Soil Testing
Savanna, Missouri Project

Dear Mr. Nashold:

On March 12, 2008, 7 small plastic bags containing soil samples were delivered to our laboratory from the project referenced above for soil testing. The samples were assigned laboratory numbers 24009 to 24015 inclusive.

In accordance with your request, HWS performed a particle-size analysis, specific gravity, total organic carbon analysis and calculated the percent porosity on each of the samples. The Particle Size Analysis was performed in accordance with ASTM D442-90 Method for Particle Size Analysis of Soils. The specific gravity was performed in accordance with ASTM D 854 Standard Test Method for Specific Gravity of soils Solids by Water Pycnometer. The total organic carbon content was sent to Test America for analysis. The bulk density, and porosity of samples were determined in accordance with Volumetric and Displacement Method of the Corps of Engineers, EM1110-2-1906, Appendix II, Unit Weights, Void Ratio, Porosity, and Degree of Saturation. The test results are presented in the following tables.

TABLE 1
Soil Testing Results

Depth of Sample	41-41.5'	67.2-67.5'	68-68.5'	85-85.5'	67.6-68.0'
Laboratory No.	24009	24010	24011	24012	24013
Boring No.	SVSB-29	SVSB-29	SVSB-29	SVSB-29	SVSB-38
Bulk Dry Density, lbs/ ft^3	103.44	76.45	99.05	110.04	101.82
Moisture Content, %	22.99	36.39	26.06	19.01	23.71
Specific Gravity	2.683	2.612	2.680	2.678	2.725
Percent Porosity	38.2	46.0	40.7	34.1	40.1
Total Organic Carbon, mg/Kg	ND	ND	ND	ND	ND

Mr. Bob Sedivey
May 2, 2008
Page 2

TABLE 1 (continued)
Soil Testing Results

Depth of Sample	31-31.5'	56-56.5'			
Laboratory No.	24014	24015			
Boring No.	SVSB-42	SVSB-42			
Bulk Dry Density, lbs/ ft^3	96.31	105.7			
Moisture Content, %	26.86	22.12			
Specific Gravity	2.670	2.691			
Percent Porosity	42.2	37.0			
Total Organic Carbon, mg/Kg	ND	ND			

TABLE 2
Particle Size Testing Results

Depth of Sample	41-41.5'	67.2-67.5'	68-68.5'	85-85.5'	67.6-68.0'
Laboratory No.	24009	24010	24011	24012	24013
Boring No.	SVSB-29	SVSB-29	SVSB-29	SVSB-29	SVSB-38
Particle Size			Percent Fine		
#4	100.0	100.0	100.0	100.0	100.0
#10	100.0	100.0	99.9	99.4	99.9
#18	100.0	99.0	99.8	98.4	99.7
#35	100.0	99.7	99.5	95.6	99.2
#40	100.0	99.6	99.4	95.2	99.2
#60	99.9	99.3	98.7	90.8	98.4
#100	99.8	98.6	97.7	85.1	97.3
#120	99.8	98.3	97.5	83.6	97.1
#140	99.7	98.1	97.1	82.0	96.8
#200	98.6	97.4	96.2	78.4	95.7
#230	96.5	96.4	95.1	76.8	94.7
#270	93.4	94.8	93.9	75.6	93.1
% Gravel	0.0	0.0	0.0	0.0	0.0
% Sand	1.4	2.6	3.8	21.6	4.3
% Silt	60.6	50.5	44.0	37.4	47.7
% Clay	38.0	46.9	52.2	41.0	48.0

Mr. Bob Sedivey
May 2, 2008
Page 3

TABLE 2 (continued)
Particle Size Testing Results

Depth of Sample	31-31.5'	56-56.5'			
Laboratory No.	24014	24015			
Boring No.	SVSB-42	SVSB-42			
Particle Size	Percent Finer				
#4	100.0	100.0			
#10	100.0	100.0			
#18	99.9	100.0			
#35	99.9	99.9			
#40	99.8	99.8			
#60	99.8	99.6			
#100	99.7	99.3			
#120	99.7	99.2			
#140	99.6	99.0			
#200	98.8	98.2			
#230	97.0	97.0			
#270	94.6	95.2			
% Gravel	0.0	0.0			
% Sand	1.2	1.8			
% Silt	69.5	55.7			
% Clay	29.3	42.5			

The test results presented in this letter represent the samples as delivered to our laboratory.

We appreciate the opportunity to perform the testing services requested, and if you have any questions about this testing or this report, please contact HWS at your convenience.

Respectfully submitted,

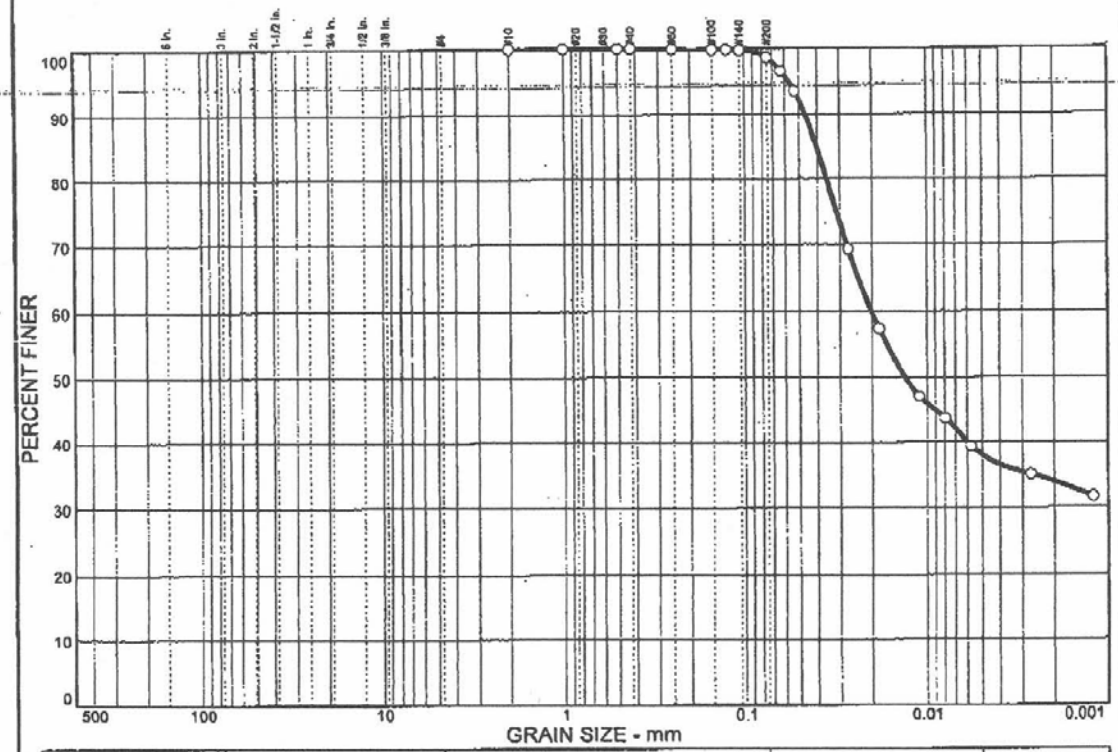
HWS CONSULTING GROUP INC.

Raymond Delka
Manager, Materials Laboratory

RD/
52-76-1014.0400
F:projects/Job No. SavannahMO
Orig. & 1 pc.: Argonne National Laboratory, Mr. Bob Sedivy

HWS CONSULTING Fax:402-479-2276 May 9 2008 08:48am P004/015

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	1.4	60.6	38.0

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#18	100.0		
#35	100.0		
#40	100.0		
#60	99.9		
#100	99.8		
#120	99.8		
#140	99.7		
#200	98.6		
#230	96.5		
#270	93.4		

* (no specification provided)

Soil Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.0405 D_{60}= 0.0202 D_{50}= 0.0133
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Sample No.: L/N 24009 **Source of Sample:** SVSB-29 **Date:**
Location: **Elev./Depth:** 41'-41.5'

HWS CONSULTING GROUP INC.

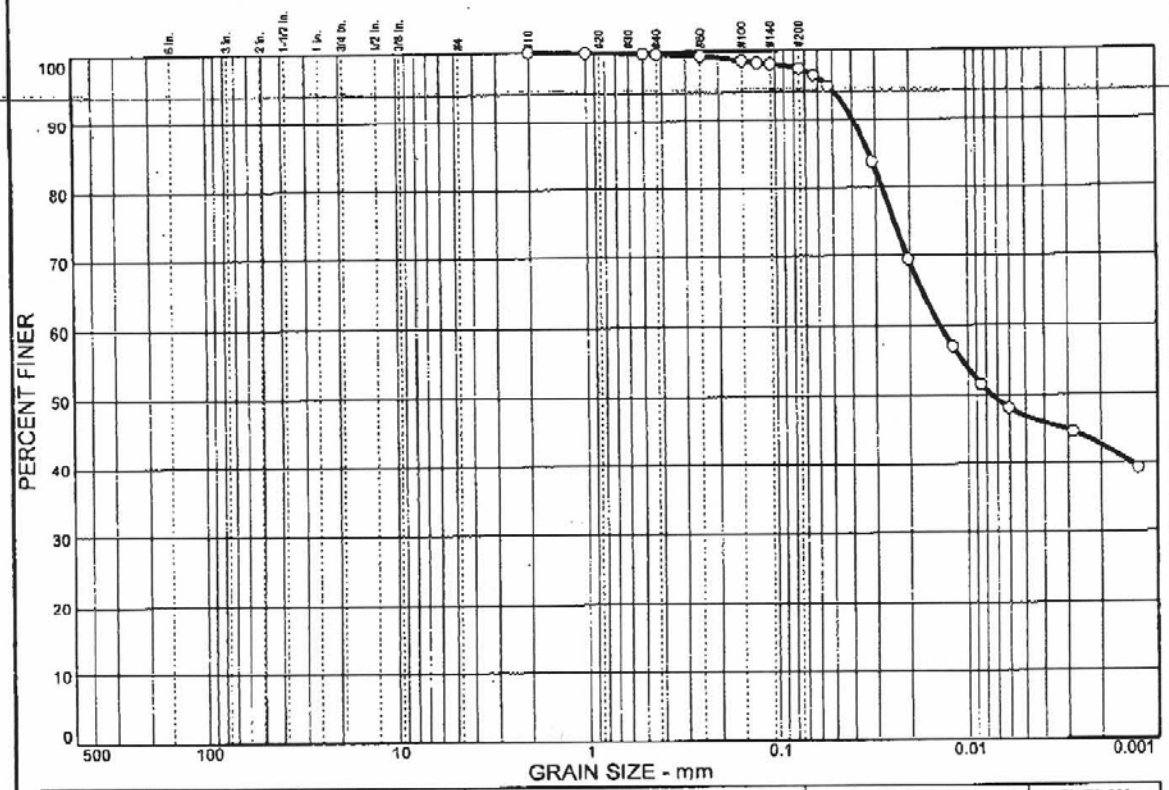
Client:
Project:

Plate

Figure 1

HWS CONSULTING Fax:402-479-2276 May 9 2008 08:49am P010/015

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	2.6	50.5	46.9

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#18	99.9		
#35	99.7		
#40	99.6		
#60	99.3		
#100	98.6		
#120	98.3		
#140	98.1		
#200	97.4		
#230	96.4		
#270	94.8		

* (no specification provided)

Soil Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.0326 D_{60}= 0.0140 D_{50}= 0.0075
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Sample No.: L/N 24010 **Source of Sample:** SVSB-29 **Date:**
Location: **Elev./Depth:** 67.2'-67.5'

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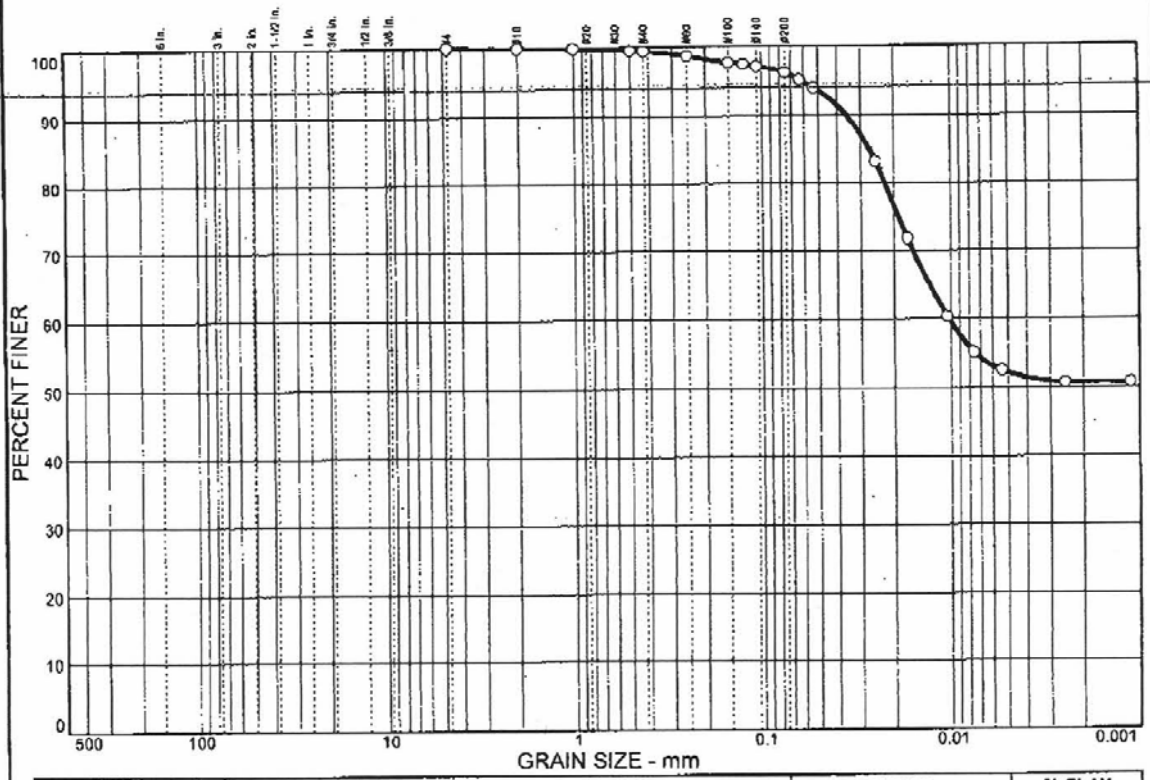
Client:
Project:
Project No: **Plate**

Figure 7

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	3.8	44.0	52.2

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.9		
#18	99.8		
#35	99.5		
#40	99.4		
#60	98.7		
#100	97.7		
#120	97.5		
#140	97.1		
#200	96.2		
#230	95.1		
#270	93.9		

* (no specification provided)

Soil Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.0273 D_{60}= 0.0103 D_{50}=
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Sample No.: L/N 24011 **Source of Sample:** SVSB-29 **Date:**
Location: **Elev./Depth:** 68'-68.5'

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Client:
Project:
Project No: **Plate**

Figure 6

HWS CONSULTING Fax:402-479-2276 May 9 2008 08:49am P008/015

Particle Size Distribution Report

% COBBLES	% GRAVEL	COARSE MED % SAND FINE	% SILT	% CLAY
0.0	0.0	21.6	37.4	41.0

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.4		
#18	98.4		
#35	95.6		
#40	95.2		
#60	90.8		
#100	85.1		
#120	83.6		
#140	82.0		
#200	78.4		
#230	76.8		
#270	75.6		

* (no specification provided)

Soil Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.148 D_{60}= 0.0215 D_{50}= 0.0129
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Sample No.: L/N 24012 **Source of Sample:** SVSB-29 **Date:**
Location: **Elev./Depth:** 85'-85.5'

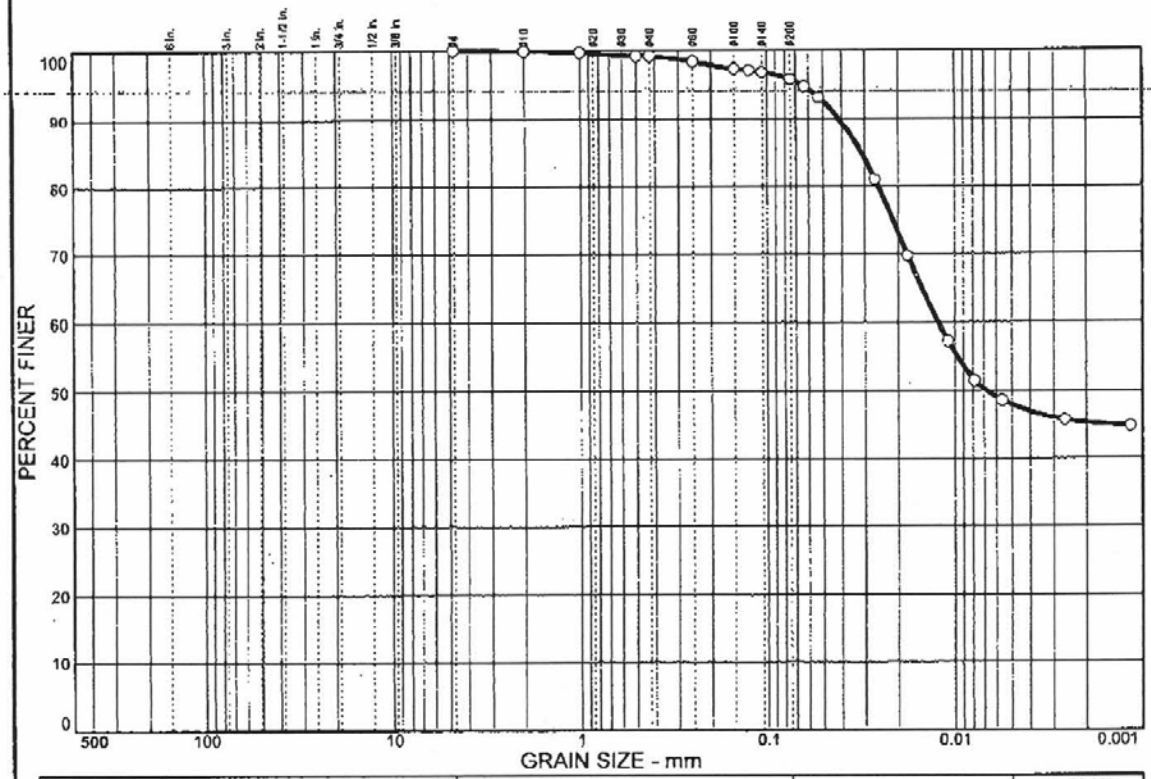
HWS CONSULTING GROUP INC.

Client:
Project:
Project No: **Plate**

Figure 5

HWS CONSULTING Fax:402-479-2276 May 9 2008 08:49am P007/015

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	4.3	47.7	48.0

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	99.9		
#18	99.7		
#35	99.2		
#40	99.2		
#60	98.4		
#100	97.3		
#120	97.1		
#140	96.8		
#200	95.7		
#230	94.7		
#270	93.1		

* (no specification provided)

Soil Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.0315 D_{60}= 0.0123 D_{50}= 0.0068
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Sample No.: L/N 24013 **Source of Sample:** SVSB-38 **Date:**
Location: **Elev./Depth:** 67.6'-68.0'

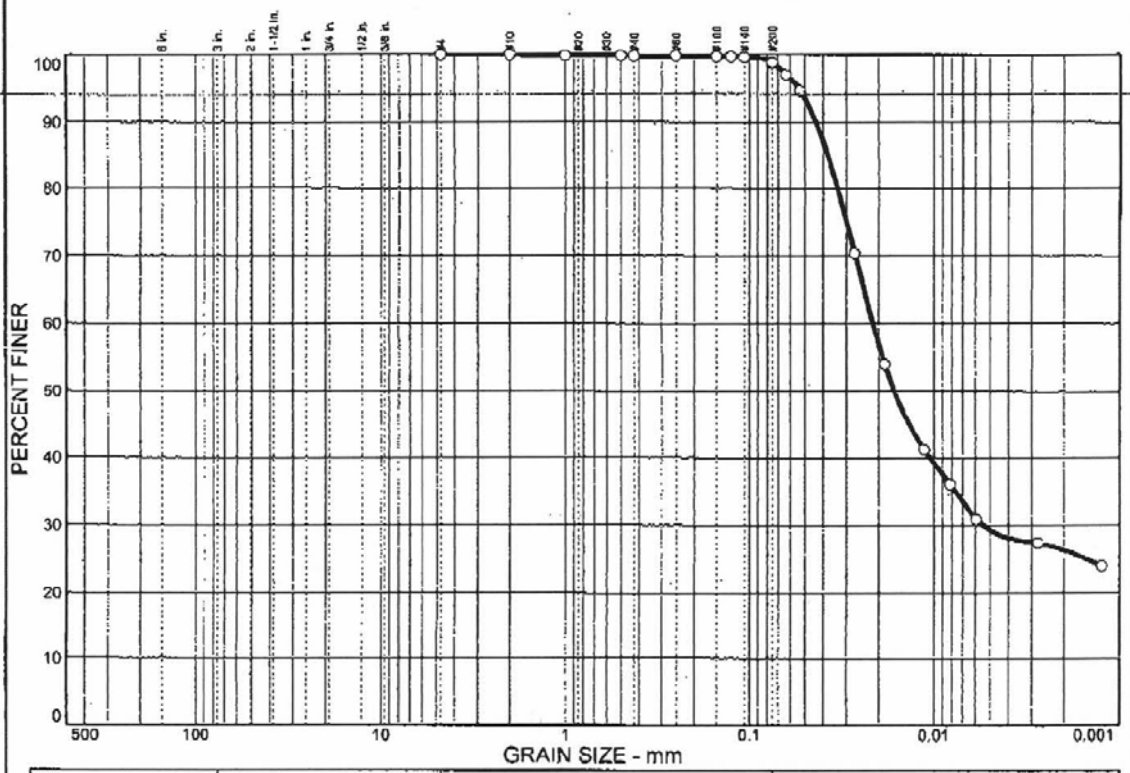
HWS CONSULTING GROUP INC.

Client:
Project:
Project No: **Plate**

Figure 4

HWS CONSULTING Fax:402-479-2276 May 9 2008 08:48am P006/015

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	1.2	69.5	29.3

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	100.0		
#18	99.9		
#35	99.9		
#40	99.8		
#60	99.8		
#100	99.7		
#120	99.7		
#140	99.6		
#200	98.8		
#230	97.0		
#270	94.6		

* (no specification provided)

Soil Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.0380 D_{60}= 0.0215 D_{50}= 0.0165
D_{30}= 0.0054 D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Sample No.: L/N 24014 **Source of Sample:** SVSB-42 **Date:**
Location: **Elev./Depth:** 31'-31.5'

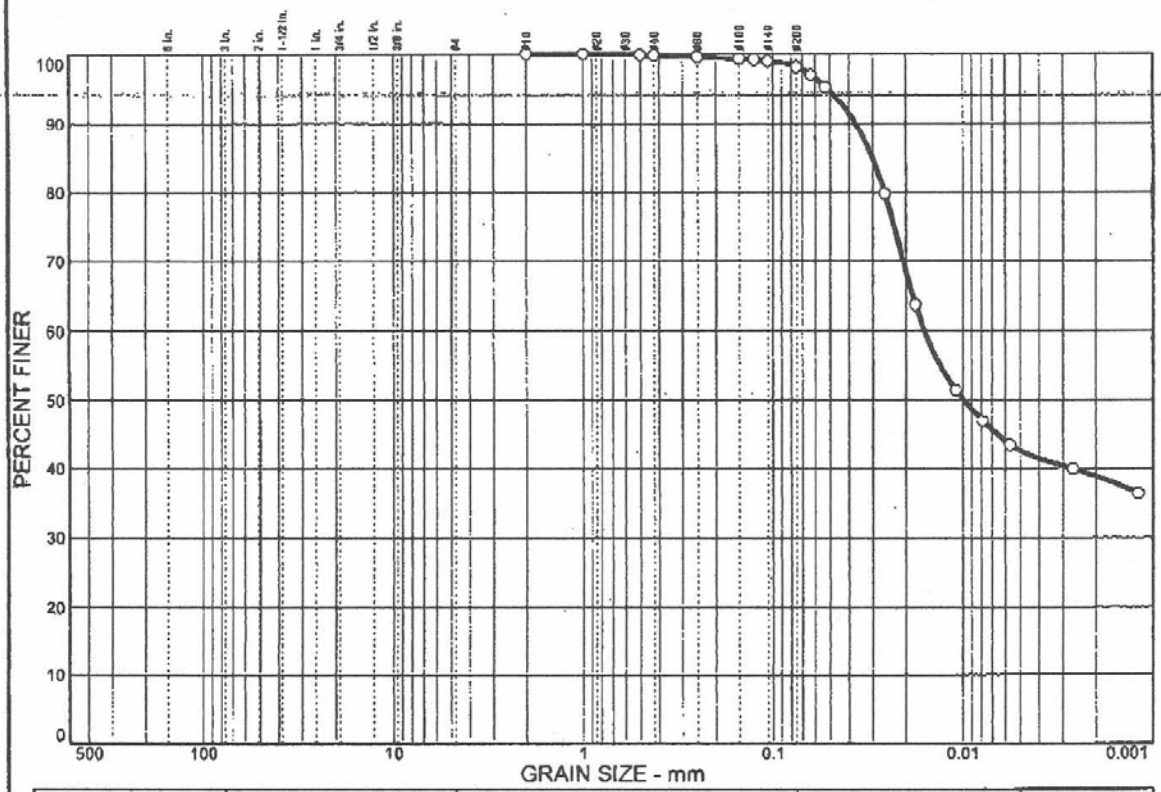
HWS CONSULTING GROUP INC.

Client:
Project:
Project No: **Plate**

Figure 3

HWS CONSULTING Fax:402-479-2276 May 9 2008 08:48am P005/015

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	1.8	55.7	42.5

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#10	100.0		
#18	100.0		
#35	99.9		
#40	99.8		
#60	99.6		
#100	99.3		
#120	99.2		
#140	99.0		
#200	98.2		
#230	97.0		
#270	95.2		

* (no specification provided)

Soil Description

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.0303 D_{60}= 0.0160 D_{50}= 0.0100
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Sample No.: L/N 24015 **Source of Sample:** SVSB-42 **Date:**
Location: **Elev./Depth:** 56'-56.5'

HWS CONSULTING GROUP INC.

Client:
Project:
Project No: **Plate**

Figure 2

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

March 26, 2008 4:09:15PM

Client: HWS Consulting Group (14499)
825 J Street
Lincoln, NE 68501
Attn: Ray Delka

Work Order: NRC1409
Project Name: TOC
Project Nbr: [none]
P/O Nbr:
Date Received: 03/18/08

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
Lab #24009	NRC1409-01	03/06/08 00:01
Lab #24010	NRC1409-02	03/06/08 00:01
Lab #24011	NRC1409-03	03/06/08 00:01
Lab #24012	NRC1409-04	03/06/08 00:01
Lab #24013	NRC1409-05	03/06/08
Lab #24014	NRC1409-06	03/06/08 00:01
Lab #24015	NRC1409-07	03/06/08 00:01

An executed copy of the chain of custody, the project quality control data, and the sample receipt form are also included as an addendum to this report. If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-800-765-0980. Any opinions, if expressed, are outside the scope of the Laboratory's accreditation.

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Additional Laboratory Comments:
There will be further explanation of pertinent data qualifiers and definitions at the end of this report.
Other anomalies noted at sample log-in are outlined in accompanying LF-1 form (Cooler Receipt) and/or CSF-12 (Sample nonconformance/COC revision form).
The samples were recieved at 16.9 degrees Celsius.

The Chain(s) of Custody, 5 pages, are included and are an integral part of this report.

These results relate only to the items tested. This report shall not be reproduced except in full and with permission of the laboratory.

All solids results are reported in wet weight unless specifically stated.
Estimated uncertainty is available upon request.
This report has been electronically signed.
Report Approved By:

Michandra McIntosh

Project Manager

Figure 8

HWS CONSULTING Fax:402-479-2276 May 9 2008 08:49am P012/015

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client HWS Consulting Group (14499)
825 J Street
Lincoln, NE 68501
Attn Ray Delka

Work Order: NRC1409
Project Name: TOC
Project Number: [none]
Received: 03/18/08 07:45

ANALYTICAL REPORT

Analyte	Result	Flag	Units	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NRC1409-01 (Lab #24009 - Soil) Sampled: 03/06/08 00:01								
General Chemistry Parameters								
Total Organic Carbon	ND		mg/Kg dry	1000	1	03/26/08 13:07	SW846 9060M	8033647
Sample ID: NRC1409-02 (Lab #24010 - Soil) Sampled: 03/06/08 00:01								
General Chemistry Parameters								
Total Organic Carbon	ND		mg/Kg dry	1000	1	03/26/08 13:07	SW846 9060M	8033647
Sample ID: NRC1409-03 (Lab #24011 - Soil) Sampled: 03/06/08 00:01								
General Chemistry Parameters								
Total Organic Carbon	ND		mg/Kg dry	1000	1	03/26/08 13:07	SW846 9060M	8033647
Sample ID: NRC1409-04 (Lab #24012 - Soil) Sampled: 03/06/08 00:01								
General Chemistry Parameters								
Total Organic Carbon	ND		mg/Kg dry	1000	1	03/26/08 13:07	SW846 9060M	8033647
Sample ID: NRC1409-05 (Lab #24013 - Soil) Sampled: 03/06/08								
General Chemistry Parameters								
Total Organic Carbon	ND		mg/Kg dry	1000	1	03/26/08 13:07	SW846 9060M	8033647
Sample ID: NRC1409-06 (Lab #24014 - Soil) Sampled: 03/06/08 00:01								
General Chemistry Parameters								
Total Organic Carbon	ND		mg/Kg dry	1000	1	03/26/08 13:07	SW846 9060M	8033647
Sample ID: NRC1409-07 (Lab #24015 - Soil) Sampled: 03/06/08 00:01								
General Chemistry Parameters								
Total Organic Carbon	ND		mg/Kg dry	1000	1	03/26/08 13:07	SW846 9060M	8033647

Figure 9

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	HWS Consulting Group (14499)	Work Order:	NRC1409
	825 J Street	Project Name:	TOC
	Lincoln, NE 68501	Project Number:	[none]
Attn	Ray Delka	Received:	03/18/08 07:45

PROJECT QUALITY CONTROL DATA
Blank

Analyte	Blank Value	Q	Units	Q.C. Batch	Lab Number	Analyzed Date/Time
General Chemistry Parameters						
8033647-BLK1						
Total Organic Carbon	<172		mg/Kg dry	8033647	8033647-BLK1	03/26/08 13:07

Figure 10

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	HWS Consulting Group (14499) 825 J Street Lincoln, NE 68501	Work Order:	NRC1409
		Project Name:	TOC
		Project Number:	[none]
Attn	Ray Delka	Received:	03/18/08 07:45

PROJECT QUALITY CONTROL DATA
Duplicate

Analyte	Orig. Val.	Duplicate	Q	Units	RPD	Limit	Batch	Sample Duplicated	Analyzed Date/Time
General Chemistry Parameters									
8033647-DUP1									
Total Organic Carbon	ND	ND		mg/Kg dry		35	8033647	NRC1409-07	03/26/08 13:07

Figure 11

HWS CONSULTING Fax:402-479-2276 May 9 2008 08:50am P015/015

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

2960 Foster Creighton Road Nashville, TN 37204 * 800-765-0980 * Fax 615-726-3404

Client	HWS Consulting Group (14499) 825 J Street Lincoln, NE 68501	Work Order:	NRC1409
		Project Name:	TOC
		Project Number:	[none]
Attn	Ray Delka	Received:	03/18/08 07:45

PROJECT QUALITY CONTROL DATA
LCS

Analyte	Known Val.	Analyzed Val	Q	Units	% Rec.	Target Range	Batch	Analyzed Date/Time
General Chemistry Parameters								
8033647-BS1								
Total Organic Carbon	2.99	2.80		%	94%	85 - 110	8033647	03/26/08 13:07

Figure 12

Appendix G:

Results of Air Monitoring

Air Monitoring

Date: Oct. 29 - 2007

Job Location: Savannah MO.

Project: USDA Site

Instrument Used	Reading	Time	Location
Mini Rae		1420	SB40
ppbRAE 3000	0.000		Ground Level
	0.000		2 Ft. Above Ground
	0.000		Breathing Zone
Mini Rae		1426	SB40- 4'' In Depth
ppbRAE 3000	0.000		Ground Level
	0.000		2 Ft. Above Ground
	0.000		Breathing Zone
Mini Rae		1432	SB40-2' In Depth
ppbRAE 3000	0.000		Ground Level
	0.000		2 Ft. Above Ground
	0.000		Breathing Zone
Mini Rae		1433	SB40-6' In Depth
ppbRAE 3000	0.000		Ground Level
	0.000		2 FT. Above Ground
	0.000		Breathing Zone
Mini Rae		1448	SB40-8' In Depth
ppbRAE 3000	0.000		Ground Level
	0.000		2 FT. Above Ground
	0.000		Breathing Zone
Mini Rae		1500	SB40-14' In Depth
ppbRAE 3000	0.000		Ground Level
	0.000		2 FT. Above Ground
	0.000		Breathing Zone

Notes:

The Mini Rae was calibrated using Isobutylene 10 PPM Oct. 28-2007
Also did a fresh air calibration Oct. 29-2007

The Mini Rae was calibrated by Daryl Biere

Daryl Biere

Air Monitoring

Date: Oct. 31 - 2007

Job Location: Savannah MO.

Project: USDA Site

Instrument Used	Reading	Time	Location
Mini Rae		1418	SB41
ppbRAE 3000	0.000		Ground Level
	0.000		2 Ft. Above Ground
	0.000		Breathing Zone
Mini Rae		1425	SB41-6" In Depth
ppbRAE 3000	0.000		Ground Level
	0.000		2 Ft. Above Ground
	0.000		Breathing Zone
Mini Rae		1432	SB41-2' In Depth
ppbRAE 3000	0.000		Ground Level
	0.000		2 Ft. Above Ground
	0.000		Breathing Zone
Mini Rae		1437	SB41-6' In Depth
ppbRAE 3000	0.000		Ground Level
	0.000		2 FT. Above Ground
	0.000		Breathing Zone
Mini Rae		1458	SB41-12' In Depth
ppbRAE 3000	0.000		Ground Level
	0.000		2 FT. Above Ground
	0.000		Breathing Zone
Mini Rae		1500	SB41-
ppbRAE 3000	18.00 PPB		Test next to power unit
			Gas engine

Notes:

The Mini Rae was calibrated using Isobutylene 10 PPM Oct. 28-2007
Also did a fresh air calibration At 1415 Self Check OK Oct. 29-2007

The Mini Rae was calibrated by Daryl Biere

Daryl Biere

Appendix H:

Coordinates Survey Data

TABLE H.1 Survey data for 2007 Investigation at Savannah.

	Horizontal Location[a] (ft)		Elevation[b] (ft AMSL)	
Location	Northing	Easting	Ground	Top of Casing
Private wells				
Barr	1379224.351	2690064.91	1153.054	–
Burks	1378698.89	2690820.669	1126.113	–
Clizer "Old"	1380094.336	2690363.657	1153.761	1149.438[c]
Clizer "New"	1380499.394	2690276.689	1144.377	1144.382
Hughes	1379721.518	2690289.42	1149.646	–
Marshall	1378485.546	2690259.549	1120.16	1120.337
McPike	1379660.857	2690713.109	1148.758	–
MoDOT	1379471.645	2691139.047	1151.94	1150.29[d]
Miller	1378073.051	2691795.454	1147.828	1150.112
Moore	1378587.907	2692906.863	1110.677	1113.927
Morgan	1379362.164	2690909.253	1158.038	1159.273[c]
Potter	1380644.758	2690090.568	1134.795	–
Smith	1377751.276	2690241.526	1131.258	1131.666
Thomas	1378401.681	2690832.165	1109.86	1111.662
Cone penetrometer				
SB-4	1379585.485	2690827.667	1155.08	–
SB-24	1379468.78	2690904.303	1158.337	–
New piezometers				
SB24	1379470.716	2690903.529	1158.646	1158.055
SB38	1379416.648	2690936.369	1158.867	1158.395
Grain storage foundations				
19-ft-diameter concrete slab, center	1379490.434	2690977.27	1157.386	–
19-ft-diameter concrete slab, center	1379511.405	2690967.655	1157.003	–
19-ft-diameter concrete slab, center	1379532.499	2690958.298	1156.619	–
Corner of Concrete	1379457.479	2690892.995	1158.414	–
Corner of Concrete	1379489.872	2690892.316	1158.271	–
Corner of Concrete	1379487.576	2690796.588	1158.413	–
Corner of Concrete	1379455.343	2690796.878	1158.44	–
Corner of Concrete	1379531.662	2690795.81	1157.189	–
Corner of Concrete	1379533.733	2690891.284	1157.208	–
Corner of Concrete	1379501.452	2690889.973	1157.004	–
Control locations				
104 CONTROL	1379444.164	2691001.763	1158.064	–
AN-14	1376798.004	2700749.092	1074.128	–
BM-PT1	1.000	1.000	1147.963	–
AN-14-GPS CHECK	1376797.954	2700749.114	1078.427	–
SAVANNAH	1374798.514	2693589.946	1147.963	–

TABLE H.1 (Cont.)

Location	Horizontal Location[a] (ft)		Elevation[b] (ft AMSL)	
	Northing	Easting	Ground	Top of Casing
Transect data				
221-ground	1379399.169	2690843.293	1158.187	–
222-ground	1379417.284	2690843.217	1158.285	–
223-ground	1379434.097	2690842.922	1159.045	–
224-ground	1379442.101	2690843.08	1158.633	–
225-ground	1379449.724	2690843.522	1158.671	–
226-ground	1379452.693	2690843.497	1157.921	–
227-ground	1379454.008	2690843.654	1157.853	–
228-edge of concrete	1379456.32	2690843.747	1158.513	–
229-ground	1379474.469	2690844.179	1158.515	–
230-edge of concrete	1379488.664	2690843.829	1158.418	–
231-ground	1379493.749	2690843.973	1157.245	–
232-ground	1379498.423	2690843.806	1156.837	–
233-edge of concrete	1379500.41	2690843.845	1157.118	–
234-ground	1379518.37	2690844.372	1157.28	–
235-edge of concrete	1379532.765	2690844.349	1157.116	–
236-ground	1379534.654	2690844.53	1156.862	–
237-ground	1379543.677	2690844.8	1156.624	–
238-ground	1379551.099	2690845.137	1156.806	–
239-ground	1379558.285	2690845.159	1156.449	–
240-ground	1379565.746	2690845.625	1155.923	–
241-ground	1379571.043	2690845.794	1155.107	–
242-ground	1379573.168	2690845.797	1155.13	–
243-ground	1379579.364	2690845.737	1155.309	–
244-ground	1379593.914	2690845.924	1154.963	–
245-ground	1379500.2	2690519.763	1145.932	–
246-ground	1379500.182	2690524.682	1146.412	–
247-ground	1379499.697	2690537.818	1147.081	–
248-ground	1379499.381	2690543.74	1146.89	–
249-ground	1379499.36	2690545.353	1146.864	–
250-ground	1379499.417	2690548.833	1147.641	–
251-ground	1379497.544	2690563.492	1147.84	–
252-ground	1379497.876	2690566.399	1147.584	–
253-ground	1379497.799	2690568.979	1147.6	–
254-ground	1379498.219	2690572.823	1148.484	–
255-ground	1379498.392	2690587.892	1148.867	–
256-ground	1379497.988	2690594.522	1149.743	–
257-ground	1379498.177	2690606.062	1151.188	–
258-ground	1379498.017	2690618.548	1151.922	–
259-ground	1379498.194	2690629.523	1152.677	–
260-ground	1379498.18	2690642.264	1153.626	–
261-ground	1379498.198	2690658.5	1154.424	–
262-ground	1379498.301	2690673.821	1155.5	–
263-ground	1379497.881	2690693.804	1155.753	–
264-ground	1379498.043	2690712.445	1156.62	–
265-ground	1379499.196	2690735.408	1156.894	–
266-ground	1379499.676	2690755.106	1157.156	–
267-ground	1379498.681	2690767.371	1157.607	–
268-ground	1379498.13	2690777.926	1158.238	–
269-ground	1379497.12	2690787.952	1157.456	–
270-ground	1379495.42	2690819.674	1157.252	–
271-ground	1379495.983	2690853.225	1157.164	–
272-ground	1379494.946	2690875.403	1157.194	–

TABLE H.1 (Cont.)

	Horizontal Location[a] (ft)		Elevation[b] (ft AMSL)	
Location	Northing	Easting	Ground	Top of Casing
273-ground	1379495.016	2690892.505	1157.372	–
274-ground	1379494.011	2690906.19	1157.791	–
275-ground	1379494.401	2690924.869	1157.69	–
276-ground	1379492.735	2690939.932	1157.024	–
277-ground	1379492.435	2690955.543	1156.813	–
278-edge of concrete	1379491.933	2690967.616	1157.265	–
279-edge of concrete	1379491.557	2690986.601	1157.283	–
280-ground	1379491.608	2690987.379	1157.062	–
281-barbed wire fence	1379491.541	2690990.111	1157.2	–
282-ground	1379492.478	2690993.429	1156.661	–
283-ground	1379492.34	2690999.538	1155.129	–
284-ground	1379491.843	2691004.677	1153.774	–
285-ground	1379491.415	2691010.029	1152.33	–
286-ground	1379491.915	2691013.797	1151.199	–
287-ground	1379491.803	2691016.393	1149.94	–
288-ground	1379491.657	2691019.022	1149.906	–
289-shoulder line	1379491.703	2691021.492	1150.45	–
290-edge of asphalt	1379492.157	2691026.091	1150.758	–
291-travel way	1379492.552	2691038.931	1151.058	–
292-edge of asphalt	1379492.439	2691054.477	1150.907	–
293-ground	1379492.482	2691065.066	1150.84	–
294-ground	1379491.915	2691079.149	1151.198	–
295-ground	1379490.85	2691094.743	1151.731	–
296-edge of concrete	1379489.575	2691105.557	1152.001	–
297-ground	1379488.375	2691116.499	1152.454	–

[a] Coordinates are in the Missouri State Plane, West Zone, North American Datum (NAD) 83.

[b] Vertical datum is North American Vertical Datum (NAVD) 88.

[c] Top of casing hand-measured from surveyed elevation of well lid.

[d] Location of well inside MoDOT maintenance building was hand-measured from surveyed reference point, outside building, 33 ft west of actual well. Elevation reference is the top of the large-diameter casing that extends above the bottom of the pit in the MoDOT garage floor, used as the set point for the water level recorder.

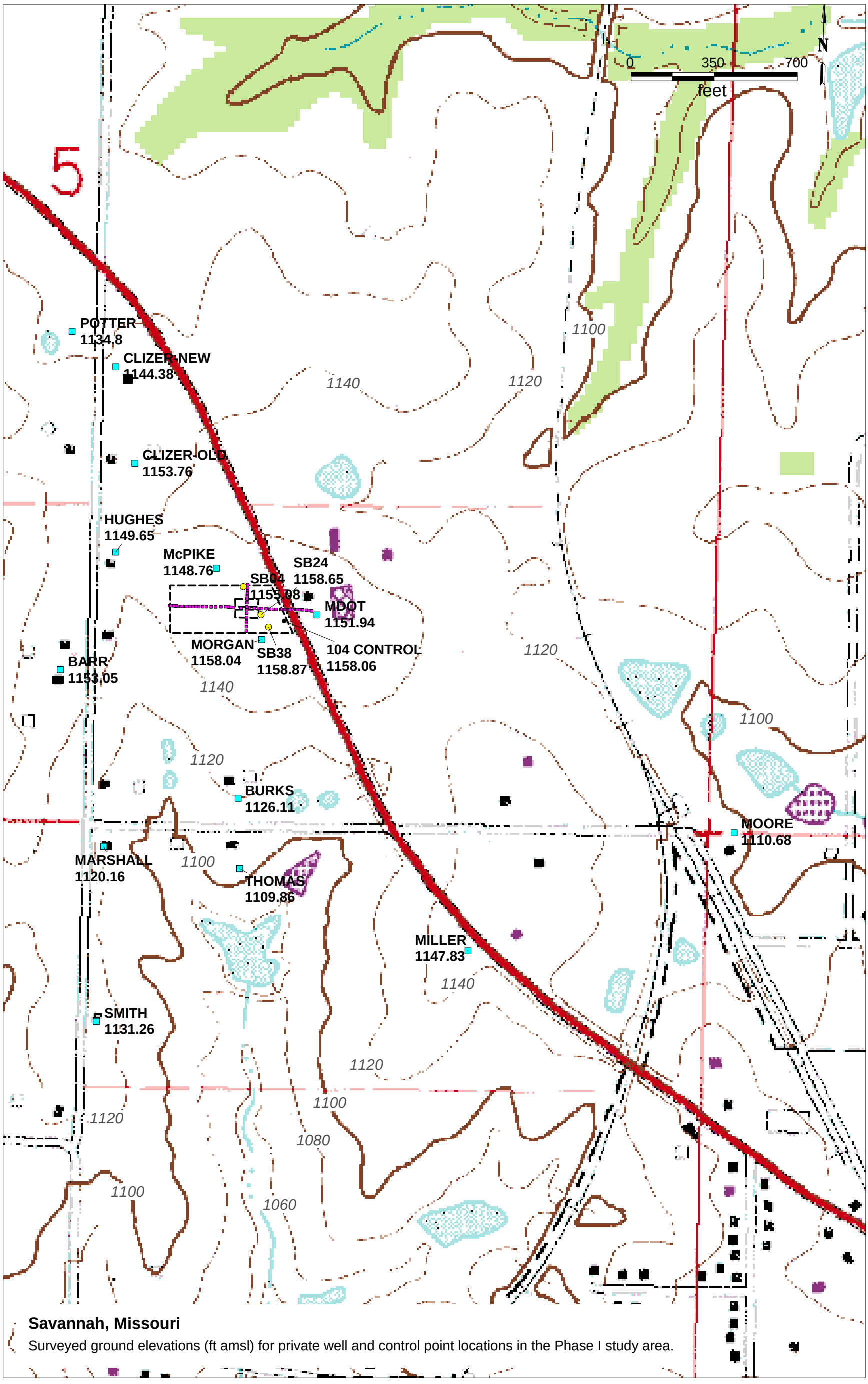


FIGURE H.1 Surveyed ground elevation (ft AMSL) for private well and control point locations in the Phase 1 study area.

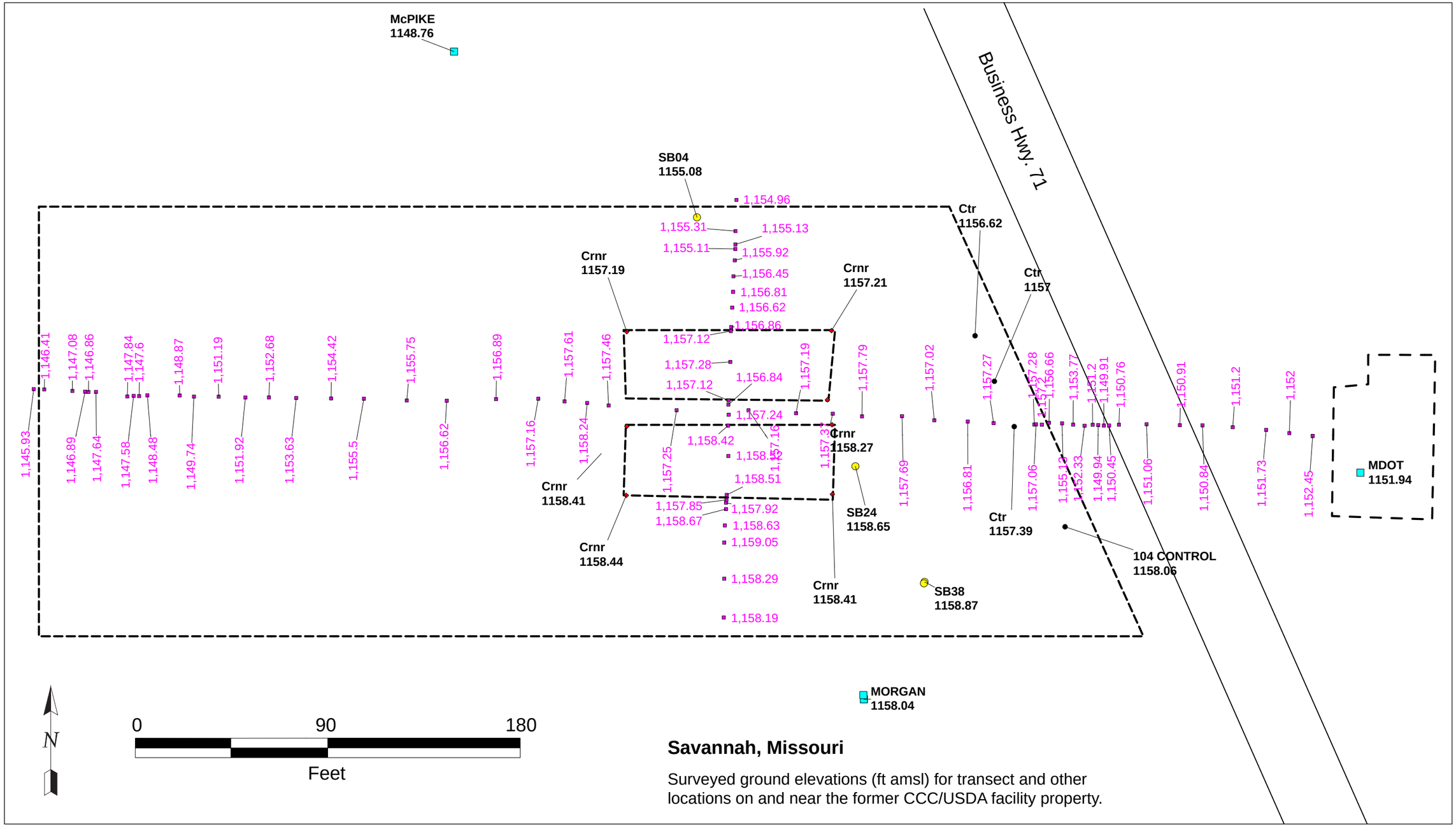


FIGURE H.2 Surveyed ground elevations (ft AMSL) for transect and other locations on and near the former CCC/USDA facility property.

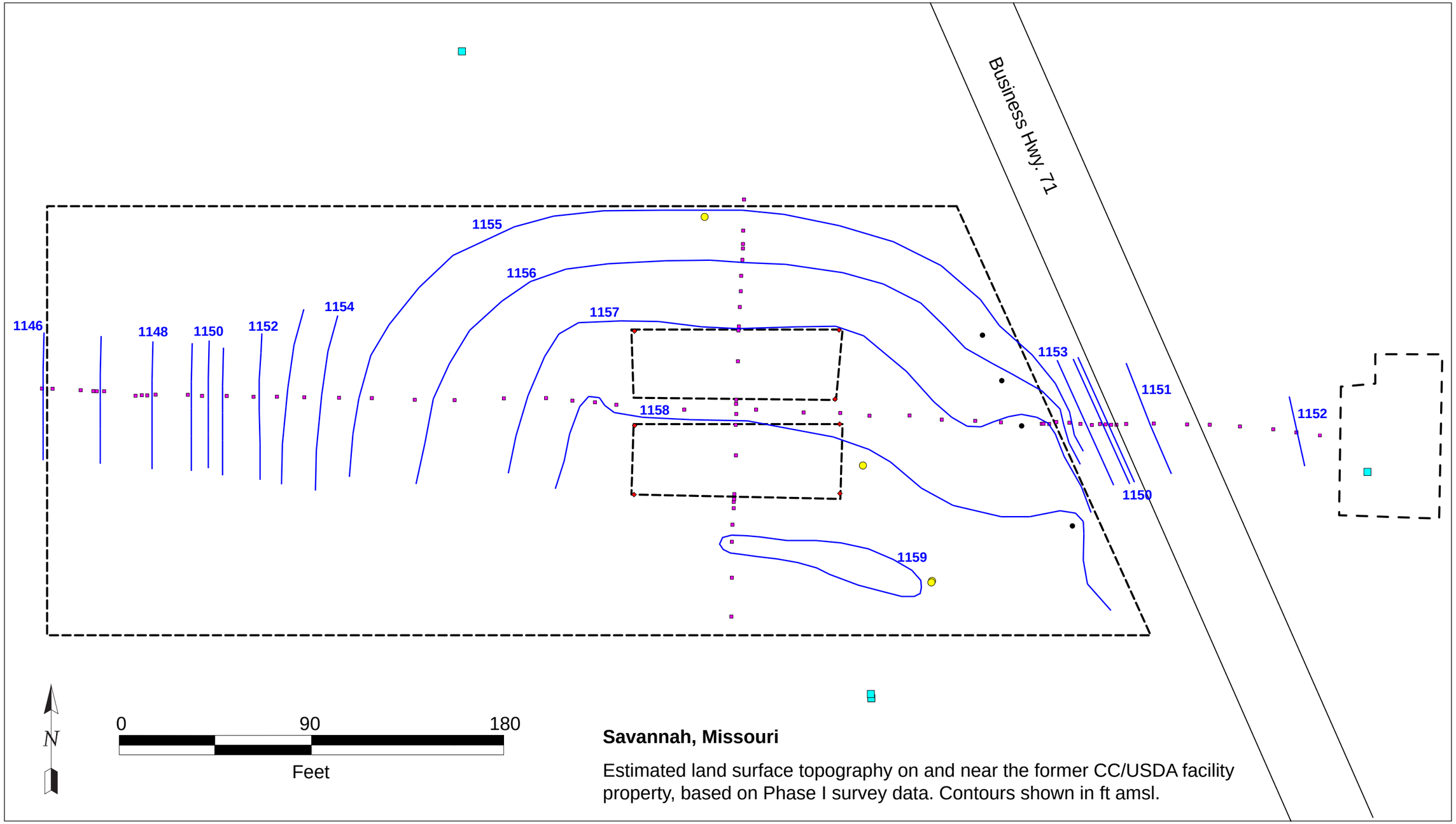


FIGURE H.3 Estimated land surface topography on and near the former CCC/USDA facility property, based on Phase 1 survey data. Contours are shown in ft AMSL.

Appendix I:

Waste Characterization Data

5400 Legacy Drive, Cluster II, B3
Plano, Texas 75024
800-669-5740
www.safety-kleen.com

DUNS NO. 05-397-8551 FED. ID NO. 39800019

CUSTOMER

FOR SERVICE CALL	BRANCH MANAGER	DOC. EXP.	SCHEDULED SERVICE WEEK	SCHEDULED TERRITORY	REFERENCE NUMBER
816 796-9660	ROD KUHN		07		M004613380

CUSTOMER NO. 3 1 7 3 6 7 1

GENERATOR: CCC Elevator, Hwy 71 & CR 160, Savannah MO 64485

BILL TO

CREDIT CODE	PREVIOUS BALANCE	BAL. OVER 60 DAYS

BUSINESS TYPE	CHAIN	OUTER COUNTY	SVC. P/C	PROD. P/C

LOCATION	TAX EXEMPTION NUMBER
508502	

SERVICE DATE	SALES REP NO.	CUSTOMER P.O. NUMBER	CUSTOMER PHONE #	TAX CODE	HANDLING CODE	ASSOC. CODE	SERVICE TAX	C.O.M.S. TAX	PRODUCT TAX
1/2/08	027167		785 841-8267	OR					

DEPT	SERVICE/ PRODUCT	SURVEY NUMBER	UNIT PRICE	QUANTITY	CHARGE	SALES TAX	TOTAL CHARGE	CHLORINE TEST RESULTS: HALOGEN TESTER PASS	FAIL	CHLOR-D-TECT RESULTS (PPM)	TESTERS INITIALS	SK DOT NUMBER	GC	SERVICE TERM	CHANGE SERVICE TERM (WEEKS) (INITIAL)	CHANGE SCH. DATE (YY WW)	PROMO NO.	RELEASE NO.
00	66666	3337371		3800	3876.00	—	3876.00	☒	☐			33262		19				
				1	12.00	—	12.00	☑	☐					19				
								☐	☐									
								☐	☐									
								☐	☐									
								☐	☐									
								☐	☐									
								☐	☐									
								☐	☐									

TOTAL-SERVICE/PRODUCTS 3800 3888.00 —

TANK CAPACITY

TRANSPORTER DATE 1/2/08
Randy Stephens — PRINT NAME
X Randy Stephens — SIGNATURE

FACILITY DATE / /
PRINT NAME
X SIGNATURE

GENERATOR STATUS: CHECK ONLY ONE BOX BELOW

GENERATOR HAZARDOUS WASTE CLASSIFICATION*	VEHICLE FLUIDS ONLY	OTHER NONVEHICLE FLUIDS
LQG/SQG	☐ 1	☒ 3
SQG/LQG	☐ 2	☐ 4

1 NO PREQUAL REQUIRED, NO HALOGEN TEST
2 NO PREQUAL REQUIRED, HALOGEN TEST AT PICK-UP
3 PREQUAL REQUIRED, NO HALOGEN TEST
4 PREQUAL REQUIRED, HALOGEN TEST AT PICK-UP
* REFER TO REVERSE SIDE FOR DEFINITIONS

MANIFEST NO. | USE A TRANSPORTER ID NO. MOD980973564
GENERATOR STATE ID NO. | DESTINATION STATE ID NO.

11. US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID.)

	12. CONTAINERS NO.	TYPE	13. TOTAL QUANTITY	14. UNIT WT/VOL	SK DOT NUMBER
USED OIL AND WATER MIXTURE (NOT USDOT HAZARDOUS MATERIAL)					1002
USED OIL AND WATER MIXTURE (NOT USDOT OR USEPA REGULATED)(VAC)					12700
NON-REGULATED LIQUID					23136
	1	TT	3800	G	33262

INTERMEDIATE FACILITY NAME AND ADDRESS SAFETY-KLEEN SYSTEMS, INC. 9015 Junior Indep MO 64056

USA EPA ID NO. MOD980973564
STATE ID NO. HH-0026

OIL RECOVERY SERVICE/ SALES ACKNOWLEDGMENT

PAYMENT RECEIVED SECTION

CASH ☐ TOTAL RECEIVED
CHECK NUMBER
APPLY PAYMENT TO: ☐ TODAY'S SERVICE/SALE ☐ PREVIOUS BALANCE AS FOLLOWS

INVOICE #	AMOUNT $	INVOICE #	AMOUNTS

PREVIOUS CREDIT CARD NO. →
CREDIT CARD NO. | EXP. DATE

MANIFEST CODE | SEQ #
13 D

IN THE EVENT OF AN EMERGENCY CALL

CHARGE MY ACCOUNT FOR THIS TRANSACTION UNLESS OTHERWISE INDICATED IN THE PAYMENT RECEIVED SECTION.
Customer certifies that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the U.S. Environmental Protection Agency and the U.S. Department of Transportation.
ADDITIONAL TERMS AND CONDITIONS ON THE REVERSE SIDE OF THIS DOCUMENT ARE INCORPORATED HEREWITH MADE A PART HEREOF.
Print Name Darrl Biera
X Darrl Biera
GENERATOR/SHIPPER DESIGNATED REPRESENTATIVE SIGNATURE

TOTAL DUE 3888.00

DO NOT WRITE IN THE AREA BELOW
M004613380
027167

BILL OF LADING/MANIFEST

1. Shipper's US EPA ID No. (If Applicable): CE30G
Document No.: 133.80
2. Page 1 of 1

3. Shipper's Name and Mailing Address: CCC ELEVATOR
HWY 71 & CR160
SAVANNAH MO 64485

4. Shipper's Phone: (785 841-8707

5. Transporter 1 Company Name: SAFETY-KLEEN SYSTEMS, INC
6. US EPA ID Number: MOD980973564
A. Transporter's Phone: 816 796-9660

7. Transporter 2 Company Name:
8. US EPA ID Number:
B. Transporter's Phone:

9. Designated Facility Name and Site Address: 508502
SAFETY-KLEEN SYSTEMS, INC.
901 SOUTH YUMA DRIVE
INDEPENDENCE, MO 64056
10. US EPA ID Number: MOD980973564
C. Facility's Phone: 816 796-9660

	11. Shipping Name and Description	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a.	NON REGULATED MATERIAL, LIQUID		001	TT	3800	G
b.						
c.						
d.						

15. Special Handling Instruction and Additional Information

MFST R/T#109160643 0003-1736-71
EMERGENCY RESP 800-468-1760(24 HR). IF UNDELIVERABLE RETURN TO GENERATOR.

SKDOT# A: 33262 B: C: D:

16a. US DOT HAZARDOUS MATERIALS SHIPPER'S CERTIFICATION: *This is to certify that the above-named 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.
Printed/Typed Name: Signature required here if US DOT regulated: Month Day Year

16b. NON-REGULATED SHIPPER'S CERTIFICATION: I certify the materials described above on this form are not subject to federal regulations for Transportation or Disposal.
Printed/Typed Name: Daryl Biere
Sign here if material is not DOT regulated: Daryl Biere
Month Day Year: 01 02 08

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Randy Stephens
Signature: Randy Stephens
Month Day Year: 01 02 08

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name:
Signature:
Month Day Year:

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of materials covered by this form except as noted in Item 19.
Printed/Typed Name: WINFIELD NEDROW
Signature:
Month Day Year: 01 02 08

IN EVENT OF EMERGENCY CALL
1-800-468-1760 (24 hours)

ORIGINAL-RETURN TO GENERATOR

FORM NO. 90291 (11/9

5400 Legacy Drive, Cluster II, B3
Plano, Texas 75024
800-669-5740
www.safety-kleen.com

CUSTOMER NO. 3 1 7 3 6 7 1

GENERATOR: CCC Elevator
Hwy 71 + CR 160
Savannah MO 64485

BILL TO

FOR SERVICE CALL	BRANCH MANAGER	DOC. EXP.	SCHEDULED SERVICE WEEK	SCHEDULED TERRITORY	REFERENCE NUMBER
816 796-9660	ROD KUHN		07		M004613379

CREDIT CODE	PREVIOUS BALANCE	BAL. OVER 60 DAYS

BUSINESS TYPE	CHAIN	OUTER COUNTY	SVC. P/C	PROD. P/C

LOCATION	TAX EXEMPTION NUMBER
508502	

SERVICE DATE	SALES REP NO.	CUSTOMER P.O. NUMBER	CUSTOMER PHONE #	TAX CODE	HANDLING CODE	ASSOC. CODE	SERVICE TAX	C.O.M.S. TAX	PRODUCT TAX
12/12/08	434293				OR				

DEPT	SERVICE/ PRODUCT	SURVEY NUMBER	UNIT PRICE	QUANTITY	CHARGE	SALES TAX	TOTAL CHARGE	CHLORINE TEST RESULTS: HALOGEN TESTER PASS	FAIL	CHLORO-TECT RESULTS (PPM)	TESTERS INITIALS	SK DOT NUMBER	EC	SERVICE TERM	CHANGE SERVICE TERM (WEEKS) (INITIAL)	CHANGE EQL DATE (YY WW)	PROMO NO.	RELEASE NO.
	666666	3337371	1.02	2750	2805	—	2805	☑	☐									
	100007		12.00	1	12.00		12.00	☐	☐									
								☐	☐									
								☐	☐									
								☐	☐									
								☐	☐									
								☐	☐									
								☐	☐									
								☐	☐									

TOTAL-SERVICE/PRODUCTS 2817.00

TANK CAPACITY

GENERATOR STATUS: CHECK ONLY ONE BOX BELOW

GENERATOR HAZARDOUS WASTE CLASSIFICATION	VEHICLE FLUIDS ONLY	OTHER NON-VEHICLE FLUIDS
LQG/SQG	☑ 1	☐ 3
SQG/LQG	☐ 2	☐ 4

1 NO PREQUAL REQUIRED, NO HALOGEN TEST
2 NO PREQUAL REQUIRED, HALOGEN TEST AT PICK-UP
3 PREQUAL REQUIRED, NO HALOGEN TEST
4 PREQUAL REQUIRED, HALOGEN TEST AT PICK-UP
* REFER TO REVERSE SIDE FOR DEFINITIONS

SEP. VAN NO. MOD980973564

TRANSPORTER DATE 12 12 08
Alan Shipley PRINT NAME
X SIGNATURE

FACILITY DATE / /
PRINT NAME
X SIGNATURE

11. US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID.)	12. CONTAINERS NO.	TYPE	13. TOTAL QUANTITY	14. UNIT WT/VOL	SK DOT NUMBER
USED OIL AND WATER MIXTURE					1002
(NOT USDOT HAZARDOUS MATERIAL)					
USED OIL AND WATER MIXTURE					12700
(NOT USDOT OR USEPA REGULATED)(VAC)					
NON REGULATED LIQUID					23136
Non Reg Mat. Liquid	1	TT	2750	G	33262

INTERMEDIATE FACILITY NAME AND ADDRESS SAFETY-KLEEN SYSTEMS, INC.

USA EPA ID NO. MOD980973564
STATE ID NO.

OIL RECOVERY SERVICE/ OILS ACCIDENTAL ENCAMENT

PAYMENT RECEIVED SECTION

CASH ☐ TOTAL RECEIVED
CHECK NUMBER
APPLY PAYMENT TO: ☐ TODAY'S SERVICE/SALE ☐ PREVIOUS BALANCE AS FOLLOWS

INVOICE #	AMOUNT $	INVOICE #	AMOUNT $

PREVIOUS CREDIT CARD NO. →
CREDIT CARD NO. EXP. DATE
CUSTOMER REFERENCE

MANIFEST CODE SEQ. # 12 D

IN THE EVENT OF AN EMERGENCY CALL 1-800-468-1760 (24 hours)

CHARGE MY ACCOUNT FOR THIS TRANSACTION UNLESS OTHERWISE INDICATED IN THE PAYMENT RECEIVED SECTION.
Customer certifies that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the U.S. Environmental Protection Agency and the U.S. Department of Transportation.
ADDITIONAL TERMS AND CONDITIONS ON THE REVERSE SIDE OF THIS DOCUMENT ARE INCORPORATED HEREWITH MADE A PART HEREOF.
Print Name: Darryl Bice
X Darryl Bice
GENERATOR/SHIPPER DESIGNATED REPRESENTATIVE SIGNATURE

TOTAL DUE 2817

DO NOT WRITE IN THE AREA BELOW
M004613379
027167

SEE REVERSE SIDE FOR IMPORTANT INFORMATION

BILL OF LADING/MANIFEST

1. Shipper's US EPA ID No. (If Applicable): CESOG
Document No.: 3379.0
2. Page 1 of 1

3. Shipper's Name and Mailing Address: CCC ELEVATOR
HWY 71 & CR160
SAVANNAH MO 64485

4. Shipper's Phone: (785 841-8707

5. Transporter 1 Company Name: SAFETY-KLEEN SYSTEMS, INC
6. US EPA ID Number: MOD980973564
A. Transporter's Phone: 816 796-9660

7. Transporter 2 Company Name:
8. US EPA ID Number:
B. Transporter's Phone:

9. Designated Facility Name and Site Address: 508502
SAFETY-KLEEN SYSTEMS, INC.
901 SOUTH YUMA DRIVE
INDEPENDENCE, MO 64056
10. US EPA ID Number: MOD980973564
C. Facility's Phone: 816 796-9660

	HM	11. Shipping Name and Description	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a.		NON REGULATED MATERIAL, LIQUID	001	TT	2750	KG
b.						
c.						
d.						

15. Special Handling Instruction and Additional Information

MFST R/T#109160645 0003-1736-71
EMERGENCY RESP 800-468-1760(24 HR). IF UNDELIVERABLE RETURN TO GENERATOR.

SKDOT# A: 33262 B: C: D:

SK#55089

16a. US DOT HAZARDOUS MATERIALS SHIPPER'S CERTIFICATION: "This is to certify that the above-named 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.
Printed/Typed Name: | Signature required here if US DOT regulated | Month Day Year

16b. NON-REGULATED SHIPPER'S CERTIFICATION: I certify the materials described above on this form are not subject to federal regulations for Transportation or Disposal.
Printed/Typed Name: Daryl Biere | Sign here if material is not DOT regulated: Daryl Biere | Month 01 Day 02 Year 08

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Alan Shipley | Signature: M. Shipley | Month 01 Day 02 Year 08

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of materials covered by this form except as noted in Item 19.
Printed/Typed Name: WINFIELD NEDROW | Signature | Month 01 Day 02 Year 08

SHIPPER — USE 16A OR 16B — TRANSPORTER — FACILITY

IN EVENT OF EMERGENCY CALL
1-800-468-1760 (24 hours)

ORIGINAL-RETURN TO GENERATOR

FORM NO. 90291 (11

5400 Legacy Drive, Cluster II, B3
Plano, Texas 75024
800-669-5740
www.safety-kleen.com

DUNS NO. 05-397-5551 FED. ID NO. 396090019

CUSTOMER

FOR SERVICE CALL	BRANCH MANAGER	DOC. EXP.	SCHEDULED SERVICE WEEK	SCHEDULED TERRITORY	REFERENCE NUMBER
816 796-9660	ROD KUHN		07		M004608267

CUSTOMER NO. 3 1 7 3 6 7 1

GENERATOR
CCC Elevator
Hwy 71 + CR 160
Savannah MO 64485

BILL TO

CREDIT CODE	PREVIOUS BALANCE	BAL. OVER 60 DAYS

BUSINESS TYPE	CHAIN	OUTER COUNTY	SVC. P/C	PROD. P/C

LOCATION	TAX EXEMPTION NUMBER
508502	

SERVICE DATE	SALES REP NO.	CUSTOMER P.O. NUMBER	CUSTOMER PHONE #	TAX CODE	HANDLING CODE	OR	ASSOC. CODE	SERVICE TAX	C.O.M.S. TAX	PRODUCT TAX
1/2/08	434293									

DEPT	SERVICE/ PRODUCT	SURVEY NUMBER	UNIT PRICE	QUANTITY	CHARGE	SALES TAX	TOTAL CHARGE	CHLORINE TEST RESULTS: HALOGEN TESTER PASS	FAIL	CHLOR-D-TECT RESULTS (PPM)	TESTERS INITIALS	SK DOT NUMBER	CC	SERVICE TERM	CHANGE SERVICE TERM (WEEKS)	INITIAL	CHANGE SCH. DATE (YY MM)	PROMO NO.	RELEASE NO.
	6666666	3337371	1.02	2425	2473.5		2473.50	☑	☐			33262		9					
	100007		12.00	1	12.00		12.00	☐	☐										
								☐	☐										
								☐	☐										
								☐	☐										
								☐	☐										
								☐	☐										
								☐	☐										
								☐	☐										

TOTAL-SERVICE/PRODUCTS 2485.50

TANK CAPACITY

TRANSPORTER DATE 1/12/08
Alan Shipp PRINT NAME
X Al Shipp SIGNATURE

FACILITY DATE / /
PRINT NAME
X SIGNATURE

GENERATOR STATUS: CHECK ONLY ONE BOX BELOW

GENERATOR HAZARDOUS WASTE CLASSIFICATION*	VEHICLE FLUIDS ONLY	OTHER NON-VEHICLE FLUIDS
CESQG	☐ 1	☑ 3
SQG/LQG	☐ 2	☐ 4

1 NO PREQUAL REQUIRED, NO HALOGEN TEST
2 NO PREQUAL REQUIRED, HALOGEN TEST AT PICK-UP
3 PREQUAL REQUIRED, NO HALOGEN TEST
4 PREQUAL REQUIRED, HALOGEN TEST AT PICK-UP
* REFER TO REVERSE SIDE FOR DEFINITIONS

MANIFEST NO. USER TRANSPORTER ID NO. MOD980973564
GENERATOR ID NO. GENERATOR ID NO.

11. US DOT DESCRIPTION (INCLUDING PROPER SHIPPING NAME, HAZARD CLASS, AND ID.)	12. CONTAINERS NO.	TYPE	13. TOTAL QUANTITY	14. UNIT WT/VOL	SK DOT NUMBER
USED OIL AND WATER MIXTURE					1002
(NOT USDOT HAZARDOUS MATERIAL)					
USED OIL AND WATER MIXTURE					12700
(NOT USDOT OR USEPA REGULATED)(VAC)					
NON-REGULATED LIQUID					23136
Non Regulated Mat Liquid	1	TT	2425	G	33262

INTERMEDIATE FACILITY NAME AND ADDRESS SAFETY-KLEEN SYSTEMS, INC.
901 S. Yuma Tr. MO 64056

USA EPA ID NO. MOD980973564
STATE ID NO.

OIL RECOVERY SERVICE/

PAYMENT RECEIVED SECTION

CASH ☐	TOTAL RECEIVED	APPLY PAYMENT TO:
CHECK NUMBER		☐ TODAY'S SERVICE/SALE ☐ PREVIOUS BALANCE AS FOLLOWS

INVOICE #	AMOUNT $	INVOICE #	AMOUNT $

PREVIOUS CREDIT CARD NO. →
CREDIT CARD NO. AMEX VISA MC EXP. DATE

MANIFEST CODE SEQ # 3 D

IN THE EVENT OF AN EMERGENCY CALL

CHARGE MY ACCOUNT FOR THIS TRANSACTION UNLESS OTHERWISE INDICATED IN THE PAYMENT RECEIVED SECTION.
Customer certifies that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the U.S. Environmental Protection Agency and the U.S. Department of Transportation.
ADDITIONAL TERMS AND CONDITIONS ON THE REVERSE SIDE OF THIS DOCUMENT ARE INCORPORATED HEREWITH MADE A PART HEREOF.
Print Name Darryl Bitle
X Darryl Bitle
GENERATOR/SHIPPER DESIGNATED REPRESENTATIVE SIGNATURE

TOTAL DUE 2485.50
DO NOT WRITE IN THE AREA BELOW
M004608267
434293

BILL OF LADING/MANIFEST

1. Shipper's US EPA ID No. (If Applicable): CFSOG
Document No.: 82670
2. Page 1 of 1

3. Shipper's Name and Mailing Address: CCC ELEVATOR
HWY 71 & CR160
SAVANNAH MO 64485

4. Shipper's Phone: (785 841-8707

5. Transporter 1 Company Name: SAFETY-KLEEN SYSTEMS, INC
6. US EPA ID Number: MOD980973564
A. Transporter's Phone: 816 796-9660

7. Transporter 2 Company Name:
8. US EPA ID Number:
B. Transporter's Phone:

9. Designated Facility Name and Site Address: 508502
SAFETY-KLEEN SYSTEMS, INC.
901 SOUTH YUMA DRIVE
INDEPENDENCE, MO 64056
10. US EPA ID Number: MOD980973564
C. Facility's Phone: 816 796-9660

	11. Shipping Name and Description	HM	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol
a.	NON REGULATED MATERIAL, LIQUID		001	TT	2425	G
b.						
c.						
d.						

SHIPPER

15. Special Handling Instruction and Additional Information

EMERGENCY RESP 800-468-1760(24 HR). MFST R/T#109160646 0003-1736-71
IF UNDELIVERABLE RETURN TO GENERATOR.

SKDOT# A: 33262 B: C: D:

SK #55289

USE 16A OR 16B

16a. US DOT HAZARDOUS MATERIALS SHIPPER'S CERTIFICATION: "This is to certify that the above-named 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."
Printed/Typed Name | Signature required here if US DOT regulated | Month Day Year

16b. NON-REGULATED SHIPPER'S CERTIFICATION: I certify the materials described above on this form are not subject to federal regulations for Transportation or Disposal.
Printed/Typed Name: Daryl Biere | Sign here if material is not DOT regulated: Daryl Biere | Month Day Year: 01 02 08

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Alon Shippy | Signature: A Shippy | Month Day Year: 01 02 08

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name | Signature | Month Day Year

FACILITY

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of materials covered by this form except as noted in Item 19.
Printed/Typed Name: WINFIELD NEDROW | Signature | Month Day Year: 01 02 08

IN EVENT OF EMERGENCY CALL
1-800-468-1760 (24 hours)

ORIGINAL -RETURN TO GENERATOR

FORM NO. 90291 (11/9

December 4, 2007

To: Jody Mayes

FAX 816-622-7044

FROM:

David Surgnier

Phone: 785-857-3864
FAX: 785-857-3893

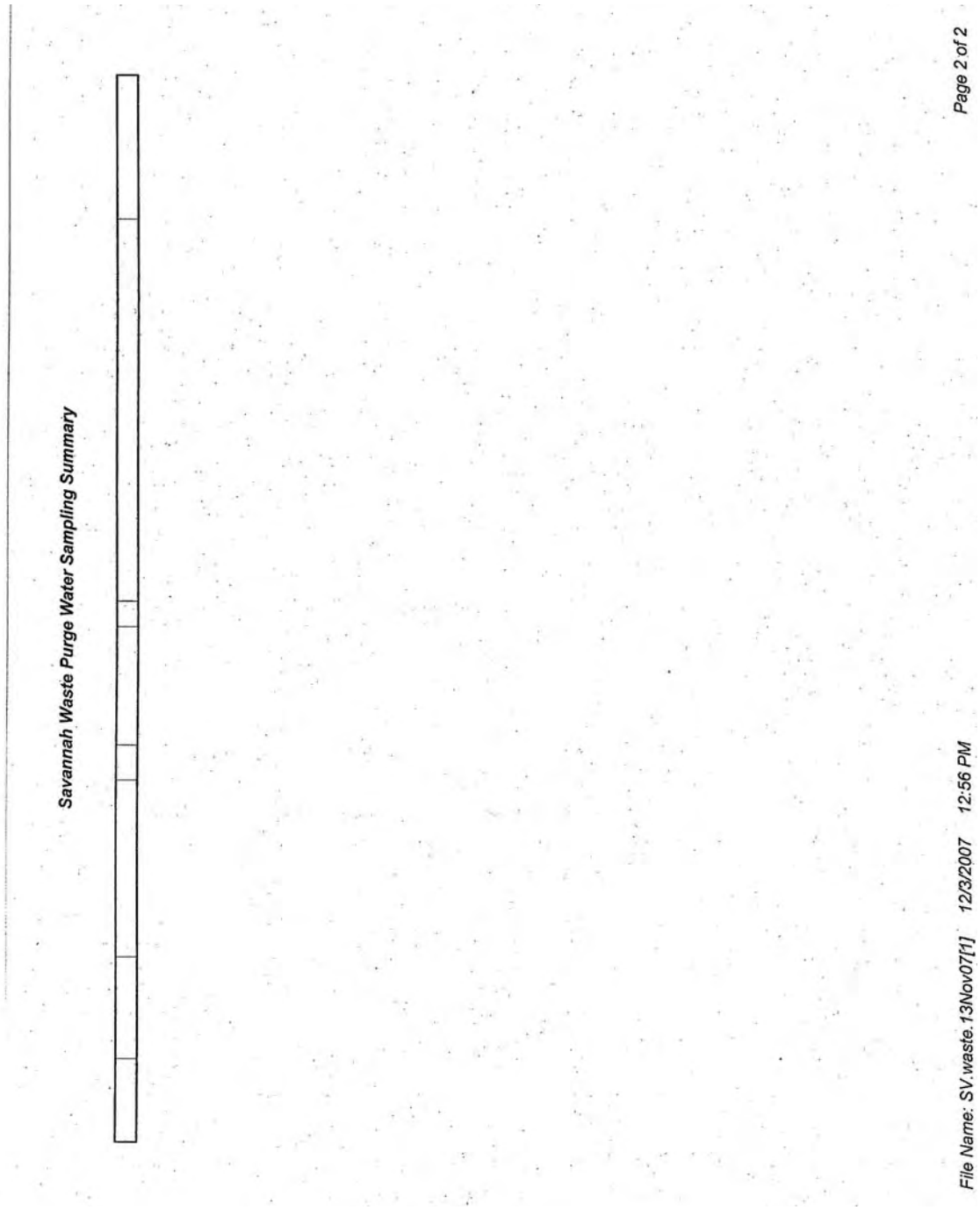
Jody,

Attached are the laboratory backup data results from the Former CCC/USDA Site located approximately 1 mille north of the City of Savannah, MO

Jody.mayes@dnr.mo.gov

Savannah Waste Purge Water Sampling Summary

Chain of Custody	Date Shipped	Sample ID	Sample Delivery Group	Analysis Result	file name
Samples Sent to AGEM Lab for VOC Analysis					
6330	30Oct07	SVWWTANK1-W-25388	07-10-31a	CT = ND. CH = ND.	Waste.1.pdf
		SVWWTANK2-W-25389	07-10-31a	CT = 33 µg/l. CH = 2 µg/l. Re-sample.	Waste.1.pdf
		SVWWTANK3-W-25390	07-10-31a	CT = ND. CH = ND.	Waste.1.pdf
		SVWWTANK4-W-25392	07-11-1a	CT = ND. CH = ND.	Waste.1a.pdf
		SVTB-W-25395	07-11-1a	CT = ND. CH = ND.	Waste.1a.pdf
	Tank2 re-sample to check contaminant level after volatilization.				
6021	09Nov07	SVTANK2-W-25412	07-11-12	CT = <1 µg/l. CH = <1 µg/l.	Waste.2.pdf
		SVQCTB-W-25413	07-11-12	CT = ND. CH = ND.	Waste.2.pdf
Samples sent to Test America-South Burlington, VT for heavy metals analysis					
6337	01Nov07	SVTANK1-W-25408	122809	Ba=401 µg/l. Ca=115000 µg/l. Mg=26600 µg/l. Mn=28.4 µg/l. Na=24800 µg/l. Zn=41.6 µg/l.	Waste.3.pdf
		SVCOMB-W-25409	122809	Ba=245 µg/l. Ca=71200 µg/l. Fe=1270 µg/l. Mg=13900 µg/l. Mn=81.3 µg/l. Na=15400 µg/l.	Waste.3.pdf
6010	05Nov07	SVTANK2-W-25411	122865	Al=343 µg/l. Ba=394 µg/l. Ca=87400 µg/l. Fe=1680 µg/l..Mg=21400 µg/l. Mn=50.3 µg/l. Na=20700 µg/l. Zn=120 µg/l.	Waste.4.pdf
Samples sent to Test America-Chicago for total nitrogen Analysis					
6331	01Nov07	SVTANK1-W-25408	122809	1800 µg/l.	Waste.5.pdf
		SVCOMB-W-25409	122809	550 µg/l.	Waste.5.pdf
6012	05Nov07	SVTANK2-W-25411	122865	440 µg/l.	Waste.6.pdf


Savannah Waste Purge Water Sampling Summary
File Name: SV.waste.13Nov07[1] 12/3/2007 12:56 PM
Page 2 of 2

C:\HPCHEM\1\DATA\SV\SV110101.D

Operator CMR
Number of Compounds 20.
Vial Number 1
Sample Name LAB BLANK
Data File Name SV110101.D
Date Acquired 11/ 1/20 -1:9:

#	Name	Ret Time	Signal	Amount	Target Response	
1)	1,2-dichloroethene	0.00	63	0.00	0	
2)	Methylene Chloride	0.00	84	0.00	0	
3)	1,2-dichloroethene	0.00	62	0.00	0	
4)	1,1-dichloroethane	0.00	63	0.00	0	
5)	Chloroform	0.00	83	0.00	0	
6)	Carbon Tetrachloride	0.00	117	0.00	0	
7)	Benzene	0.00	78	0.00	0	
8)	1,2-dichloroethane	0.00	62	0.00	0	
9)	Fluorobenzene	10.23	96	3.98	1045360	Internal Std
10)	Trichloroethylene	0.00	97	0.00	0	
11)	1,2-dichloropropane	0.00	63	0.00	0	
12)	Toluene	0.00	91	0.00	0	
13)	1,1,2-trichloroethane	0.00	83	0.00	0	
14)	Tetrachloroethylene	0.00	164	0.00	0	
15)	Dibromochloromethane	0.00	129	0.00	0	
16)	1, 2-Dibromoethane	0.00	107	0.00	0	
17)	Chlorobenzene	0.00	112	0.00	0	
18)	p-Bromofluorobenzene	16.70	95	3.53	304731	Internal Std
19)	1,1,2,2-tetrachloroethane	0.00	83	0.00	0	
20)	Dichlorobenzene-d4	18.99	152	4.16	320920	Internal Std

C:\HPCHEM\1\DATA\SV\SV110104.D

Operator CMR
Number of Compounds 20.
Vial Number 4
Sample Name SVTB-W-25392
Data File Name SV110104.D
Date Acquired 11/ 1/20 -1:1:

#	Name	Ret Time	Signal	Amount	Target Response	
1)	1,2-dichloroethene	0.00	63	0.00	0	
2)	Methylene Chloride	0.00	84	0.00	0	
3)	1,2-dichloroethene	0.00	62	0.00	0	
4)	1,1-dichloroethane	0.00	63	0.00	0	
5)	Chloroform	0.00	83	0.00	0	
6)	Carbon Tetrachloride	0.00	117	0.00	0	
7)	Benzene	0.00	78	0.00	0	
8)	1,2-dichloroethane	0.00	62	0.00	0	
9)	Fluorobenzene	10.22	96	4.14	1083292	Internal Std
10)	Trichloroethylene	0.00	97	0.00	0	
11)	1,2-dichloropropane	0.00	63	0.00	0	
12)	Toluene	0.00	91	0.00	0	
13)	1,1,2-trichloroethane	0.00	83	0.00	0	
14)	Tetrachloroethylene	0.00	164	0.00	0	
15)	Dibromochloromethane	0.00	129	0.00	0	
16)	1, 2-Dibromoethane	0.00	107	0.00	0	
17)	Chlorobenzene	0.00	112	0.00	0	
18)	p-Bromofluorobenzene	16.70	95	3.52	303611	Internal Std
19)	1,1,2,2-tetrachloroethane	0.00	83	0.00	0	
20)	Dichlorobenzene-d4	18.99	152	4.40	335026	Internal Std

C:\HPCHEM\1\DATA\SV\SV110102.D

Operator CMR
Number of Compounds 20.
Vial Number 2
Sample Name SVWWTANK4-W-25392
Data File Name SV110102.D
Date Acquired 11/ 1/20 -1:0:

#	Name	Ret Time	Signal	Amount	Target Response	
1)	1,2-dichloroethene	0.00	63	0.00	0	
2)	Methylene Chloride	0.00	84	0.00	0	
3)	1,2-dichloroethene	0.00	62	0.00	0	
4)	1,1-dichloroethane	0.00	63	0.00	0	
5)	Chloroform	0.00	83	0.00	0	
6)	Carbon Tetrachloride	0.00	117	0.00	0	
7)	Benzene	0.00	78	0.00	0	
8)	1,2-dichloroethane	0.00	62	0.00	0	
9)	Fluorobenzene	10.22	96	4.07	1067894	Internal Std
10)	Trichloroethylene	0.00	97	0.00	0	
11)	1,2-dichloropropane	0.00	63	0.00	0	
12)	Toluene	0.00	91	0.00	0	
13)	1,1,2-trichloroethane	0.00	83	0.00	0	
14)	Tetrachloroethylene	0.00	164	0.00	0	
15)	Dibromochloromethane	0.00	129	0.00	0	
16)	1, 2-Dibromoethane	0.00	107	0.00	0	
17)	Chlorobenzene	0.00	112	0.00	0	
18)	p-Bromofluorobenzene	16.70	95	3.49	302045	Internal Std
19)	1,1,2,2-tetrachloroethane	0.00	83	0.00	0	
20)	Dichlorobenzene-d4	18.99	152	3.99	311251	Internal Std

November 29, 2007

Jorge S. Alvarado, PH. D
Argonne National Laboratory
Environmental Research Division
Applied Geosciences and Environmental
Management Section
9700 South Cass Avenue, ER-203
Argonne, Illinois 60439

RE: Report #0070295

Dear Jorge,

Enclosed is the Analytical Data Package for Organics Analysis for the samples received on November 16, 2007. These samples were analyzed by using method SW-846 8260B and USEPA CLP SOWOLM04.3 and the chain of custody instructions.

The requested LCS and LCSD analysis was performed and will be reported in next data package.

Please do not hesitate to call if you have any questions, comments, or require additional information.

Sincerely,

Mohan Khare Ph.D.
President/CEO

Enclosure (1)
MK/ncc

Envirosystems, Inc.

SDG NARRATIVE
VOLATILE ORGANICS (VOC)

Envirosystems, Inc.

Contract: N/A
Client: Argonne National Laboratory
Case: N/A
SDG: ARG71105

1. SAMPLE RECIEPT

Date received: 11-16-2007
Cooler Temperature: 2

Sample Summary

Client ID	Laboratory ID	Matrix	pH
CNPUBL-W-26062	0071105-01	WATER	7

2. HOLDING TIMES

A. **Sample Preparation:** All holding times were met.
B. **Sample Analysis:** All holding times were met

3. METHODS

The samples were analyzed and reported by using method SW-846 8260B and USEPA CLP SOW OLM04.3 for target compound list.

4. INSTRUMENT AND CHROMATOGRAPHIC CONDITIONS

A Hewlett Packard 6890 gas chromatograph equipped with a Hewlett Packard 5975 MSD was used for sample analysis. The capillary column used was a Restek 20m by 0.18 mm ID by 1.0 µm film thickness (Restek Cat. # RTX-624). The trap used with the sample concentrator is an OI Analytical Trap #10, 30cm packed with Tenax/silica gel/cms (PN#228122).

5. PREPARATION

The submitted samples were analyzed as received.

6. ANALYSIS

A. **Calibration:**

I. **Initial calibration**

All acceptance criteria as stipulated by SW-846 8260b were met for all SPCC's and CCC's. All target compounds met the required percent RSD.

II. **Blanks:**

SDG NARRATIVE
VOLATILE ORGANICS (VOC)

All acceptance criteria were met.

II. Surrogates:

All acceptance criteria were met.

B. Spikes:

I. Laboratory Control Spikes (LCS)

LCS and LCSD samples were not analyzed.

II. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

The client did not request a MS/MSD.

C. Internal Standards:

All acceptance criteria were met.

D. Samples

Sample analysis proceeded normally.

Manual Integration Summary

No manual integrations were required.

Laboratory Manager

11/29/07

Date

Argonne NATIONAL LABORATORY

6362

ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD*

MATRIX: WATER
RECEIVING LAB: ENVIROSYSTEMS
PROJECT/SITE: CENTRALIA PILOT
SAMPLER(S) (Signature) D. BIERE

Shipping Container:
Shipping Info:
Field Contact (Name & Temporary Phone): 402-429-5144

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOCs *	REMARKS
11/15/07	CNPUBL-W-26062	4	X	RUSH ANALYSIS REQUIRED
				INCLUDE CARBON DISULFIDE

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
B. Bedury	11/15/07	20:30					

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Remarks

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Science Division, 9700 S. Cass Avenue, Argonne, IL 60439

EVS-160 (6-07)

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
CNPUBL-W-26062

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG71105

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0071105-01

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H73FA241.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/16/2007

% Moisture: not dec. Date Analyzed: 11/16/2007

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	2.6	J
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

SOM01.1 (5/2005)

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
CNPUBL-W-26062

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG71105

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0071105-01

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H73FA241.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/16/2007

% Moisture: not dec. Date Analyzed: 11/16/2007

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	5.0	U

SOM01.1 (5/2005)

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
CNPUBL-W-26062

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG71105

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0071105-01

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H73FA241.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/16/2007

% Moisture: not dec. Date Analyzed: 11/16/2007

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	5.0	U

SOM01.1 (5/2005)

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
CNPUBL-W-26062

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG71105

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0071105-01

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H73FA241.D

Level: (TRACE/LOW/MED) LOW Date Received: 11/16/2007

% Moisture: not dec. Date Analyzed: 11/16/2007

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	2.6	J
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

SOM01.1 (5/2005)

Argonne NATIONAL LABORATORY

6362

MATRIX: WATER	ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD*		Shipping Container:
RECEIVING LAB: ENVIROSYSTEMS			Shipping Info:
PROJECT/SITE: CENTRALIA PILOT		ANALYSIS	Field Contact (Name & Temporary Phone): 402-429-5144
SAMPLER(S) (Signature) D. BIERE			

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	VOCs *	REMARKS
11/15/07	CNPOBL-W-26062	4	X	RUSH ANALYSIS REQUIRED
				INCLUDE CARBON DISULFIDE

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
B. Dedury	11/15/07	20:30					

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Remarks

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:

1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Science Division, 9700 S. Cass Avenue, Argonne, IL 60439

EVS-160 (6-07)

SDG NARRATIVE
VOLATILE ORGANICS (VOC)

All acceptance criteria were met.

II. Surrogates:

All acceptance criteria were met.

B. Spikes:

I. Laboratory Control Spikes (LCS)

LCS and LCSD samples were not analyzed.

II. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

The client did not request a MS/MSD.

C. Internal Standards:

All acceptance criteria were met.

D. Samples

Sample analysis proceeded normally.

Manual Integration Summary

No manual integrations were required.

Laboratory Manager

11/29/07

Date

SDG NARRATIVE
VOLATILE ORGANICS (VOC)

Envirosystems, Inc.

Contract: N/A
Client: Argonne National Laboratory
Case: N/A
SDG: ARG71105

1. SAMPLE RECIEPT

Date received: 11-16-2007
Cooler Temperature: 2

Sample Summary

Client ID	Laboratory ID	Matrix	pH
CNPUBL-W-26062	0071105-01	WATER	7

2. HOLDING TIMES

A. **Sample Preparation:** All holding times were met.
B. **Sample Analysis:** All holding times were met

3. METHODS

The samples were analyzed and reported by using method SW-846 8260B and USEPA CLP SOW OLM04.3 for target compound list.

4. INSTRUMENT AND CHROMATOGRAPHIC CONDITIONS

A Hewlett Packard 6890 gas chromatograph equipped with a Hewlett Packard 5975 MSD was used for sample analysis. The capillary column used was a Restek 20m by 0.18 mm ID by 1.0 µm film thickness (Restek Cat. # RTX-624). The trap used with the sample concentrator is an OI Analytical Trap #10, 30cm packed with Tenax/silica gel/cms (PN#228122).

5. PREPARATION

The submitted samples were analyzed as received.

6. ANALYSIS

A. **Calibration:**

I. **Initial calibration**

All acceptance criteria as stipulated by SW-846 8260b were met for all SPCC's and CCC's. All target compounds met the required percent RSD.

II. **Blanks:**

November 29, 2007

Jorge S. Alvarado, PH. D
Argonne National Laboratory
Environmental Research Division
Applied Geosciences and Environmental
Management Section
9700 South Cass Avenue, ER-203
Argonne, Illinois 60439

RE: Report #0070295

Dear Jorge,

Enclosed is the Analytical Data Package for Organics Analysis for the samples received on November 16, 2007. These samples were analyzed by using method SW-846 8260B and USEPA CLP SOWOLM04.3 and the chain of custody instructions.

The requested LCS and LCSD analysis was performed and will be reported in next data package.

Please do not hesitate to call if you have any questions, comments, or require additional information.

Sincerely,

Mohan Khare Ph.D.
President/CEO

Enclosure (1)
MK/ncc

Envirosystems, Inc.

Argonne NATIONAL LABORATORY

6330

MATRIX: WATER	ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD*		Shipping Container:
RECEIVING LAB: AGEM			Shipping Info:
PROJECT/SITE: SAVANNAH, MO			Field Contact (Name & Temporary Phone):
SAMPLER(S) (Signature)			

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS										REMARKS
			VOC										
10.30.07	SVWWTANK1-25388	4	X										
	SVWWTANK2-25389	4	X										
	SVWWTANK3-25390	4	X										
	SVWWTANK4-25392	4	X										
	SVTB-W-25395	2	X										

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	1800	10.30.07					

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Remarks
			[illegible]	10/31/07	9:30	Day IC

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:

1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Science Division, 9700 S. Cass Avenue, Argonne, IL 60439

EVS-160 (6-07)

C:\MSDCHEM\1\DATA\SV\SV103101.D

Operator CMR
Number of Compounds 19.
Sample Name WWTANK1-W-25388
Data File Name SV103101.D
Date Acquired 10/31/2007 9:35

#	Name	Ret Time	Signal	Amount	Target Response	
1)	Ethene, 1,1-dichloro-	0.00	61	0.00	0	
2)	Methylene Chloride	5.14	84	0.11	5186	
3)	Ethene, 1,2-dichloro-, (E)-	0.00	61	0.00	0	
4)	Ethane, 1,1-dichloro-	0.00	63	0.00	0	
5)	Chloroform	8.60	83	-0.09	51	
6)	Carbon Tetrachloride	0.00	116.9	0.00	0	
7)	Benzene	10.06	78	0.00	194	
8)	Benzene, fluoro-	10.07	96.1	5.11	200522	Internal Std
9)	Trichloroethylene	10.89	129.9	0.92	63	
10)	Propane, 1,2-dichloro-	0.00	63	0.00	0	
11)	Toluene	12.74	91	0.00	3896	
12)	Ethane, 1,1,2-trichloro-	13.38	97	-0.13	69	
13)	Tetrachloroethylene	13.54	165.8	0.95	123	
14)	Methane, dibromochloro-	13.95	128.9	0.03	97	
15)	1, 2-Dibromoethane	0.00	107	0.00	0	
16)	Benzene, chloro-	0.00	112	0.00	0	
17)	Benzene, 1-bromo-3-fluoro-	16.59	95.1	5.66	69497	Internal Std
18)	Ethane, 1,1,2,2-tetrachloro-	16.84	83	-0.76	269	
19)	Benzene-1,2,3,4-d4-, 5,6-dichloro-	18.89	150	5.90	142379	Internal Std

C:\MSDCHEM\1\DATA\SV\SV103102.D

Operator CMR
Number of Compounds 19.
Sample Name /WTANK2-W-25389
Data File Name SV103102.D
Date Acquired 10/31/2007 10:05

#	Name	Ret Time	Signal	Amount	Target Response	
1)	Ethene, 1,1-dichloro-	0.00	61	0.00	0	
2)	Methylene Chloride	5.15	84	-0.56	81	
3)	Ethene, 1,2-dichloro-, (E)-	0.00	61	0.00	0	
4)	Ethane, 1,1-dichloro-	0.00	63	0.00	0	
5)	Chloroform	8.59	83	2.18	43286	
6)	Carbon Tetrachloride	9.17	116.9	32.90	497049	
7)	Benzene	10.06	78	0.00	62	
8)	Benzene, fluoro-	10.06	96.1	4.90	190767	Internal Std
9)	Trichloroethylene	10.68	129.9	0.98	878	
10)	Propane, 1,2-dichloro-	0.00	63	0.00	0	
11)	Toluene	12.74	91	0.00	1112	
12)	Ethane, 1,1,2-trichloro-	13.37	97	-0.10	294	
13)	Tetrachloroethylene	13.56	165.8	1.01	1138	
14)	Methane, dibromochloro-	13.95	128.9	0.05	383	
15)	1, 2-Dibromoethane	0.00	107	0.00	0	
16)	Benzene, chloro-	0.00	112	0.00	0	
17)	Benzene, 1-bromo-3-fluoro-	16.59	95.1	5.49	66404	Internal Std
18)	Ethane, 1,1,2,2-tetrachloro-	16.82	83	-0.67	979	
19)	Benzene-1,2,3,4-d4-, 5,6-dichloro-	18.88	150	5.90	142309	Internal Std

C:\MSDCHEM\1\DATA\SV\SV103103.D

Operator CMR
Number of Compounds 19.
Sample Name WWTANK3-W-25390
Data File Name SV103103.D
Date Acquired 10/31/2007 10:35

#	Name	Ret Time	Signal	Amount	Target Response	
1)	Ethene, 1,1-dichloro-	4.17	61	-0.60	54	
2)	Methylene Chloride	5.13	84	0.34	6977	
3)	Ethene, 1,2-dichloro-, (E)-	0.00	61	0.00	0	
4)	Ethane, 1,1-dichloro-	0.00	63	0.00	0	
5)	Chloroform	8.59	83	-0.09	64	
6)	Carbon Tetrachloride	9.17	116.9	-0.21	169	
7)	Benzene	0.00	78	0.00	0	
8)	Benzene, fluoro-	10.07	96.1	4.51	172933	Internal Std
9)	Trichloroethylene	10.68	129.9	1.00	1149	
10)	Propane, 1,2-dichloro-	0.00	63	0.00	0	
11)	Toluene	12.74	91	0.00	1250	
12)	Ethane, 1,1,2-trichloro-	13.37	97	0.04	1462	
13)	Tetrachloroethylene	13.58	165.8	0.95	60	
14)	Methane, dibromochloro-	13.95	128.9	0.13	1226	
15)	1, 2-Dibromoethane	0.00	107	0.00	0	
16)	Benzene, chloro-	0.00	112	0.00	0	
17)	Benzene, 1-bromo-3-fluoro-	16.59	95.1	5.12	59458	Internal Std
18)	Ethane, 1,1,2,2-tetrachloro-	16.83	83	-0.56	1848	
19)	Benzene-1,2,3,4-d4-, 5,6-dichloro-	18.88	150	5.56	130713	Internal Std

C:\MSDCHEM\1\DATA\SV\SV103107.D

Operator	CMR
Number of Compounds	19.
Sample Name	LAB BLANK
Data File Name	SV103107.D
Date Acquired	10/31/2007 12:36

#	Name	Ret Time	Signal	Amount	Target Response	
1)	Ethene, 1,1-dichloro-	0.00	61	0.00	0	
2)	Methylene Chloride	5.11	84	-0.56	73	
3)	Ethene, 1,2-dichloro-, (E)-	0.00	61	0.00	0	
4)	Ethane, 1,1-dichloro-	0.00	63	0.00	0	
5)	Chloroform	0.00	83	0.00	0	
6)	Carbon Tetrachloride	0.00	116.9	0.00	0	
7)	Benzene	10.05	78	0.00	67	
8)	Benzene, fluoro-	10.06	96.1	3.74	138324	Internal Std
9)	Trichloroethylene	10.68	129.9	0.92	52	
10)	Propane, 1,2-dichloro-	0.00	63	0.00	0	
11)	Toluene	12.73	91	0.00	126	
12)	Ethane, 1,1,2-trichloro-	13.43	97	-0.13	62	
13)	Tetrachloroethylene	13.56	165.8	0.95	159	
14)	Methane, dibromochloro-	13.74	128.9	0.02	59	
15)	1, 2-Dibromoethane	0.00	107	0.00	0	
16)	Benzene, chloro-	0.00	112	0.00	0	
17)	Benzene, 1-bromo-3-fluoro-	16.59	95.1	4.40	46229	Internal Std
18)	Ethane, 1,1,2,2-tetrachloro-	0.00	83	0.00	0	
19)	Benzene-1,2,3,4-d4-, 5,6-dichloro-	18.88	150	4.75	103331	Internal Std

C:\MSDCHEM\1\DATA\SV\SV103125.D

Operator	CMR
Number of Compounds	19.
Sample Name	LAB BLK 2
Data File Name	SV103125.D
Date Acquired	10/31/2007 21:35

#	Name	Ret Time	Signal	Amount	Target Response	
1)	Ethene, 1,1-dichloro-	0.00	61	0.00	0	
2)	Methylene Chloride	5.11	84	-0.56	118	
3)	Ethene, 1,2-dichloro-, (E)-	0.00	61	0.00	0	
4)	Ethane, 1,1-dichloro-	0.00	63	0.00	0	
5)	Chloroform	8.75	83	-0.09	106	
6)	Carbon Tetrachloride	0.00	116.9	0.00	0	
7)	Benzene	10.05	78	0.00	139	
8)	Benzene, fluoro-	10.06	96.1	5.57	221306	Internal Std
9)	Trichloroethylene	0.00	129.9	0.00	0	
10)	Propane, 1,2-dichloro-	0.00	63	0.00	0	
11)	Toluene	0.00	91	0.00	0	
12)	Ethane, 1,1,2-trichloro-	0.00	97	0.00	0	
13)	Tetrachloroethylene	13.56	165.8	0.95	61	
14)	Methane, dibromochloro-	0.00	128.9	0.00	0	
15)	1, 2-Dibromoethane	0.00	107	0.00	0	
16)	Benzene, chloro-	0.00	112	0.00	0	
17)	Benzene, 1-bromo-3-fluoro-	16.59	95.1	5.92	74455	Internal Std
18)	Ethane, 1,1,2,2-tetrachloro-	0.00	83	0.00	0	
19)	Benzene-1,2,3,4-d4-, 5,6-dichloro-	18.88	150	6.41	159495	Internal Std

C:\MSDCHEM\1\DATA\SV\SV103126.D

Operator	CMR
Number of Compounds	19.
Sample Name	LAB BLK 3
Data File Name	SV103126.D
Date Acquired	10/31/2007 22:05

#	Name	Ret Time	Signal	Amount	Target Response	
1)	Ethene, 1,1-dichloro-	0.00	61	0.00	0	
2)	Methylene Chloride	5.11	84	-0.56	61	
3)	Ethene, 1,2-dichloro-, (E)-	5.68	61	-0.38	55	
4)	Ethane, 1,1-dichloro-	0.00	63	0.00	0	
5)	Chloroform	8.66	83	-0.09	63	
6)	Carbon Tetrachloride	0.00	116.9	0.00	0	
7)	Benzene	10.05	78	0.00	114	
8)	Benzene, fluoro-	10.06	96.1	5.21	204890	Internal Std
9)	Trichloroethylene	10.90	129.9	0.92	56	
10)	Propane, 1,2-dichloro-	0.00	63	0.00	0	
11)	Toluene	0.00	91	0.00	0	
12)	Ethane, 1,1,2-trichloro-	0.00	97	0.00	0	
13)	Tetrachloroethylene	0.00	165.8	0.00	0	
14)	Methane, dibromochloro-	0.00	128.9	0.00	0	
15)	1, 2-Dibromoethane	0.00	107	0.00	0	
16)	Benzene, chloro-	0.00	112	0.00	0	
17)	Benzene, 1-bromo-3-fluoro-	16.59	95.1	5.77	71513	Internal Std
18)	Ethane, 1,1,2,2-tetrachloro-	0.00	83	0.00	0	
19)	Benzene-1,2,3,4-d4-, 5,6-dichloro-	18.88	150	6.24	153957	Internal Std

Argonne NATIONAL LABORATORY

6337

ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD*

MATRIX: SEVERN - TRENT
RECEIVING LAB: WATER
PROJECT/SITE: SAVANNAH, MO
SAMPLER(S) (Signature): Sedery / BIERRE

Shipping Container:
Shipping Info:
Field Contact (Name & Temporary Phone): 402-465-9021

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: HVY. MTLS.	REMARKS
11/1/07	SVTANK1-W-25408	1	↓	FOR HEAVY METALS ANALYSIS
↓	SVLOMB-W-25409	1	↓	

RUSH SERVICE REQUIRED

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
B. Sedery	11/1/07	20:30					

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Remarks

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:

1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

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-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
SVTANK1-W-25408

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: _____ SDG No.: 122809

Matrix (soil/water): WATER Lab Sample ID: 730871

Level (low/med): LOW Date Received: 11/02/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-22-4	Silver	0.30	U		P
7429-90-5	Aluminum	159	B		P
7440-36-0	Antimony	0.90	U		P
7440-38-2	Arsenic	3.2	B		P
7440-39-3	Barium	401			P
7440-41-7	Beryllium	0.10	U		P
7440-70-2	Calcium	115000			P
7440-43-9	Cadmium	0.12	B		P
7440-48-4	Cobalt	0.20	U		P
7440-47-3	Chromium	3.4	B		P
7440-50-8	Copper	8.8	B		P
7439-89-6	Iron	122	B		P
7439-95-4	Magnesium	26600			P
7439-96-5	Manganese	28.4			P
7440-23-5	Sodium	24800			P
7440-02-0	Nickel	4.3	B		P
7439-92-1	Lead	2.6	B		P
7440-09-7	Potassium	1320	B		P
7782-49-2	Selenium	1.6	B		P
7440-28-0	Thallium	0.90	U		P
7440-62-2	Vanadium	1.4	B		P
7440-66-6	Zinc	41.6			P

Color Before: colorless Clarity Before: clear Texture: _____

Color After: colorless Clarity After: clear Artifacts: _____

Comments: _____

Form I - IN

USEPA-CLP FORMS
-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
SVCOMB-W-25409

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: SDG No.: 122809

Matrix (soil/water): WATER Lab Sample ID: 730872

Level (low/med): LOW Date Received: 11/02/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-22-4	Silver	0.30	U		P
7429-90-5	Aluminum	123	B		P
7440-36-0	Antimony	0.90	U		P
7440-38-2	Arsenic	1.5	B		P
7440-39-3	Barium	245			P
7440-41-7	Beryllium	0.13	B		P
7440-70-2	Calcium	71200			P
7440-43-9	Cadmium	0.10	U		P
7440-48-4	Cobalt	0.20	U		P
7440-47-3	Chromium	1.9	B		P
7440-50-8	Copper	6.2	B		P
7439-89-6	Iron	1270			P
7439-95-4	Magnesium	13900			P
7439-96-5	Manganese	81.3			P
7440-23-5	Sodium	15400			P
7440-02-0	Nickel	3.6	B		P
7439-92-1	Lead	2.3	B		P
7440-09-7	Potassium	1270	B		P
7782-49-2	Selenium	2.8	B		P
7440-28-0	Thallium	0.90	U		P
7440-62-2	Vanadium	0.66	B		P
7440-66-6	Zinc	17.1	B		P

Color Before: colorless Clarity Before: clear Texture:

Color After: colorless Clarity After: clear Artifacts:

Comments:

Form I - IN

Argonne NATIONAL LABORATORY

6010

ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD*

MATRIX: WATER
RECEIVING LAB: SEVERN - TRENT
PROJECT/SITE: SAVANNAH, MO
SAMPLER(S) (Signature): Bedivy, BIERRE

Shipping Container:
Shipping Info:
Field Contact (Name & Temporary Phone): 402-465-9021

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: HVY MTL									REMARKS
11/3/07	SVTANKZ-W-25411	1	X									FOR HEAVY METALS ANALYSIS
												RUSH SERVICE
												REQUIRED

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
B Bedivy	11/5/07	17:00					

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Remarks

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:

1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
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-I-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
SVTANK2-W-25411

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: SDG No.: 122865

Matrix (soil/water): WATER Lab Sample ID: 731192

Level (low/med): LOW Date Received: 11/06/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-22-4	Silver	0.47	B		P
7429-90-5	Aluminum	343			P
7440-36-0	Antimony	6.2	B		P
7440-38-2	Arsenic	2.1	B		P
7440-39-3	Barium	394			P
7440-41-7	Beryllium	0.49	B		P
7440-70-2	Calcium	87400			P
7440-43-9	Cadmium	1.5	B		P
7440-48-4	Cobalt	1.1	B		P
7440-47-3	Chromium	4.3	B		P
7440-50-8	Copper	2.9	B		P
7439-89-6	Iron	1680			P
7439-95-4	Magnesium	21400			P
7439-96-5	Manganese	50.3			P
7440-23-5	Sodium	20700			P
7440-02-0	Nickel	4.5	B		P
7439-92-1	Lead	4.4	B		P
7440-09-7	Potassium	1780	B		P
7782-49-2	Selenium	2.2	B		P
7440-28-0	Thallium	0.90	U		P
7440-62-2	Vanadium	1.9	B		P
7440-66-6	Zinc	120			P

Color Before: colorless Clarity Before: clear Texture:

Color After: colorless Clarity After: clear Artifacts:

Comments:

Form I - IN

Argonne NATIONAL LABORATORY

6331

ARGONNE NATIONAL LABORATORY
CHAIN OF CUSTODY RECORD*

MATRIX: WATER
RECEIVING LAB: TEST AMERICA
PROJECT/SITE: SAVANNAH, MO
SAMPLER(S) (Signature): Sedery / BIERRE

Shipping Container:
Shipping Info:
Field Contact (Name & Temporary Phone): 402-465-9021

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: TOC N	REMARKS
11/1/07	SVTANK1-W-25408	1	↓	
↓	SVCOMB-W-25409	1	↓	SAMPLES FOR TOTAL N PH<2
				RUSH SERVICE REQUIRED

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
B. Sedery	11/1/07	18:30					

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Remarks

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

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EVS-160 (6-07)

Mr. Kirk F Young
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7570-1

Client Sample ID: SVTANK1-W-25408
Lab Sample ID: 500-7570-1

Date Sampled: 11/01/2007 1650
Date Received: 11/02/2007 1020
Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 353.2		Date Analyzed:	11/06/2007 1250		
Nitrogen, Nitrate Nitrite	1800	ug/L	290	1000	10

Draft Report: Phase I Investigation at the Former CCC/USDA Facility Grain Storage Facility in Savannah, Missouri

Applied Geosciences and Environmental Management Section,
Environmental Science Division,
Argonne National Laboratory, 9700 South Cass Avenue, Argonne, Illinois 60439

Contents:

S1_waterlevels.pdf	Supplement 1: Automatically Recorded Water Level Data and Rainfall Data
S2_qualitycontrol.pdf	Supplement 2: Quality Control for Sample Collection, Handling, and Analysis
S3_outsideanal.pdf	Supplement 3: Outside Laboratory Data

June 2008

Work sponsored by Commodity Credit Corporation, United States Department of Agriculture

Supplement 1:

Automatically Recorded Water Level Data and Rainfall Data

TABLE S1.1 Automatically recorded groundwater level data for wells and piezometers at Savannah, October 2007-April 2008.

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer "old"	SB38	Date and Time	Barr
10/28/07 20:00	19.745		44.01						10/28/07 14:17	29.457
10/29/07 0:00	19.587		43.465						10/28/07 18:17	29.424
10/29/07 4:00	19.488		42.998						10/28/07 22:17	29.389
10/29/07 8:00	19.424		42.573						10/29/07 2:17	29.356
10/29/07 12:00	19.387		42.189						10/29/07 6:17	29.323
10/29/07 16:00	19.346		41.851						10/29/07 10:17	29.295
10/29/07 20:00	19.318		41.531						10/29/07 14:17	29.265
10/30/07 0:00	19.304		41.24						10/29/07 18:17	29.236
10/30/07 4:00	19.292		40.961						10/29/07 22:17	29.211
10/30/07 8:00	19.283		40.698						10/30/07 2:17	29.187
10/30/07 12:00	19.28		40.459						10/30/07 6:17	29.164
10/30/07 16:00	19.264		40.215						10/30/07 10:17	29.138
10/30/07 20:00	19.25		39.98						10/30/07 14:17	29.117
10/31/07 0:00	19.252		39.745						10/30/07 18:17	29.093
10/31/07 4:00	19.266		39.522						10/30/07 22:17	29.07
10/31/07 8:00	19.304		39.301						10/31/07 2:17	29.049
10/31/07 12:00	19.365		39.093	36.59					10/31/07 6:17	29.028
10/31/07 16:00	19.413	20.721	38.893	36.475					10/31/07 10:17	29.009
10/31/07 20:00	19.455	20.192	38.689	36.365					10/31/07 14:17	28.988
11/1/07 0:00	19.497	19.68	38.492	36.257					10/31/07 18:17	28.969
11/1/07 4:00	19.528	19.165	38.297	36.152					10/31/07 22:17	28.95
11/1/07 8:00	19.551	18.674	38.114	36.047					11/1/07 2:17	28.934
11/1/07 12:00	19.57	18.194	37.973	35.941	23.113				11/1/07 6:17	28.917
11/1/07 16:00	19.568	17.729	37.912	35.838	23.068				11/1/07 10:17	28.899
11/1/07 20:00	19.563	17.282	37.698	35.738	23.066				11/1/07 14:17	28.882
11/2/07 0:00	19.57	16.856	37.466	35.639	23.071				11/1/07 18:17	28.866
11/2/07 4:00	19.582	16.447	37.276	35.543	23.085				11/1/07 22:17	28.849
11/2/07 8:00	19.596	16.058	37.083	35.45	23.099				11/2/07 2:17	28.835
11/2/07 12:00	19.622	15.705	36.907	35.358	23.135				11/2/07 6:17	28.819
11/2/07 16:00	19.641	15.357	36.79	35.262	23.146				11/2/07 10:17	28.807
11/2/07 20:00	19.672	15.02	36.574	35.174	23.179				11/2/07 14:17	28.793
11/3/07 0:00	19.707	14.704	36.403	35.085	23.212				11/2/07 18:17	28.779
11/3/07 4:00	19.74	14.405	36.241	35	23.236				11/2/07 22:17	28.767
11/3/07 8:00	19.766	14.124	36.107	34.916	23.25				11/3/07 2:17	28.755
11/3/07 12:00	19.785	13.866	36.039	34.836	23.252				11/3/07 6:17	28.741

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer "old"	SB38	Date and Time	Barr
11/3/07 16:00	19.775	13.616	36.004	34.75	23.203				11/3/07 10:17	28.732
11/3/07 20:00	19.761	13.373	35.853	34.67	23.189				11/3/07 14:17	28.718
11/4/07 0:00	19.761	13.137	35.652	34.591	23.191				11/3/07 18:17	28.704
11/4/07 4:00	19.778	12.914	35.454	34.509	23.219				11/3/07 22:17	28.692
11/4/07 8:00	19.799	12.704	35.314	34.432	23.241				11/4/07 2:17	28.68
11/4/07 12:00	19.813	12.505	35.246	34.357	23.243				11/4/07 6:17	28.669
11/4/07 16:00	19.801	12.316	35.243	34.279	23.193				11/4/07 10:17	28.659
11/4/07 20:00	19.787	12.138	35.095	34.207	23.175				11/4/07 14:17	28.648
11/5/07 0:00	19.78	11.969	34.94	34.134	23.16				11/4/07 18:17	28.636
11/5/07 4:00	19.782	11.81	34.771	34.064	23.165				11/4/07 22:17	28.624
11/5/07 8:00	19.808	11.665	34.497	33.994	23.236				11/5/07 2:17	28.615
11/5/07 12:00	19.87	11.534	34.269	33.933	23.311				11/5/07 6:17	28.605
11/5/07 16:00	19.924	11.406	34.208	33.86	23.356				11/5/07 10:17	28.596
11/5/07 20:00	19.969	11.281	34.077	33.797	23.401				11/5/07 14:17	28.587
11/6/07 0:00	20.013	11.167	33.973	33.734	23.441				11/5/07 18:17	28.575
11/6/07 4:00	20.051	11.057	33.868	33.673	23.472				11/5/07 22:17	28.568
11/6/07 8:00	20.082	10.952	33.743	33.612	23.498				11/6/07 2:17	28.558
11/6/07 12:00	20.112	10.849	33.682	33.556	23.526				11/6/07 6:17	28.551
11/6/07 16:00	20.126	10.748	33.631	33.498	23.524				11/6/07 10:17	28.544
11/6/07 20:00	20.141	10.652	33.532	33.437	23.535				11/6/07 14:17	28.537
11/7/07 0:00	20.155	10.561	33.419	33.383	23.55				11/6/07 18:17	28.528
11/7/07 4:00	20.164	10.474	33.335	33.329	23.552				11/6/07 22:17	28.521
11/7/07 8:00	20.174	10.39	33.241	33.273	23.55				11/7/07 2:17	28.516
11/7/07 12:00	20.169	10.306	33.187	33.217	23.524				11/7/07 6:17	28.509
11/7/07 16:00	20.143	10.224	33.234	33.161	23.467				11/7/07 10:17	28.5
11/7/07 20:00	20.119	10.147	33.105	33.109	23.453				11/7/07 14:17	28.495
11/8/07 0:00	20.11	10.072	32.955	33.055	23.446				11/7/07 18:17	28.486
11/8/07 4:00	20.11	10.007	32.821	33.004	23.453				11/7/07 22:17	28.479
11/8/07 8:00	20.122	9.946	32.661	32.955	23.476				11/8/07 2:17	28.474
11/8/07 12:00	20.143	9.887	32.565	32.906	23.512				11/8/07 6:17	28.467
11/8/07 16:00	20.155	9.829	32.551	32.856	23.505				11/8/07 10:17	28.46
11/8/07 20:00	20.167	9.775	32.408	32.81	23.526				11/8/07 14:17	28.455
11/9/07 0:00	20.188	9.726	32.262	32.763	23.554				11/8/07 18:17	28.448
11/9/07 4:00	20.207	9.679	32.171	32.718	23.571				11/8/07 22:17	28.443
11/9/07 8:00	20.233	9.635	32.037	32.672	23.599				11/9/07 2:17	28.439
11/9/07 12:00	20.263	9.604	31.967	32.62	23.637				11/9/07 6:17	28.434
11/9/07 16:00	20.282	9.562	31.915	32.576	23.649				11/9/07 10:17	28.429

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer “old”	SB38	Date and Time	Barr
11/9/07 20:00	20.299	9.525	31.821	32.531	23.66				11/9/07 14:17	28.542
11/10/07 0:00	20.315	9.49	31.713	32.489	23.679				11/9/07 18:17	28.547
11/10/07 4:00	20.332	9.454	31.629	32.451	23.691				11/9/07 22:17	28.457
11/10/07 8:00	20.341	9.419	31.553	32.412	23.693				11/10/07 2:17	28.432
11/10/07 12:00	20.35	9.384	31.509	32.377	23.686				11/10/07 6:17	28.427
11/10/07 16:00	20.334	9.345	31.546	32.332	23.637				11/10/07 10:17	28.434
11/10/07 20:00	20.315	9.307	31.478	32.297	23.618				11/10/07 14:17	28.641
11/11/07 0:00	20.313	9.277	31.312	32.26	23.634				11/10/07 18:17	28.692
11/11/07 4:00	20.32	9.246	31.211	32.224	23.642				11/10/07 22:17	28.624
11/11/07 8:00	20.327	9.218	31.098	32.189	23.663				11/11/07 2:17	28.58
11/11/07 12:00	20.343	9.19	31.004	32.157	23.689				11/11/07 6:17	28.584
11/11/07 16:00	20.353	9.164	30.969	32.121	23.684				11/11/07 10:17	28.584
11/11/07 20:00	20.369	9.143	30.805	32.091	23.719				11/11/07 14:17	28.624
11/12/07 0:00	20.395	9.125	30.687	32.058	23.75				11/11/07 18:17	28.533
11/12/07 4:00	20.423	9.108	30.565	32.028	23.781				11/11/07 22:17	28.397
11/12/07 8:00	20.452	9.094	30.408	31.997	23.816				11/12/07 2:17	28.345
11/12/07 12:00	20.487	9.083	30.274	31.969	23.859				11/12/07 6:17	28.225
11/12/07 16:00	20.515	9.071	30.248	31.939	23.877				11/12/07 10:17	28.108
11/12/07 20:00	20.537	9.057	30.19	31.911	23.899				11/12/07 14:17	28.145
11/13/07 0:00	20.555	9.043	30.15	31.883	23.908				11/12/07 18:17	28.188
11/13/07 4:00	20.565	9.026	30.126	31.855	23.903				11/12/07 22:17	28.183
11/13/07 8:00	20.567	9.008	30.065	31.827	23.894				11/13/07 2:17	28.253
11/13/07 12:00	20.565	8.989	30.025	31.798	23.882				11/13/07 6:17	28.314
11/13/07 16:00	20.544	8.961	30.108	31.768	23.821				11/13/07 10:17	28.387
11/13/07 20:00	20.525	8.938	29.96	31.742	23.814				11/13/07 14:17	28.54
11/14/07 0:00	20.527	8.921	29.765	31.714	23.842				11/13/07 18:17	28.657
11/14/07 4:00	20.551	8.91	29.598	31.691	23.899				11/13/07 22:17	28.49
11/14/07 8:00	20.581	8.905	29.436	31.665	23.941				11/14/07 2:17	28.324
11/14/07 12:00	20.617	8.9	29.387	31.639	23.979				11/14/07 6:17	28.197
11/14/07 16:00	20.636	8.895	29.356	31.618	23.988				11/14/07 10:17	28.089
11/14/07 20:00	20.662	8.888	29.218	31.593	24.024				11/14/07 14:17	28.157
11/15/07 0:00	20.692	8.888	29.129	31.571	24.057				11/14/07 18:17	28.131
11/15/07 4:00	20.716	8.884	29.04	31.548	24.078				11/14/07 22:17	28.052
11/15/07 8:00	20.737	8.879	28.962	31.525	24.097				11/15/07 2:17	27.965
11/15/07 12:00	20.761	8.877	28.91	31.504	24.116				11/15/07 6:17	28.009
11/15/07 16:00	20.765	8.865	28.906	31.48	24.099				11/15/07 10:17	27.993
11/15/07 20:00	20.768	8.851	28.859	31.457	24.094				11/15/07 14:17	28.239

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer “old”	SB38	Date and Time	Barr
11/16/07 0:00	20.77	8.839	28.8	31.436	24.09				11/15/07 18:17	28.371
11/16/07 4:00	20.761	8.823	28.772	31.412	24.057				11/15/07 22:17	28.396
11/16/07 8:00	20.746	8.802	28.772	31.391	24.031				11/16/07 2:17	28.443
11/16/07 12:00	20.735	8.786	28.723	31.368	24.021				11/16/07 6:17	28.5
11/16/07 16:00	20.723	8.767	28.671	31.347	24.012				11/16/07 10:17	28.448
11/16/07 20:00	20.723	8.755	28.497	31.328	24.031				11/16/07 14:17	28.596
11/17/07 0:00	20.732	8.746	28.389	31.307	24.047				11/16/07 18:17	28.594
11/17/07 4:00	20.744	8.739	28.281	31.288	24.071				11/16/07 22:17	28.465
11/17/07 8:00	20.761	8.732	28.211	31.272	24.097				11/17/07 2:17	28.404
11/17/07 12:00	20.784	8.729	28.131	31.253	24.13				11/17/07 6:17	28.361
11/17/07 16:00	20.801	8.725	28.101	31.234	24.144				11/17/07 10:17	28.26
11/17/07 20:00	20.819	8.725	27.983	31.218	24.168				11/17/07 14:17	28.357
11/18/07 0:00	20.841	8.725	27.887	31.202	24.191				11/17/07 18:17	28.324
11/18/07 4:00	20.86	8.727	27.812	31.188	24.205				11/17/07 22:17	28.185
11/18/07 8:00	20.878	8.727	27.732	31.171	24.224				11/18/07 2:17	28.157
11/18/07 12:00	20.892	8.725	27.723	31.155	24.234				11/18/07 6:17	28.153
11/18/07 16:00	20.897	8.715	27.716	31.138	24.217				11/18/07 10:17	28.15
11/18/07 20:00	20.907	8.711	27.622	31.122	24.241				11/18/07 14:17	28.321
11/19/07 0:00	20.914	8.706	27.558	31.106	24.25				11/18/07 18:17	28.345
11/19/07 4:00	20.923	8.701	27.509	31.092	24.25				11/18/07 22:17	28.326
11/19/07 8:00	20.93	8.694	27.443	31.075	24.262				11/19/07 2:17	28.347
11/19/07 12:00	20.937	8.687	27.406	31.061	24.269				11/19/07 6:17	28.347
11/19/07 16:00	20.94	8.675	27.38	31.045	24.257				11/19/07 10:17	28.406
11/19/07 20:00	20.944	8.671	27.282	31.031	24.271				11/19/07 14:17	28.619
11/20/07 0:00	20.954	8.666	27.199	31.017	24.281				11/19/07 18:17	28.591
11/20/07 4:00	20.958	8.662	27.159	31.003	24.281				11/19/07 22:17	28.467
11/20/07 8:00	20.963	8.654	27.101	30.989	24.285				11/20/07 2:17	28.418
11/20/07 12:00	20.968	8.648	27.047	30.977	24.295				11/20/07 6:17	28.394
11/20/07 16:00	20.97	8.641	26.988	30.961	24.302				11/20/07 10:17	28.413
11/20/07 20:00	20.989	8.648	26.782	30.949	24.34				11/20/07 14:17	28.497
11/21/07 0:00	21.013	8.652	26.695	30.937	24.359				11/20/07 18:17	28.192
11/21/07 4:00	21.029	8.657	26.669	30.928	24.385				11/20/07 22:17	28.019
11/21/07 8:00	21.043	8.657	26.601	30.914	24.396				11/21/07 2:17	28.009
11/21/07 12:00	21.062	8.664	26.533	30.902	24.425				11/21/07 6:17	27.96
11/21/07 16:00	21.083	8.668	26.46	30.89	24.446				11/21/07 10:17	27.923
11/21/07 20:00	21.102	8.676	26.385	30.881	24.477				11/21/07 14:17	27.932
11/22/07 0:00	21.123	8.683	26.329	30.869	24.493				11/21/07 18:17	27.904

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer “old”	SB38	Date and Time	Barr
11/22/07 4:00	21.142	8.687	26.275	30.86	24.51				11/21/07 22:17	27.85
11/22/07 8:00	21.156	8.69	26.209	30.848	24.526				11/22/07 2:17	27.878
11/22/07 12:00	21.175	8.697	26.148	30.839	24.547				11/22/07 6:17	27.897
11/22/07 16:00	21.192	8.694	26.145	30.827	24.552				11/22/07 10:17	27.925
11/22/07 20:00	21.204	8.694	26.08	30.818	24.566				11/22/07 14:17	28.002
11/23/07 0:00	21.218	8.694	26.042	30.808	24.578				11/22/07 18:17	28.063
11/23/07 4:00	21.23	8.692	25.995	30.799	24.58				11/22/07 22:17	28.099
11/23/07 8:00	21.237	8.687	25.951	30.79	24.58				11/23/07 2:17	28.171
11/23/07 12:00	21.244	8.68	25.908	30.78	24.587				11/23/07 6:17	28.216
11/23/07 16:00	21.237	8.668	25.899	30.769	24.559				11/23/07 10:17	28.258
11/23/07 20:00	21.218	8.659	25.85	30.759	24.561				11/23/07 14:17	28.338
11/24/07 0:00	21.206	8.652	25.782	30.75	24.573				11/23/07 18:17	28.411
11/24/07 4:00	21.208	8.643	25.716	30.741	24.583				11/23/07 22:17	28.378
11/24/07 8:00	21.213	8.638	25.657	30.734	24.592				11/24/07 2:17	28.35
11/24/07 12:00	21.222	8.631	25.62	30.724	24.594				11/24/07 6:17	28.354
11/24/07 16:00	21.22	8.624	25.57	30.717	24.592				11/24/07 10:17	28.347
11/24/07 20:00	21.215	8.617	25.509	30.708	24.599				11/24/07 14:17	28.359
11/25/07 0:00	21.215	8.615	25.451	30.698	24.604				11/24/07 18:17	28.387
11/25/07 4:00	21.215	8.605	25.401	30.691	24.599				11/24/07 22:17	28.373
11/25/07 8:00	21.218	8.598	25.357	30.684	24.597				11/25/07 2:17	28.364
11/25/07 12:00	21.225	8.591	25.312	30.675	24.604				11/25/07 6:17	28.364
11/25/07 16:00	21.211	8.582	25.324	30.668	24.58				11/25/07 10:17	28.338
11/25/07 20:00	21.194	8.575	25.23	30.659	24.59				11/25/07 14:17	28.427
11/26/07 0:00	21.194	8.57	25.148	30.652	24.604				11/25/07 18:17	28.488
11/26/07 4:00	21.201	8.568	25.049	30.647	24.618				11/25/07 22:17	28.413
11/26/07 8:00	21.215	8.566	24.993	30.64	24.63				11/26/07 2:17	28.366
11/26/07 12:00	21.232	8.573	24.901	30.635	24.656				11/26/07 6:17	28.286
11/26/07 16:00	21.251	8.575	24.84	30.628	24.672				11/26/07 10:17	28.185
11/26/07 20:00	21.272	8.582	24.751	30.624	24.696				11/26/07 14:17	28.206
11/27/07 0:00	21.291	8.589	24.702	30.619	24.71				11/26/07 18:17	28.16
11/27/07 4:00	21.305	8.591	24.657	30.614	24.722				11/26/07 22:17	28.124
11/27/07 8:00	21.319	8.596	24.582	30.61	24.731				11/27/07 2:17	28.103
11/27/07 12:00	21.336	8.598	24.589	30.605	24.738				11/27/07 6:17	28.096
11/27/07 16:00	21.34	8.591	24.613	30.598	24.715				11/27/07 10:17	28.108
11/27/07 20:00	21.338	8.577	24.594	30.591	24.691				11/27/07 14:17	28.218
11/28/07 0:00	21.34	8.57	24.561	30.586	24.689				11/27/07 18:17	28.305
11/28/07 4:00	21.338	8.559	24.58	30.579	24.672				11/27/07 22:17	28.303

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer “old”	SB38	Date and Time	Barr
11/28/07 8:00	21.338	8.547	24.507	30.577	24.675				11/28/07 2:17	28.378
11/28/07 12:00	21.35	8.547	24.362	30.572	24.719				11/28/07 6:17	28.373
11/28/07 16:00	21.366	8.554	24.277	30.567	24.755				11/28/07 10:17	28.303
11/28/07 20:00	21.387	8.566	24.174	30.567	24.781				11/28/07 14:17	28.183
11/29/07 0:00	21.406	8.577	24.101	30.565	24.804				11/28/07 18:17	28.045
11/29/07 4:00	21.425	8.584	24.066	30.56	24.811				11/28/07 22:17	27.93
11/29/07 8:00	21.439	8.589	24.04	30.558	24.819				11/29/07 2:17	27.998
11/29/07 12:00	21.451	8.591	24.021	30.556	24.83				11/29/07 6:17	28.084
11/29/07 16:00	21.456	8.584	24.038	30.551	24.804				11/29/07 10:17	28.04
11/29/07 20:00	21.458	8.58	24.002	30.546	24.802				11/29/07 14:17	28.169
11/30/07 0:00	21.468	8.577	23.944	30.544	24.821				11/29/07 18:17	28.23
11/30/07 4:00	21.479	8.582	23.838	30.542	24.849				11/29/07 22:17	28.174
11/30/07 8:00	21.496	8.594	23.74	30.539	24.875				11/30/07 2:17	28.148
11/30/07 12:00	21.515	8.605	23.693	30.539	24.896				11/30/07 6:17	27.979
11/30/07 16:00	21.527	8.608	23.707	30.537	24.892				11/30/07 10:17	27.89
11/30/07 20:00	21.534	8.608	23.688	30.532	24.889				11/30/07 14:17	28.021
12/1/07 0:00	21.538	8.603	23.683	30.53	24.882				11/30/07 18:17	28.136
12/1/07 4:00	21.538	8.594	23.688	30.528	24.863				11/30/07 22:17	28.164
12/1/07 8:00	21.527	8.577	23.726	30.511	24.826				12/1/07 2:17	28.192
12/1/07 12:00	21.446	8.556	23.805	30.462	24.594				12/1/07 6:17	28.286
12/1/07 16:00	20.258	8.533	23.857	30.427	24.205				12/1/07 10:17	28.387
12/1/07 20:00	18.736	8.495	23.681	30.42	24.151				12/1/07 14:17	28.547
12/2/07 0:00	18.486	8.453	23.458	30.418	24.165				12/1/07 18:17	28.652
12/2/07 4:00	18.67	8.432	23.169	30.415	24.184				12/1/07 22:17	28.526
12/2/07 8:00	18.91	8.423	22.97	30.415	24.208				12/2/07 2:17	28.253
12/2/07 12:00	19.137	8.423	22.794	30.415	24.245				12/2/07 6:17	28.068
12/2/07 16:00	19.337	8.43	22.653	30.415	24.278				12/2/07 10:17	27.81
12/2/07 20:00	19.523	8.442	22.517	30.413	24.321				12/2/07 14:17	27.676
12/3/07 0:00	19.676	8.453	22.42	30.415	24.349				12/2/07 18:17	27.559
12/3/07 4:00	19.797	8.458	22.362	30.413	24.356				12/2/07 22:17	27.479
12/3/07 8:00	19.896	8.46	22.28	30.411	24.363				12/3/07 2:17	27.643
12/3/07 12:00	19.973	8.456	22.242	30.411	24.359				12/3/07 6:17	27.775
12/3/07 16:00	20.016	8.444	22.252	30.406	24.295				12/3/07 10:17	27.873
12/3/07 20:00	20.049	8.425	22.202	30.404	24.276				12/3/07 14:17	27.969
12/4/07 0:00	20.086	8.414	22.148	30.401	24.264				12/3/07 18:17	28.045
12/4/07 4:00	20.115	8.399	22.078	30.397	24.252				12/3/07 22:17	28.059
12/4/07 8:00	20.143	8.39	22.005	30.399	24.248				12/4/07 2:17	28.138

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer “old”	SB38	Date and Time	Barr
12/4/07 12:00	20.171	8.378	22.005	30.394	24.238				12/4/07 6:17	28.145
12/4/07 16:00	20.181	8.36	22.059	30.392	24.208				12/4/07 10:17	28.12
12/4/07 20:00	20.19	8.346	22.024	30.387	24.186				12/4/07 14:17	28.286
12/5/07 0:00	20.207	8.332	21.876	30.385	24.191				12/4/07 18:17	28.354
12/5/07 4:00	20.24	8.327	21.658	30.385	24.219				12/4/07 22:17	28.326
12/5/07 8:00	20.299	8.339	21.435	30.387	24.297				12/5/07 2:17	28.23
12/5/07 12:00	20.372	8.357	21.327	30.389	24.359				12/5/07 6:17	27.977
12/5/07 16:00	20.426	8.364	21.338	30.387	24.373				12/5/07 10:17	27.754
12/5/07 20:00	20.468	8.371	21.245	30.389	24.394				12/5/07 14:17	27.77
12/6/07 0:00	20.501	8.371	21.24	30.387	24.394				12/5/07 18:17	27.836
12/6/07 4:00	20.527	8.371	21.209	30.387	24.392				12/5/07 22:17	27.866
12/6/07 8:00	20.541	8.364	21.155	30.385	24.401				12/6/07 2:17	27.92
12/6/07 12:00	20.555	8.36	21.153	30.385	24.389				12/6/07 6:17	27.958
12/6/07 16:00	20.555	8.343	21.141	30.382	24.356				12/6/07 10:17	27.991
12/6/07 20:00	20.565	8.336	21.064	30.38	24.375				12/6/07 14:17	28.04
12/7/07 0:00	20.588	8.334	20.975	30.38	24.406				12/6/07 18:17	28.04
12/7/07 4:00	20.617	8.334	20.914	30.38	24.422				12/6/07 22:17	27.995
12/7/07 8:00	20.643	8.334	20.85	30.38	24.439				12/7/07 2:17	27.977
12/7/07 12:00	20.669	8.336	20.806	30.38	24.453				12/7/07 6:17	27.96
12/7/07 16:00	20.692	8.336	20.792	30.378	24.455				12/7/07 10:17	27.934
12/7/07 20:00	20.716	8.339	20.693	30.38	24.481				12/7/07 14:17	27.958
12/8/07 0:00	20.744	8.341	20.616	30.38	24.498				12/7/07 18:17	27.941
12/8/07 4:00	20.77	8.346	20.58	30.38	24.505				12/7/07 22:17	27.892
12/8/07 8:00	20.798	8.35	20.512	30.38	24.521				12/8/07 2:17	27.876
12/8/07 12:00	20.824	8.355	20.456	30.38	24.531				12/8/07 6:17	27.866
12/8/07 16:00	20.845	8.355	20.451	30.38	24.566				12/8/07 10:17	27.843
12/8/07 20:00	20.867	8.355	20.402	30.38	24.554				12/8/07 14:17	27.894
12/9/07 0:00	20.888	8.357	20.336	30.38	24.543				12/8/07 18:17	27.871
12/9/07 4:00	20.904	8.357	20.348	30.38	24.594				12/8/07 22:17	27.894
12/9/07 8:00	20.921	8.357	20.299	30.38	24.585				12/9/07 2:17	27.918
12/9/07 12:00	20.937	8.357	20.24	30.38	24.571				12/9/07 6:17	27.937
12/9/07 16:00	20.949	8.353	20.231	30.38	24.602				12/9/07 10:17	27.918
12/9/07 20:00	20.966	8.35	20.179	30.382	24.571				12/9/07 14:17	27.969
12/10/07 0:00	20.982	8.35	20.148	30.38	24.592				12/9/07 18:17	27.958
12/10/07 4:00	20.996	8.346	20.106	30.38	24.611				12/9/07 22:17	27.969
12/10/07 8:00	21.008	8.341	20.071	30.382	24.625				12/10/07 2:17	27.995
12/10/07 12:00	21.022	8.339	20.05	30.38	24.623				12/10/07 6:17	28.007

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer “old”	SB38	Date and Time	Barr
12/10/07 16:00	21.027	8.332	20.055	30.38	24.651				12/10/07 10:17	27.979
12/10/07 20:00	21.036	8.327	20.003	30.38	24.637				12/10/07 14:17	28.038
12/11/07 0:00	21.039	8.318	19.982	30.378	24.653				12/10/07 18:17	28.061
12/11/07 4:00	19.629	8.248	19.853	30.289	24.007				12/10/07 22:17	28.075
12/11/07 8:00	16.365	7.892	19.339	30.251	22.736				12/11/07 2:17	28.059
12/11/07 12:00	14.409	7.454	18.47	30.237	21.915				12/11/07 6:17	27.878
12/11/07 16:00	13.353	7.054	17.466	30.226	21.306				12/11/07 10:17	27.564
12/11/07 20:00	12.846	6.743	16.726	30.219	21.132				12/11/07 14:17	27.434
12/12/07 0:00	12.693	6.535	16.076	30.212	21.141				12/11/07 18:17	27.237
12/12/07 4:00	12.858	6.423	15.527	30.207	21.139				12/11/07 22:17	27.104
12/12/07 8:00	13.119	6.364	15.132	30.202	21.16				12/12/07 2:17	27.106
12/12/07 12:00	13.409	6.348	14.773	30.198	21.184				12/12/07 6:17	27.09
12/12/07 16:00	13.645	6.346	14.513	30.188	21.167				12/12/07 10:17	27.085
12/12/07 20:00	13.885	6.367	14.255	30.181	21.137				12/12/07 14:17	27.151
12/13/07 0:00	14.107	6.395	14.018	30.172	21.111				12/12/07 18:17	27.169
12/13/07 4:00	14.319	6.43	13.806	30.162	21.094				12/12/07 22:17	27.181
12/13/07 8:00	14.526	6.467	13.595	30.153	21.085				12/13/07 2:17	27.181
12/13/07 12:00	14.748	6.519	13.4	30.146	21.106				12/13/07 6:17	27.151
12/13/07 16:00	14.953	6.563	13.259	30.125	21.009				12/13/07 10:17	27.113
12/13/07 20:00	15.127	6.605	13.097	30.111	20.983				12/13/07 14:17	27.104
12/14/07 0:00	15.29	6.65	12.957	30.099	21.019				12/13/07 18:17	27.071
12/14/07 4:00	15.443	6.687	12.832	30.09	21.042				12/13/07 22:17	27.033
12/14/07 8:00	15.596	6.722	12.72	30.078	21.096				12/14/07 2:17	27.012
12/14/07 12:00	15.745	6.757	12.642	30.067	21.153				12/14/07 6:17	26.972
12/14/07 16:00	15.846	6.776	12.612	30.055	21.139				12/14/07 10:17	26.956
12/14/07 20:00	15.931	6.799	12.541	30.043	21.146				12/14/07 14:17	27.031
12/15/07 0:00	16.018	6.818	12.478	30.029	21.17				12/14/07 18:17	27.059
12/15/07 4:00	16.084	6.83	12.433	30.017	21.158				12/14/07 22:17	27.017
12/15/07 8:00	16.15	6.842	12.382	30.003	21.16				12/15/07 2:17	27.059
12/15/07 12:00	16.216	6.853	12.335	29.992	21.165				12/15/07 6:17	27.071
12/15/07 16:00	16.261	6.858	12.339	29.978	21.195				12/15/07 10:17	27.087
12/15/07 20:00	16.327	6.872	12.234	29.966	21.158				12/15/07 14:17	27.151
12/16/07 0:00	16.403	6.886	12.173	29.952	21.172				12/15/07 18:17	27.153
12/16/07 4:00	16.476	6.902	12.121	29.94	21.191				12/15/07 22:17	27.099
12/16/07 8:00	16.558	6.919	12.084	29.926	21.233				12/16/07 2:17	27.085
12/16/07 12:00	16.641	6.933	12.046	29.914	21.28				12/16/07 6:17	27.05
12/16/07 16:00	16.707	6.945	12.037	29.903	21.309				12/16/07 10:17	27.026

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer “old”	SB38	Date and Time	Barr
12/16/07 20:00	16.761	6.958	11.994	29.889	21.325				12/16/07 14:17	27.04
12/17/07 0:00	16.817	6.97	11.973	29.877	21.351				12/16/07 18:17	27.036
12/17/07 4:00	16.864	6.975	11.971	29.863	21.375				12/16/07 22:17	27.005
12/17/07 8:00	16.914	6.982	11.954	29.851	21.391				12/17/07 2:17	27.005
12/17/07 12:00	16.963	6.987	11.943	29.839	21.396				12/17/07 6:17	27
12/17/07 16:00	16.982	6.984	11.98	29.823	21.398				12/17/07 10:17	27.003
12/17/07 20:00	16.973	6.984	11.978	29.811	21.387				12/17/07 14:17	27.052
12/18/07 0:00	16.989	6.984	11.961	29.797	21.382				12/17/07 18:17	27.115
12/18/07 4:00	17.001	6.979	11.985	29.781	21.384				12/17/07 22:17	27.108
12/18/07 8:00	17.027	6.982	11.952	29.769	21.365				12/18/07 2:17	27.16
12/18/07 12:00	17.074	6.984	11.886	29.758	21.356				12/18/07 6:17	27.134
12/18/07 16:00	17.124	6.996	11.86	29.746	21.356				12/18/07 10:17	27.083
12/18/07 20:00	17.176	7.008	11.828	29.732	21.377				12/18/07 14:17	27.061
12/19/07 0:00	17.235	7.022	11.814	29.72	21.415				12/18/07 18:17	27.007
12/19/07 4:00	17.284	7.029	11.807	29.706	21.453				12/18/07 22:17	26.977
12/19/07 8:00	17.324	7.031	11.818	29.697	21.483				12/19/07 2:17	26.982
12/19/07 12:00	17.364	7.036	11.814	29.683	21.509				12/19/07 6:17	26.977
12/19/07 16:00	17.369	7.031	11.872	29.669	21.526				12/19/07 10:17	26.968
12/19/07 20:00	17.359	7.024	11.87	29.655	21.507				12/19/07 14:17	27.045
12/20/07 0:00	17.355	7.022	11.872	29.643	21.49				12/19/07 18:17	27.104
12/20/07 4:00	17.352	7.015	11.912	29.629	21.486				12/19/07 22:17	27.113
12/20/07 8:00	17.352	7.012	11.891	29.615	21.455				12/20/07 2:17	27.134
12/20/07 12:00	17.39	7.017	11.816	29.601	21.441				12/20/07 6:17	27.144
12/20/07 16:00	17.409	7.017	11.839	29.591	21.448				12/20/07 10:17	27.057
12/20/07 20:00	17.392	7.024	11.79	29.577	21.45				12/20/07 14:17	27.097
12/21/07 0:00	17.357	7.031	11.785	29.566	21.476				12/20/07 18:17	27.052
12/21/07 4:00	17.371	7.036	11.776	29.552	21.488				12/20/07 22:17	26.984
12/21/07 8:00	17.395	7.036	11.774	29.54	21.5				12/21/07 2:17	26.972
12/21/07 12:00	17.423	7.033	11.797	29.524	21.526				12/21/07 6:17	26.979
12/21/07 16:00	17.404	7.024	11.877	29.512	21.54				12/21/07 10:17	26.963
12/21/07 20:00	17.187	7.012	11.753	29.498	21.481				12/21/07 14:17	27.097
12/22/07 0:00	16.968	6.963	11.602	29.484	21.46				12/21/07 18:17	27.127
12/22/07 4:00	16.947	6.893	11.431	29.47	21.474				12/21/07 22:17	27.059
12/22/07 8:00	17.018	6.823	11.285	29.458	21.481				12/22/07 2:17	26.97
12/22/07 12:00	17.095	6.764	11.185	29.444	21.514				12/22/07 6:17	26.874
12/22/07 16:00	17.131	6.701	11.154	29.428	21.545				12/22/07 10:17	26.822
12/22/07 20:00	17.171	6.657	11.084	29.411	21.549				12/22/07 14:17	26.918

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer “old”	SB38	Date and Time	Barr
12/23/07 0:00	17.202	6.629	11.023	29.376	21.556				12/22/07 18:17	26.902
12/23/07 4:00	17.244	6.612	10.957	29.245	21.568				12/22/07 22:17	26.89
12/23/07 8:00	17.284	6.603	10.896	29.147	21.575				12/23/07 2:17	26.883
12/23/07 12:00	17.331	6.605	10.851	29.133	21.594				12/23/07 6:17	26.862
12/23/07 16:00	17.371	6.608	10.825	29.24	21.611				12/23/07 10:17	26.824
12/23/07 20:00	17.416	6.619	10.762	29.135	21.632				12/23/07 14:17	26.801
12/24/07 0:00	17.465	6.633	10.755	29.201	21.672				12/23/07 18:17	26.81
12/24/07 4:00	17.503	6.645	10.76	29.257	21.7				12/23/07 22:17	26.808
12/24/07 8:00	17.534	6.659	10.75	29.296	21.724				12/24/07 2:17	26.817
12/24/07 12:00	17.572	6.671	10.734	29.371	21.74				12/24/07 6:17	26.841
12/24/07 16:00	17.586	6.68	10.76	29.39	21.755				12/24/07 10:17	26.834
12/24/07 20:00	17.588	6.687	10.769	29.212	21.755				12/24/07 14:17	26.86
12/25/07 0:00	17.595	6.697	10.767	29.196	21.747				12/24/07 18:17	26.876
12/25/07 4:00	17.595	6.706	10.776	29.179	21.738				12/24/07 22:17	26.883
12/25/07 8:00	17.6	6.706	10.762	29.163	21.729				12/25/07 2:17	26.895
12/25/07 12:00	17.623	6.802	10.739	29.147	21.738				12/25/07 6:17	26.892
12/25/07 16:00	17.614	6.959	10.776	29.13	21.74				12/25/07 10:17	26.86
12/25/07 20:00	17.595	6.778	10.75	29.114	21.71				12/25/07 14:17	26.902
12/26/07 0:00	17.595	6.755	10.746	29.098	21.698				12/25/07 18:17	26.881
12/26/07 4:00	17.595	6.781	10.762	29.081	21.693				12/25/07 22:17	26.853
12/26/07 8:00	17.593	6.748	10.75	29.065	21.667				12/26/07 2:17	26.846
12/26/07 12:00	17.605	6.767	10.75	29.048	21.651				12/26/07 6:17	26.836
12/26/07 16:00	17.597	6.823	10.771	29.032	21.66				12/26/07 10:17	26.827
12/26/07 20:00	17.609	6.811	10.743	29.016	21.646				12/26/07 14:17	26.864
12/27/07 0:00	17.635	6.783	10.748	28.999	21.662				12/26/07 18:17	26.829
12/27/07 4:00	17.663	6.821	10.727	28.985	21.66				12/26/07 22:17	26.792
12/27/07 8:00	17.701	6.715	10.717	28.971	21.665				12/27/07 2:17	26.789
12/27/07 12:00	17.746	6.792	10.699	28.955	21.66				12/27/07 6:17	26.747
12/27/07 16:00	17.76	6.799	10.774	28.938	21.684				12/27/07 10:17	26.705
12/27/07 20:00	17.772	6.802	10.767	28.922	21.686				12/27/07 14:17	26.759
12/28/07 0:00	17.779	6.853	10.807	28.908	21.729				12/27/07 18:17	26.763
12/28/07 4:00	17.767	6.905	10.846	28.889	21.721				12/27/07 22:17	26.752
12/28/07 8:00	17.741	6.93	10.856	28.873	21.672				12/28/07 2:17	26.775
12/28/07 12:00	17.744	6.886	10.849	28.856	21.653				12/28/07 6:17	26.829
12/28/07 16:00	17.76	6.919	10.832	28.84	21.658				12/28/07 10:17	26.827
12/28/07 20:00	17.803	6.909	10.816	28.828	21.688				12/28/07 14:17	26.801
12/29/07 0:00	17.84	6.907	10.828	28.812	21.731				12/28/07 18:17	26.749

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer “old”	SB38	Date and Time	Barr
12/29/07 4:00	17.861	6.912	10.844	28.798	21.743				12/28/07 22:17	26.726
12/29/07 8:00	17.88	6.907	10.861	28.782	21.755				12/29/07 2:17	26.738
12/29/07 12:00	17.904	6.928	10.872	28.768	21.764				12/29/07 6:17	26.733
12/29/07 16:00	17.897	6.968	10.919	28.751	21.752				12/29/07 10:17	26.719
12/29/07 20:00	17.892	6.93	10.91	28.737	21.747				12/29/07 14:17	26.768
12/30/07 0:00	17.904	6.94	10.938	28.721	21.762				12/29/07 18:17	26.787
12/30/07 4:00	17.899	6.963	10.962	28.704	21.755				12/29/07 22:17	26.768
12/30/07 8:00	17.89	6.968	10.999	28.693	21.755				12/30/07 2:17	26.794
12/30/07 12:00	17.878	6.977	11.027	28.676	21.74				12/30/07 6:17	26.806
12/30/07 16:00	17.859	7.008	11.058	28.66	21.724				12/30/07 10:17	26.827
12/30/07 20:00	17.866	6.893	10.983	28.646	21.681				12/30/07 14:17	26.857
12/31/07 0:00	17.894	6.907	10.959	28.632	21.688				12/30/07 18:17	26.82
12/31/07 4:00	17.913	6.944	11.008	28.618	21.703				12/30/07 22:17	26.759
12/31/07 8:00	17.925	6.902	11.001	28.604	21.7				12/31/07 2:17	26.742
12/31/07 12:00	17.968	6.886	10.969	28.59	21.714				12/31/07 6:17	26.749
12/31/07 16:00	18.015	6.863	10.947	28.578	21.71				12/31/07 10:17	26.679
12/31/07 20:00	18.088	6.858	10.91	28.566	21.733				12/31/07 14:17	26.627
1/1/08 0:00	18.17	6.893	10.896	28.557	21.792				12/31/07 18:17	26.531
1/1/08 4:00	18.232	6.884	10.912	28.543	21.872				12/31/07 22:17	26.435
1/1/08 8:00	18.297	6.874	10.908	28.531	21.934				1/1/08 2:17	26.463
1/1/08 12:00	18.359	6.923	10.917	28.522	21.993				1/1/08 6:17	26.388
1/1/08 16:00	18.406	6.94	10.945	28.51	22.066				1/1/08 10:17	26.409
1/1/08 20:00	18.451	6.914	10.947	28.501	22.181				1/1/08 14:17	26.402
1/2/08 0:00	18.484	6.909	10.973	28.489	22.203				1/1/08 18:17	26.395
1/2/08 4:00	18.512	6.944	10.985	28.477	22.224				1/1/08 22:17	26.407
1/2/08 8:00	18.547	6.916	10.992	28.468	22.243				1/2/08 2:17	26.393
1/2/08 12:00	18.59	6.97	11.004	28.459	22.271				1/2/08 6:17	26.376
1/2/08 16:00	18.604	7.012	11.098	28.447	22.314				1/2/08 10:17	26.346
1/2/08 20:00	18.592	7.017	11.128	28.435	22.306				1/2/08 14:17	26.416
1/3/08 0:00	18.576	7.021	11.175	28.423	22.304				1/2/08 18:17	26.449
1/3/08 4:00	18.552	7.021	11.21	28.412	22.29				1/2/08 22:17	26.482
1/3/08 8:00	18.521	7.045	11.267	28.4	22.302				1/3/08 2:17	26.505
1/3/08 12:00	18.484	7.045	11.302	28.388	22.264				1/3/08 6:17	26.536
1/3/08 16:00	18.432	7.169	11.414	28.372	22.248				1/3/08 10:17	26.545
1/3/08 20:00	18.392	7.078	11.419	28.363	22.137				1/3/08 14:17	26.601
1/4/08 0:00	18.371	7.059	11.45	28.351	22.099				1/3/08 18:17	26.665
1/4/08 4:00	18.354	7.045	11.473	28.339	22.08				1/3/08 22:17	26.641

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer "old"	SB38	Date and Time	Barr
1/4/08 8:00	18.338	7.035	11.482	28.33	22.054				1/4/08 2:17	26.653
1/4/08 12:00	18.33	7.045	11.485	28.318	22.035				1/4/08 6:17	26.677
1/4/08 16:00	18.307	7.141	11.553	28.304	22.042				1/4/08 10:17	26.681
1/4/08 20:00	18.29	7.073	11.525	28.292	21.99				1/4/08 14:17	26.747
1/5/08 0:00	18.262	7.077	11.548	28.281	21.979				1/4/08 18:17	26.745
1/5/08 4:00	18.215	7.052	11.55	28.269	21.946				1/4/08 22:17	26.7
1/5/08 8:00	18.182	7.021	11.543	28.257	21.908				1/5/08 2:17	26.738
1/5/08 12:00	18.17	7.042	11.527	28.246	21.882				1/5/08 6:17	26.698
1/5/08 16:00	18.1	7.126	11.543	28.234	21.75				1/5/08 10:17	26.623
1/5/08 20:00	17.861	7.016	11.44	28.222	21.611				1/5/08 14:17	26.716
1/6/08 0:00	17.531	7.009	11.356	28.21	21.493				1/5/08 18:17	26.709
1/6/08 4:00	16.954	6.902	11.161	28.199	21.276				1/5/08 22:17	26.655
1/6/08 8:00	16.249	6.612	10.877	28.187	21.104				1/6/08 2:17	26.686
1/6/08 12:00	15.846	6.387	10.572	28.175	21.014				1/6/08 6:17	26.616
1/6/08 16:00	15.443	6.174	10.335	28.164	20.934				1/6/08 10:17	26.465
1/6/08 20:00	14.477	5.814	10.001	28.154	20.863				1/6/08 14:17	26.423
1/7/08 0:00	13.911	5.613	9.79	28.143	20.837				1/6/08 18:17	26.353
1/7/08 4:00	13.862	5.589	9.654	28.131	20.802				1/6/08 22:17	26.322
1/7/08 8:00	13.838	5.545	9.504	28.117	20.747				1/7/08 2:17	26.346
1/7/08 12:00	13.456	5.528	9.349	28.105	20.731				1/7/08 6:17	26.4
1/7/08 16:00	12.662	5.311	9.166	28.096	20.669				1/7/08 10:17	26.36
1/7/08 20:00	12.085	5.18	8.889	28.082	20.587				1/7/08 14:17	26.362
1/8/08 0:00	12.068	5.175	8.736	28.07	20.561				1/7/08 18:17	26.313
1/8/08 4:00	12.341	5.215	8.593	28.058	20.507				1/7/08 22:17	26.261
1/8/08 8:00	12.662	5.255	8.506	28.047	20.49				1/8/08 2:17	26.268
1/8/08 12:00	12.976	5.262	8.4	28.035	20.486				1/8/08 6:17	26.212
1/8/08 16:00	13.261	5.327	8.337	28.021	20.495				1/8/08 10:17	26.149
1/8/08 20:00	13.541	5.292	8.269	28.009	20.486				1/8/08 14:17	26.118
1/9/08 0:00	13.775	5.388	8.241	27.997	20.519				1/8/08 18:17	26.015
1/9/08 4:00	13.958	5.549	8.271	27.983	20.547				1/8/08 22:17	26.006
1/9/08 8:00	14.116	5.645	8.295	27.969	20.552				1/9/08 2:17	26.043
1/9/08 12:00	14.267	5.718	8.304	27.955	20.554				1/9/08 6:17	26.095
1/9/08 16:00	14.364	5.795	8.382	27.939	20.488				1/9/08 10:17	26.097
1/9/08 20:00	14.442	5.788	8.379	27.923	20.436				1/9/08 14:17	26.167
1/10/08 0:00	14.541	5.844	8.4	27.906	20.427				1/9/08 18:17	26.217
1/10/08 4:00	14.621	5.9	8.48	27.887	20.417				1/9/08 22:17	26.191
1/10/08 8:00	14.684	5.956	8.525	27.871	20.37				1/10/08 2:17	26.219

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer "old"	SB38	Date and Time	Barr
1/10/08 12:00	14.746	6.027	8.506	27.843	20.257				1/10/08 6:17	26.285
1/10/08 16:00	14.807	5.949	8.438	27.824	20.202				1/10/08 10:17	26.271
1/10/08 20:00	14.903	5.851	8.318	27.806	20.181				1/10/08 14:17	26.221
1/11/08 0:00	14.995	5.849	8.309	27.789	20.2				1/10/08 18:17	26.078
1/11/08 4:00	15.066	5.961	8.321	27.77	20.216				1/10/08 22:17	26.038
1/11/08 8:00	15.116	5.987	8.321	27.752	20.219				1/11/08 2:17	26.013
1/11/08 12:00	15.163	6.048	8.344	27.733	20.235				1/11/08 6:17	26.001
1/11/08 16:00	15.177	6.139	8.389	27.712	20.2				1/11/08 10:17	25.973
1/11/08 20:00	15.203	6.057	8.377	27.693	20.12				1/11/08 14:17	26.036
1/12/08 0:00	15.238	6.052	8.384	27.674	20.125				1/11/08 18:17	26.024
1/12/08 4:00	15.285	5.994	8.382	27.656	20.136				1/11/08 22:17	25.994
1/12/08 8:00	15.347	5.954	8.363	27.639	20.143				1/12/08 2:17	25.959
1/12/08 12:00	15.429	5.963	8.356	27.621	20.184				1/12/08 6:17	25.905
1/12/08 16:00	15.49	6.059	8.398	27.6	20.238				1/12/08 10:17	25.832
1/12/08 20:00	15.554	6.071	8.386	27.581	20.271				1/12/08 14:17	25.86
1/13/08 0:00	15.618	6.062	8.412	27.564	20.337				1/12/08 18:17	25.808
1/13/08 4:00	15.658	6.104	8.454	27.543	20.365				1/12/08 22:17	25.801
1/13/08 8:00	15.698	6.094	8.461	27.525	20.377				1/13/08 2:17	25.815
1/13/08 12:00	15.747	6.097	8.478	27.504	20.405				1/13/08 6:17	25.804
1/13/08 16:00	15.764	6.193	8.579	27.483	20.415				1/13/08 10:17	25.762
1/13/08 20:00	15.773	6.204	8.604	27.464	20.398				1/13/08 14:17	25.834
1/14/08 0:00	15.804	6.171	8.583	27.44	20.401				1/13/08 18:17	25.858
1/14/08 4:00	15.858	6.157	8.572	27.419	20.429				1/13/08 22:17	25.815
1/14/08 8:00	15.905	6.153	8.574	27.398	20.443				1/14/08 2:17	25.771
1/14/08 12:00	15.964	6.183	8.602	27.377	20.483				1/14/08 6:17	25.747
1/14/08 16:00	15.997	6.225	8.675	27.356	20.511				1/14/08 10:17	25.696
1/14/08 20:00	16.023	6.246	8.694	27.333	20.523				1/14/08 14:17	25.743
1/15/08 0:00	16.044	6.244	8.722	27.312	20.519				1/14/08 18:17	25.754
1/15/08 4:00	16.049	6.267	8.771	27.286	20.509				1/14/08 22:17	25.745
1/15/08 8:00	16.04	6.298	8.802	27.263	20.474				1/15/08 2:17	25.75
1/15/08 12:00	16.032	6.3	8.842	27.237	20.452				1/15/08 6:17	25.766
1/15/08 16:00	15.988	6.417	8.959	27.213	20.424				1/15/08 10:17	25.761
1/15/08 20:00	15.966	6.382	8.978	27.188	20.353				1/15/08 14:17	25.83
1/16/08 0:00	15.976	6.368	8.98	27.162	20.313				1/15/08 18:17	25.919
1/16/08 4:00	15.985	6.372	8.982	27.139	20.278				1/15/08 22:17	25.893
1/16/08 8:00	16.025	6.337	8.931	27.113	20.259				1/16/08 2:17	25.874
1/16/08 12:00	16.089	6.258	8.888	27.092	20.292				1/16/08 6:17	25.79

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer "old"	SB38	Date and Time	Barr
1/16/08 16:00	16.134	6.316	8.935	27.068	20.335				1/16/08 10:17	25.712
1/16/08 20:00	16.172	6.312	8.933	27.045	20.346				1/16/08 14:17	25.726
1/17/08 0:00	16.207	6.314	8.961	27.019	20.377				1/16/08 18:17	25.679
1/17/08 4:00	16.228	6.302	8.985	26.996	20.386				1/16/08 22:17	25.665
1/17/08 8:00	16.242	6.3	9.02	26.972	20.389				1/17/08 2:17	25.672
1/17/08 12:00	16.275	6.33	9.025	26.949	20.394				1/17/08 6:17	25.689
1/17/08 16:00	16.285	6.361	9.076	26.926	20.391				1/17/08 10:17	25.637
1/17/08 20:00	16.311	6.384	9.072	26.902	20.401				1/17/08 14:17	25.647
1/18/08 0:00	16.337	6.379	9.09	26.879	20.417				1/17/08 18:17	25.618
1/18/08 4:00	16.351	6.403	9.121	26.858	20.419				1/17/08 22:17	25.616
1/18/08 8:00	16.372	6.403	9.111	26.834	20.417				1/18/08 2:17	25.635
1/18/08 12:00	16.426	6.363	9.069	26.816	20.455				1/18/08 6:17	25.609
1/18/08 16:00	16.497	6.297	9.06	26.797	20.519				1/18/08 10:17	25.55
1/18/08 20:00	16.572	6.319	9.062	26.773	20.582				1/18/08 14:17	25.496
1/19/08 0:00	16.65	6.349	9.06	26.757	20.639				1/18/08 18:17	25.442
1/19/08 4:00	16.697	6.382	9.104	26.736	20.71				1/18/08 22:17	25.379
1/19/08 8:00	16.723	6.365	9.13	26.715	20.731				1/19/08 2:17	25.426
1/19/08 12:00	16.766	6.403	9.128	26.698	20.766				1/19/08 6:17	25.442
1/19/08 16:00	16.78	6.433	9.229	26.677	20.771				1/19/08 10:17	25.398
1/19/08 20:00	16.777	6.445	9.245	26.656	20.761				1/19/08 14:17	25.461
1/20/08 0:00	16.794	6.443	9.252	26.635	20.78				1/19/08 18:17	25.487
1/20/08 4:00	16.808	6.459	9.285	26.617	20.795				1/19/08 22:17	25.466
1/20/08 8:00	16.829	6.435	9.278	26.6	20.801				1/20/08 2:17	25.478
1/20/08 12:00	16.864	6.412	9.287	26.581	20.837				1/20/08 6:17	25.473
1/20/08 16:00	16.857	6.424	9.36	26.56	20.82				1/20/08 10:17	25.421
1/20/08 20:00	16.848	6.393	9.379	26.542	20.802				1/20/08 14:17	25.487
1/21/08 0:00	16.855	6.405	9.393	26.523	20.806				1/20/08 18:17	25.503
1/21/08 4:00	16.848	6.524	9.435	26.502	20.797				1/20/08 22:17	25.464
1/21/08 8:00	16.822	6.503	9.468	26.485	20.778				1/21/08 2:17	25.51
1/21/08 12:00	16.808	6.557	9.482	26.464	20.754				1/21/08 6:17	25.529
1/21/08 16:00	16.777	6.622	9.586	26.443	20.743				1/21/08 10:17	25.541
1/21/08 20:00	16.763	6.52	9.55	26.427	20.681				1/21/08 14:17	25.604
1/22/08 0:00	16.801	6.206	9.447	26.411	20.667				1/21/08 18:17	25.604
1/22/08 4:00	16.869	6.192	9.431	26.394	20.684				1/21/08 22:17	25.473
1/22/08 8:00	16.921	6.283	9.438	26.378	20.745				1/22/08 2:17	25.384
1/22/08 12:00	16.961	6.4	9.463	26.361	20.794				1/22/08 6:17	25.367
1/22/08 16:00	16.961	6.569	9.534	26.343	20.835				1/22/08 10:17	25.337

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer “old”	SB38	Date and Time	Barr
1/22/08 20:00	16.938	6.545	9.564	26.326	20.825				1/22/08 14:17	25.428
1/23/08 0:00	16.919	6.557	9.588	26.308	20.811				1/22/08 18:17	25.461
1/23/08 4:00	16.907	6.576	9.623	26.294	20.806				1/22/08 22:17	25.471
1/23/08 8:00	16.886	6.578	9.649	26.277	20.773				1/23/08 2:17	25.478
1/23/08 12:00	16.895	6.531	9.621	26.258	20.74				1/23/08 6:17	25.515
1/23/08 16:00	16.916	6.554	9.616	26.244	20.759				1/23/08 10:17	25.473
1/23/08 20:00	16.968	6.328	9.555	26.23	20.743				1/23/08 14:17	25.447
1/24/08 0:00	17.037	6.307	9.543	26.219	20.825				1/23/08 18:17	25.377
1/24/08 4:00	17.084	6.309	9.548	26.205	20.889				1/23/08 22:17	25.283
1/24/08 8:00	17.128	6.363	9.548	26.193	20.938				1/24/08 2:17	25.276
1/24/08 12:00	17.173	6.547	9.567	26.181	20.988				1/24/08 6:17	25.248
1/24/08 16:00	17.19	6.592	9.644	26.165	21.047				1/24/08 10:17	25.217
1/24/08 20:00	17.188	6.585	9.679	26.151	21.073				1/24/08 14:17	25.285
1/25/08 0:00	17.183	6.55	9.693	26.137	21.075				1/24/08 18:17	25.306
1/25/08 4:00	17.18	6.564	9.712	26.125	21.061				1/24/08 22:17	25.306
1/25/08 8:00	17.173	6.601	9.766	26.109	21.063				1/25/08 2:17	25.316
1/25/08 12:00	17.143	6.69	9.808	26.097	21.063				1/25/08 6:17	25.339
1/25/08 16:00	17.096	6.727	9.895	26.081	21.026				1/25/08 10:17	25.374
1/25/08 20:00	17.077	6.657	9.891	26.067	20.976				1/25/08 14:17	25.447
1/26/08 0:00	17.07	6.599	9.891	26.053	20.95				1/25/08 18:17	25.463
1/26/08 4:00	17.06	6.559	9.898	26.038	20.929				1/25/08 22:17	25.449
1/26/08 8:00	17.062	6.536	9.874	26.027	20.91				1/26/08 2:17	25.456
1/26/08 12:00	17.088	6.501	9.815	26.015	20.915				1/26/08 6:17	25.414
1/26/08 16:00	17.1	6.566	9.827	26.003	20.938				1/26/08 10:17	25.356
1/26/08 20:00	17.086	6.498	9.794	25.992	20.95				1/26/08 14:17	25.323
1/27/08 0:00	17.074	6.51	9.813	25.98	20.993				1/26/08 18:17	25.299
1/27/08 4:00	17.067	6.496	9.841	25.971	21.021				1/26/08 22:17	25.266
1/27/08 8:00	17.081	6.503	9.832	25.957	21.033				1/27/08 2:17	25.28
1/27/08 12:00	17.1	6.554	9.86	25.947	21.059				1/27/08 6:17	25.236
1/27/08 16:00	17.074	6.736	9.994	25.935	21.078				1/27/08 10:17	25.243
1/27/08 20:00	17.001	6.629	10.006	25.921	20.976				1/27/08 14:17	25.311
1/28/08 0:00	16.956	6.603	9.994	25.91	20.941				1/27/08 18:17	25.48
1/28/08 4:00	16.902	6.659	10.027	25.896	20.889				1/27/08 22:17	25.433
1/28/08 8:00	16.752	6.706	10.041	25.882	20.787				1/28/08 2:17	25.487
1/28/08 12:00	15.778	6.631	9.933	25.87	20.636				1/28/08 6:17	25.571
1/28/08 16:00	13.98	5.801	9.163	25.854	20.497				1/28/08 10:17	25.63
1/28/08 20:00	12.969	5.494	9.043	25.844	20.337				1/28/08 14:17	25.956

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer "old"	SB38	Date and Time	Barr
1/29/08 0:00	12.379	5.333	8.94	25.83	20.259				1/28/08 16:00	24.479
1/29/08 4:00	12.056	5.246	8.938	25.818	20.205				1/28/08 20:00	24.758
1/29/08 8:00	12.012	5.241	8.712	25.807	20.136				1/29/08 0:00	24.746
1/29/08 12:00	12.304	5.279	8.428	25.807	20.115				1/29/08 4:00	24.734
1/29/08 16:00	12.676	5.328	8.304	25.793	20.174				1/29/08 8:00	24.723
1/29/08 20:00	13.042	5.396	8.175	25.79	20.259				1/29/08 12:00	24.718
1/30/08 0:00	13.339	5.454	8.182	25.783	20.37				1/29/08 16:00	24.711
1/30/08 4:00	13.577	5.506	8.208	25.776	20.46				1/29/08 20:00	24.709
1/30/08 8:00	13.777	5.555	8.222	25.767	20.511				1/30/08 0:00	24.704
1/30/08 12:00	13.968	5.609	8.224	25.762	20.554				1/30/08 4:00	24.702
1/30/08 16:00	14.1	5.639	8.398	25.755	20.778				1/30/08 8:00	24.697
1/30/08 20:00	14.232	5.683	8.369	25.746	20.667				1/30/08 12:00	24.695
1/31/08 0:00	14.373	5.726	8.358	25.741	20.556				1/30/08 16:00	24.688
1/31/08 4:00	14.503	5.768	8.391	25.732	20.563				1/30/08 20:00	24.683
1/31/08 8:00	14.628	5.805	8.384	25.727	20.592				1/31/08 0:00	24.676
1/31/08 12:00	14.75	5.84	8.348	25.722	20.646				1/31/08 4:00	24.671
1/31/08 16:00	14.842	5.861	8.492	25.715	20.57				1/31/08 8:00	24.666
1/31/08 20:00	14.925	5.882	8.499	25.708	20.594				1/31/08 12:00	24.662
2/1/08 0:00	15.002	5.903	8.543	25.699	20.58				1/31/08 16:00	24.657
2/1/08 4:00	15.068	5.924	8.602	25.694	20.556				1/31/08 20:00	24.648
2/1/08 8:00	15.134	5.945	8.628	25.687	20.566				2/1/08 0:00	24.643
2/1/08 12:00	15.201	5.962	8.677	25.68	20.568				2/1/08 4:00	24.636
2/1/08 16:00	15.236	5.964	8.78	25.671	20.561				2/1/08 8:00	24.631
2/1/08 20:00	15.269	5.974	8.776	25.666	20.549				2/1/08 12:00	24.622
2/2/08 0:00	15.316	5.99	8.815	25.659	20.547				2/1/08 16:00	24.615
2/2/08 4:00	15.354	6.002	8.846	25.652	20.53				2/1/08 20:00	24.608
2/2/08 8:00	15.403	6.02	8.811	25.645	20.573				2/2/08 0:00	24.598
2/2/08 12:00	15.479	6.046	8.766	25.64	20.655				2/2/08 4:00	24.591
2/2/08 16:00	15.552	6.065	8.79	25.633	20.691				2/2/08 8:00	24.582
2/2/08 20:00	15.538	6.081	8.787	25.629	20.728				2/2/08 12:00	24.577
2/3/08 0:00	15.556	6.1	8.764	25.622	20.769				2/2/08 16:00	24.57
2/3/08 4:00	15.604	6.107	8.813	25.615	20.752				2/2/08 20:00	24.568
2/3/08 8:00	15.648	6.114	8.867	25.608	20.731				2/3/08 0:00	24.561
2/3/08 12:00	15.686	6.114	8.907	25.601	20.703				2/3/08 4:00	24.556
2/3/08 16:00	15.674	6.097	9.045	25.591	20.587				2/3/08 8:00	24.549
2/3/08 20:00	15.689	6.098	9.045	25.584	20.596				2/3/08 12:00	24.542
2/4/08 0:00	15.719	6.105	9.081	25.577	20.58				2/3/08 16:00	24.53

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer "old"	SB38	Date and Time	Barr
2/4/08 4:00	15.712	6.1	9.219	25.568	20.5				2/3/08 20:00	24.523
2/4/08 8:00	15.688	6.09	9.313	25.559	20.429				2/4/08 0:00	24.512
2/4/08 12:00	15.712	6.102	9.25	25.549	20.452				2/4/08 4:00	24.502
2/4/08 16:00	15.066	6.102	9.212	25.542	20.486				2/4/08 8:00	24.479
2/4/08 20:00	13.937	6.067	9.008	25.538	20.589				2/4/08 12:00	24.469
2/5/08 0:00	13.838	6.032	8.853	25.53	20.679				2/4/08 16:00	24.46
2/5/08 4:00	14.008	5.987	8.773	25.528	20.719				2/4/08 20:00	24.455
2/5/08 8:00	14.218	5.948	8.806	25.521	20.693				2/5/08 0:00	24.451
2/5/08 12:00	14.409	5.917	8.813	25.516	20.677				2/5/08 4:00	24.444
2/5/08 16:00	14.557	5.889	8.837	25.505	20.648				2/5/08 8:00	24.441
2/5/08 20:00	14.703	5.875	8.825	25.498	20.636				2/5/08 12:00	24.434
2/6/08 0:00	14.833	5.868	8.855	25.491	20.622				2/5/08 16:00	24.425
2/6/08 4:00	14.941	5.861	8.9	25.481	20.589				2/5/08 20:00	24.415
2/6/08 8:00	15.043	5.863	8.865	25.477	20.611				2/6/08 0:00	24.408
2/6/08 12:00	15.156	5.868	8.804	25.467	20.669				2/6/08 4:00	24.401
2/6/08 16:00	15.26	5.877	8.794	25.458	20.681				2/6/08 8:00	24.392
2/6/08 20:00	15.363	5.896	8.754	25.453	20.731				2/6/08 12:00	24.385
2/7/08 0:00	15.467	5.91	8.754	25.446	20.766				2/6/08 16:00	24.378
2/7/08 4:00	15.547	5.917	8.785	25.439	20.761				2/6/08 20:00	24.371
2/7/08 8:00	15.601	5.92	8.832	25.432	20.731				2/7/08 0:00	24.366
2/7/08 12:00	15.644	5.922	8.879	25.425	20.703				2/7/08 4:00	24.359
2/7/08 16:00	15.663	5.92	8.959	25.418	20.646				2/7/08 8:00	24.352
2/7/08 20:00	15.696	5.924	8.942	25.411	20.655				2/7/08 12:00	24.343
2/8/08 0:00	15.726	5.929	8.996	25.43	20.627				2/7/08 16:00	24.336
2/8/08 4:00	15.738	5.929	9.074	25.488	20.573				2/7/08 20:00	24.326
2/8/08 8:00	15.745	5.929	9.113	25.521	20.537				2/8/08 0:00	24.317
2/8/08 12:00	15.776	5.938	9.076	25.404	20.568				2/8/08 4:00	24.307
2/8/08 16:00	15.811	5.948	9.064	25.416	20.544				2/8/08 8:00	24.298
2/8/08 20:00	15.868	5.964	8.984	25.364	20.544				2/8/08 12:00	24.289
2/9/08 0:00	15.912	5.976	9.001	25.292	20.573				2/8/08 16:00	24.282
2/9/08 4:00	15.945	5.983	9.017	25.285	20.58				2/8/08 20:00	24.27
2/9/08 8:00	15.976	5.99	8.991	25.172	20.594				2/9/08 0:00	24.26
2/9/08 12:00	16.035	6.006	8.902	25.191	20.691				2/9/08 4:00	24.251
2/9/08 16:00	16.113	6.029	8.813	25.177	20.717				2/9/08 8:00	24.244
2/9/08 20:00	16.195	6.053	8.7	25.037	20.811				2/9/08 12:00	24.242
2/10/08 0:00	16.268	6.071	8.642	25.053	20.87				2/9/08 16:00	24.228
2/10/08 4:00	16.337	6.086	8.592	25.06	20.936				2/9/08 20:00	24.214

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer "old"	SB38	Date and Time	Barr
2/10/08 8:00	16.403	6.102	8.505	25.086	21.007				2/10/08 0:00	24.211
2/10/08 12:00	16.469	6.111	8.48	25.154	21.063				2/10/08 4:00	24.214
2/10/08 16:00	16.488	6.107	8.637	25.313	21.002				2/10/08 8:00	24.214
2/10/08 20:00	16.476	6.095	8.721	25.31	20.95				2/10/08 12:00	24.216
2/11/08 0:00	16.45	6.083	8.801	25.128	20.894				2/10/08 16:00	24.216
2/11/08 4:00	16.417	6.069	8.909	25.175	20.82				2/10/08 20:00	24.216
2/11/08 8:00	16.374	6.057	9.01	25.163	20.745				2/11/08 0:00	24.214
2/11/08 12:00	16.346	6.05	9.043	25.397	20.719				2/11/08 4:00	24.206
2/11/08 16:00	16.311	6.039	9.111	25.275	20.627				2/11/08 8:00	24.197
2/11/08 20:00	16.299	6.041	9.078	25.268	20.648				2/11/08 12:00	24.192
2/12/08 0:00	16.308	6.05	9.085	25.264	20.655				2/11/08 16:00	24.185
2/12/08 4:00	16.32	6.053	9.104	25.259	20.655				2/11/08 20:00	24.178
2/12/08 8:00	16.33	6.06	9.095	25.252	20.662				2/12/08 0:00	24.171
2/12/08 12:00	16.358	6.069	9.088	25.247	20.695				2/12/08 4:00	24.164
2/12/08 16:00	16.363	6.069	9.127	25.24	20.662				2/12/08 8:00	24.157
2/12/08 20:00	16.37	6.074	9.123	25.233	20.686				2/12/08 12:00	24.153
2/13/08 0:00	16.377	6.081	9.139	25.226	20.686				2/12/08 16:00	24.145
2/13/08 4:00	16.381	6.081	9.167	25.219	20.669				2/12/08 20:00	24.138
2/13/08 8:00	16.377	6.081	9.16	25.212	20.646				2/13/08 0:00	24.134
2/13/08 12:00	16.384	6.083	9.174	25.205	20.653				2/13/08 4:00	24.127
2/13/08 16:00	16.358	6.071	9.296	25.198	20.563				2/13/08 8:00	24.12
2/13/08 20:00	16.313	6.06	9.36	25.189	20.53				2/13/08 12:00	24.113
2/14/08 0:00	16.282	6.06	9.407	25.182	20.511				2/13/08 16:00	24.103
2/14/08 4:00	16.264	6.057	9.465	25.172	20.483				2/13/08 20:00	24.094
2/14/08 8:00	16.268	6.067	9.419	25.165	20.523				2/14/08 0:00	24.084
2/14/08 12:00	16.301	6.078	9.402	25.158	20.563				2/14/08 4:00	24.075
2/14/08 16:00	16.348	6.102	9.221	25.151	20.688				2/14/08 8:00	24.068
2/14/08 20:00	16.433	6.134	9.071	25.144	20.825				2/14/08 12:00	24.059
2/15/08 0:00	16.518	6.158	8.98	25.142	20.924				2/14/08 16:00	24.052
2/15/08 4:00	16.586	6.177	8.876	25.137	20.997				2/14/08 20:00	24.052
2/15/08 8:00	16.645	6.188	8.841	25.133	21.026				2/15/08 0:00	24.052
2/15/08 12:00	16.702	6.198	8.834	25.128	21.08				2/15/08 4:00	24.052
2/15/08 16:00	16.719	6.191	8.965	25.123	21.026				2/15/08 8:00	24.054
2/15/08 20:00	16.7	6.179	9.024	25.116	20.988				2/15/08 12:00	24.054
2/16/08 0:00	16.686	6.172	9.066	25.109	20.96				2/15/08 16:00	24.054
2/16/08 4:00	16.667	6.165	9.156	25.102	20.905				2/15/08 20:00	24.052
2/16/08 8:00	16.641	6.153	9.207	25.095	20.849				2/16/08 0:00	24.049

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer “old”	SB38	Date and Time	Barr
2/16/08 12:00	16.605	6.137	9.242	25.088	20.766				2/16/08 4:00	24.045
2/16/08 16:00	16.551	6.116	9.31	25.079	20.658				2/16/08 8:00	24.037
2/16/08 20:00	16.48	6.097	9.449	25.069	20.563				2/16/08 12:00	24.028
2/17/08 0:00	16.412	6.083	9.541	25.051	20.438				2/16/08 16:00	24.021
2/17/08 4:00	15.776	6.057	9.681	25.032	20.018				2/16/08 20:00	24.007
2/17/08 8:00	14.451	5.98	9.538	25.009	19.582				2/17/08 0:00	23.953
2/17/08 12:00	13.256	5.769	9.2	24.999	19.613				2/17/08 4:00	23.831
2/17/08 16:00	12.646	5.507	8.93	24.99	19.679				2/17/08 8:00	23.671
2/17/08 20:00	12.292	5.285	8.684	24.978	19.691				2/17/08 12:00	23.618
2/18/08 0:00	12.068	5.121	8.592	24.973	19.641				2/17/08 16:00	23.5
2/18/08 4:00	12.021	5.025	8.487	24.964	19.622				2/17/08 20:00	23.427
2/18/08 8:00	12.169	4.983	8.43	24.955	19.617				2/18/08 0:00	23.409
2/18/08 12:00	12.448	4.979	8.364	24.948	19.641				2/18/08 4:00	23.397
2/18/08 16:00	12.726	4.995	8.334	24.938	19.667				2/18/08 8:00	23.392
2/18/08 20:00	12.999	5.032	8.257	24.929	19.721				2/18/08 12:00	23.392
2/19/08 0:00	13.249	5.077	8.228	24.922	19.759				2/18/08 16:00	23.395
2/19/08 4:00	13.454	5.119	8.214	24.91	19.771				2/18/08 20:00	23.397
2/19/08 8:00	13.621	5.159	8.235	24.901	19.747				2/19/08 0:00	23.404
2/19/08 12:00	13.763	5.198	8.306	24.889	19.719				2/19/08 4:00	23.406
2/19/08 16:00	13.855	5.224	8.369	24.877	19.606				2/19/08 8:00	23.409
2/19/08 20:00	13.954	5.262	8.35	24.863	19.594				2/19/08 12:00	23.413
2/20/08 0:00	14.086	5.315	8.249	24.854	19.698				2/19/08 16:00	23.413
2/20/08 4:00	14.234	5.371	8.127	24.842	19.804				2/19/08 20:00	23.413
2/20/08 8:00	14.383	5.423	8.029	24.833	19.905				2/20/08 0:00	23.416
2/20/08 12:00	14.534	5.474	7.968	24.824	20.007				2/20/08 4:00	23.42
2/20/08 16:00	14.637	5.498	8.09	24.81	19.955				2/20/08 8:00	23.425
2/20/08 20:00	14.713	5.521	8.151	24.798	19.943				2/20/08 12:00	23.437
2/21/08 0:00	14.779	5.54	8.219	24.784	19.912				2/20/08 16:00	23.444
2/21/08 4:00	14.824	5.558	8.289	24.767	19.853				2/20/08 20:00	23.446
2/21/08 8:00	14.847	5.568	8.383	24.753	19.787				2/21/08 0:00	23.449
2/21/08 12:00	14.88	5.587	8.397	24.739	19.783				2/21/08 4:00	23.446
2/21/08 16:00	14.899	5.594	8.43	24.723	19.709				2/21/08 8:00	23.449
2/21/08 20:00	14.92	5.608	8.423	24.707	19.707				2/21/08 12:00	23.446
2/22/08 0:00	14.953	5.626	8.435	24.693	19.719				2/21/08 16:00	23.446
2/22/08 4:00	14.984	5.643	8.454	24.679	19.698				2/21/08 20:00	23.444
2/22/08 8:00	15.022	5.661	8.435	24.665	19.731				2/22/08 0:00	23.444
2/22/08 12:00	15.071	5.685	8.425	24.65	19.783				2/22/08 4:00	23.441

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer “old”	SB38	Date and Time	Barr
2/22/08 16:00	15.109	5.699	8.475	24.634	19.768				2/22/08 8:00	23.439
2/22/08 20:00	15.142	5.713	8.475	24.618	19.782				2/22/08 12:00	23.439
2/23/08 0:00	15.182	5.732	8.468	24.604	19.815				2/22/08 16:00	23.437
2/23/08 4:00	15.219	5.748	8.465	24.59	19.839				2/22/08 20:00	23.434
2/23/08 8:00	15.255	5.764	8.472	24.573	19.851				2/23/08 0:00	23.432
2/23/08 12:00	15.302	5.778	8.456	24.559	19.896				2/23/08 4:00	23.427
2/23/08 16:00	15.34	5.788	8.496	24.54	19.896				2/23/08 8:00	23.427
2/23/08 20:00	15.359	5.797	8.498	24.526	19.901				2/23/08 12:00	23.427
2/24/08 0:00	15.387	5.811	8.486	24.512	19.924				2/23/08 16:00	23.423
2/24/08 4:00	15.408	5.823	8.491	24.498	19.922				2/23/08 20:00	23.42
2/24/08 8:00	15.427	5.832	8.493	24.482	19.917				2/24/08 0:00	23.423
2/24/08 12:00	15.448	5.837	8.512	24.466	19.905				2/24/08 4:00	23.42
2/24/08 16:00	15.448	5.834	8.569	24.449	19.839				2/24/08 8:00	23.418
2/24/08 20:00	15.422	5.834	8.54	24.433	19.794				2/24/08 12:00	23.418
2/25/08 0:00	15.375	5.837	8.515	24.416	19.728				2/24/08 16:00	23.409
2/25/08 4:00	15.323	5.832	8.54	24.4	19.625				2/24/08 20:00	23.404
2/25/08 8:00	15.264	5.823	8.641	24.384	19.5				2/25/08 0:00	23.399
2/25/08 12:00	15.231	5.823	8.653	24.43	19.448				2/25/08 4:00	23.392
2/25/08 16:00	15.203	5.827	8.618	24.412	19.431				2/25/08 8:00	23.383
2/25/08 20:00	15.05	5.853	8.369	24.143	19.521				2/25/08 12:00	23.376
2/26/08 0:00	14.918	5.879	8.17	24.028	19.61				2/25/08 16:00	23.366
2/26/08 4:00	14.946	5.879	8.078	23.997	19.646				2/25/08 20:00	23.364
2/26/08 8:00	15.017	5.863	7.97	24.119	19.702				2/26/08 0:00	23.366
2/26/08 12:00	15.104	5.837	7.881	24.112	19.768				2/26/08 4:00	23.369
2/26/08 16:00	15.17	5.802	7.949	24.215	19.747				2/26/08 8:00	23.373
2/26/08 20:00	15.203	5.767	7.975	24.194	19.707				2/26/08 12:00	23.378
2/27/08 0:00	15.224	5.741	7.996	24.234	19.681				2/26/08 16:00	23.381
2/27/08 4:00	15.234	5.718	8.029	24.253	19.636				2/26/08 20:00	23.38
2/27/08 8:00	15.25	5.711	8.022	24.201	19.634				2/27/08 0:00	23.38
2/27/08 12:00	15.276	5.708	8.008	24.243	19.65				2/27/08 4:00	23.381
2/27/08 16:00	15.292	5.701	8.116	24.381	19.608				2/27/08 8:00	23.376
2/27/08 20:00	15.285	5.699	8.123	24.239	19.561				2/27/08 12:00	23.373
2/28/08 0:00	15.269	5.699	8.108	24.187	19.507				2/27/08 16:00	23.369
2/28/08 4:00	15.25	5.699	8.108	24.203	19.459				2/27/08 20:00	23.366
2/28/08 8:00	15.233	5.696	8.132	24.222	19.391				2/28/08 0:00	23.362
2/28/08 12:00	15.236	5.701	8.127	24.255	19.379				2/28/08 4:00	23.357
2/28/08 16:00	15.215	5.699	8.144	24.346	19.29				2/28/08 8:00	23.35

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer "old"	SB38	Date and Time	Barr
2/28/08 20:00	15.208	5.706	8.108	24.253	19.313				2/28/08 12:00	23.345
2/29/08 0:00	15.224	5.715	8.106	24.215	19.318				2/28/08 16:00	23.336
2/29/08 4:00	15.241	5.725	8.09	24.131	19.339				2/28/08 20:00	23.329
2/29/08 8:00	15.288	5.746	7.97	23.993	19.452				2/29/08 0:00	23.324
2/29/08 12:00	15.358	5.771	7.892	24.021	19.573				2/29/08 4:00	23.32
2/29/08 16:00	15.106	5.771	7.977	24.056	19.549				2/29/08 8:00	23.319
2/29/08 20:00	13.574	5.657	7.89	23.976	19.457				2/29/08 12:00	23.319
3/1/08 0:00	12.674	5.42	7.78	23.88	19.334				2/29/08 16:00	23.317
3/1/08 4:00	12.478	5.194	7.78	23.932	19.174				2/29/08 20:00	23.315
3/1/08 8:00	12.629	5.046	7.768	23.976	19.049				3/1/08 0:00	23.312
3/1/08 12:00	12.796	4.959	7.796	24.091	18.877				3/1/08 4:00	23.308
3/1/08 16:00	11.898	4.688	7.775	24.068	18.565				3/1/08 8:00	23.303
3/1/08 20:00	11.036	4.302	7.444	23.817	18.167				3/1/08 12:00	23.291
3/2/08 0:00	10.656	4.129	7.158	23.731	17.815				3/1/08 16:00	23.28
3/2/08 4:00	10.454	4.066	7.047	23.899	17.518				3/1/08 20:00	23.266
3/2/08 8:00	10.076	4.017	6.942	24.049	17.259				3/2/08 0:00	23.254
3/2/08 12:00	9.702	3.991	6.827	23.969	17.084				3/2/08 4:00	23.24
3/2/08 16:00	9.541	3.935	6.801	23.799	16.907				3/2/08 8:00	23.226
3/2/08 20:00	9.487	3.892	6.435	23.579	16.895				3/2/08 12:00	23.212
3/3/08 0:00	9.02	3.607	5.702	23.41	16.615				3/2/08 16:00	23.2
3/3/08 4:00	8.714	3.312	5.2	23.48	16.334				3/2/08 20:00	23.186
3/3/08 8:00	8.978	3.303	4.937	23.616	16.322				3/3/08 0:00	23.068
3/3/08 12:00	9.303	3.389	4.838	23.478	16.277				3/3/08 4:00	22.984
3/3/08 16:00	9.583	3.499	4.918	23.588	16.185				3/3/08 8:00	22.956
3/3/08 20:00	9.835	3.611	4.953	23.574	16.108				3/3/08 12:00	22.944
3/4/08 0:00	10.064	3.721	4.991	23.574	16.03				3/3/08 16:00	22.935
3/4/08 4:00	10.264	3.829	5.047	23.452	15.957				3/3/08 20:00	22.923
3/4/08 8:00	10.436	3.93	5.122	23.447	15.89				3/4/08 0:00	22.914
3/4/08 12:00	10.596	4.035	5.188	23.759	15.834				3/4/08 4:00	22.907
3/4/08 16:00	10.712	4.107	5.268	23.658	15.707				3/4/08 8:00	22.897
3/4/08 20:00	10.823	4.133	5.322	23.485	15.695				3/4/08 12:00	22.888
3/5/08 0:00	10.941	4.152	5.327	23.471	15.702				3/4/08 16:00	22.876
3/5/08 4:00	11.04	4.171	5.39	23.511	15.674				3/4/08 20:00	22.864
3/5/08 8:00	11.141	4.199	5.381	23.41	15.678				3/5/08 0:00	22.857
3/5/08 12:00	11.285	4.245	5.334	23.349	15.768				3/5/08 4:00	22.848
3/5/08 16:00	11.426	4.292	5.338	23.195	15.841				3/5/08 8:00	22.841
3/5/08 20:00	11.556	4.336	5.277	23.101	15.921				3/5/08 12:00	22.836

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer "old"	SB38	Date and Time	Barr
3/6/08 0:00	11.669	4.386	5.251	23.108	15.978				3/5/08 16:00	22.834
3/6/08 4:00	11.747	4.428	5.28	23.131	15.978				3/5/08 20:00	22.836
3/6/08 8:00	11.81	4.472	5.296	23.094	15.987				3/6/08 0:00	22.836
3/6/08 12:00	11.879	4.521	5.303	23.124	16.006				3/6/08 4:00	22.836
3/6/08 16:00	11.895	4.554	5.505	23.389	15.926				3/6/08 8:00	22.836
3/6/08 20:00	11.933	4.584	5.54	23.19	15.914				3/6/08 12:00	22.836
3/7/08 0:00	11.985	4.615	5.507	23.047	15.926				3/6/08 16:00	22.829
3/7/08 4:00	12.032	4.643	5.531	23.019	15.926				3/6/08 20:00	22.824
3/7/08 8:00	12.079	4.676	5.488	22.968	15.947				3/7/08 0:00	22.822
3/7/08 12:00	12.152	4.718	5.463	22.933	16.023				3/7/08 4:00	22.817
3/7/08 16:00	12.187	4.746	5.542	22.923	16.004				3/7/08 8:00	22.813
3/7/08 20:00	12.218	4.772	5.582	22.907	15.992				3/7/08 12:00	22.813
3/8/08 0:00	12.237	4.788	5.61	22.923	15.961				3/7/08 16:00	22.808
3/8/08 4:00	12.242	4.802	5.674	23.012	15.907				3/7/08 20:00	22.803
3/8/08 8:00	12.246	4.821	5.693	23.04	15.869				3/8/08 0:00	22.796
3/8/08 12:00	12.253	4.839	5.742	23.028	15.825				3/8/08 4:00	22.789
3/8/08 16:00	12.239	4.853	5.772	22.897	15.754				3/8/08 8:00	22.782
3/8/08 20:00	12.275	4.874	5.789	22.869	15.792				3/8/08 12:00	22.77
3/9/08 0:00	12.326	4.898	5.756	22.841	15.851				3/8/08 16:00	22.759
3/9/08 4:00	12.367	4.917	5.784	22.813	15.881				3/8/08 20:00	22.749
3/9/08 8:00	12.421	4.94	5.721	22.787	15.964				3/9/08 0:00	22.742
3/9/08 12:00	12.482	4.966	5.7	22.759	16.046				3/9/08 4:00	22.733
3/9/08 16:00	12.513	4.98	5.852	22.731	16.065				3/9/08 8:00	22.728
3/9/08 20:00	12.55	4.991	5.801	22.705	16.131				3/9/08 12:00	22.726
3/10/08 0:00	12.586	4.996	5.742	22.68	16.176				3/9/08 16:00	22.719
3/10/08 4:00	12.623	5.006	5.716	22.654	16.216				3/9/08 20:00	22.719
3/10/08 8:00	12.666	5.02	5.662	22.628	16.28				3/10/08 0:00	22.716
3/10/08 12:00	12.708	5.036	5.66	22.605	16.336				3/10/08 4:00	22.716
3/10/08 16:00	12.704	5.036	5.862	22.577	16.27				3/10/08 8:00	22.716
3/10/08 20:00	12.694	5.024	5.932	22.549	16.223				3/10/08 12:00	22.716
3/11/08 0:00	12.696	5.017	5.937	22.521	16.2				3/10/08 16:00	22.709
3/11/08 4:00	12.68	5.006	6.005	22.493	16.129				3/10/08 20:00	22.702
3/11/08 8:00	12.666	4.999	6.035	22.464	16.086				3/11/08 0:00	22.695
3/11/08 12:00	12.652	4.996	6.075	22.436	16.034				3/11/08 4:00	22.686
3/11/08 16:00	12.616	4.982	6.2	22.406	15.928				3/11/08 8:00	22.674
3/11/08 20:00	12.6	4.971	6.317	22.378	15.893				3/11/08 12:00	22.662
3/12/08 0:00	12.605	4.964	6.294	22.35	15.893				3/11/08 16:00	22.644

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer “old”	SB38	Date and Time	Barr
3/12/08 4:00	12.605	4.959	6.343	22.322	15.869				3/11/08 20:00	22.63
3/12/08 8:00	12.607	4.957	6.355	22.294	15.876				3/12/08 0:00	22.618
3/12/08 12:00	12.612	4.954	6.439	22.265	15.865				3/12/08 4:00	22.606
3/12/08 16:00	12.602	4.95	6.657	22.235	15.825				3/12/08 8:00	22.592
3/12/08 20:00	12.647	4.971	6.592	22.209	15.928				3/12/08 12:00	22.578
3/13/08 0:00	12.692	4.992	6.479	22.184	15.997				3/12/08 16:00	22.562
3/13/08 4:00	12.718	5.003	6.437	22.158	16.027				3/12/08 20:00	22.552
3/13/08 8:00	12.737	5.013	6.427	22.132	16.056				3/13/08 0:00	22.545
3/13/08 12:00	12.762	5.024	6.444	22.109	16.093				3/13/08 4:00	22.538
3/13/08 16:00	12.758	5.024	6.575	22.078	16.06				3/13/08 8:00	22.531
3/13/08 20:00	12.758	5.025	6.625	22.052	16.053				3/13/08 12:00	22.522
3/14/08 0:00	12.772	5.027	6.594	22.027	16.068				3/13/08 16:00	22.51
3/14/08 4:00	12.767	5.025	6.625	21.999	16.044				3/13/08 20:00	22.501
3/14/08 8:00	12.786	5.029	6.587	21.973	16.089				3/14/08 0:00	22.494
3/14/08 12:00	12.81	5.036	6.585	21.95	16.141				3/14/08 4:00	22.482
3/14/08 16:00	12.81	5.032	6.669	21.924	16.117				3/14/08 8:00	22.475
3/14/08 20:00	12.826	5.029	6.658	21.9	16.162				3/14/08 12:00	22.465
3/15/08 0:00	12.866	5.039	6.578	21.875	16.254				3/14/08 16:00	22.456
3/15/08 4:00	12.885	5.015	6.47	21.844	16.167				3/14/08 20:00	22.447
3/15/08 8:00	12.909	4.947	6.345	21.823	16.261				3/15/08 0:00	22.435
3/15/08 12:00	12.937	4.87	6.282	21.8	16.351				3/15/08 4:00	22.402
3/15/08 16:00	12.913	4.758	6.279	21.774	16.31				3/15/08 8:00	22.39
3/15/08 20:00	12.894	4.634	6.19	21.753	16.391				3/15/08 12:00	22.374
3/16/08 0:00	12.908	4.557	6.096	21.734	16.48				3/15/08 16:00	22.353
3/16/08 4:00	12.909	4.503	6.141	21.713	16.487				3/15/08 20:00	22.346
3/16/08 8:00	12.93	4.489	6.068	21.694	16.561				3/16/08 0:00	22.346
3/16/08 12:00	12.96	4.496	6.054	21.676	16.627				3/16/08 4:00	22.343
3/16/08 16:00	12.963	4.493	6.162	21.655	16.603				3/16/08 8:00	22.336
3/16/08 20:00	12.942	4.482	6.2	21.634	16.553				3/16/08 12:00	22.339
3/17/08 0:00	12.939	4.475	6.188	21.612	16.558				3/16/08 16:00	22.334
3/17/08 4:00	12.93	4.475	6.251	21.591	16.52				3/16/08 20:00	22.329
3/17/08 8:00	12.897	4.468	6.272	21.568	16.44				3/17/08 0:00	22.325
3/17/08 12:00	12.692	4.437	6.183	21.533	16.254				3/17/08 4:00	22.32
3/17/08 16:00	11.631	4.103	6.045	21.505	15.872				3/17/08 8:00	22.311
3/17/08 20:00	11.294	3.789	5.951	21.481	15.858				3/17/08 12:00	22.231
3/18/08 0:00	11.334	3.644	5.852	21.458	15.898				3/17/08 16:00	22.146
3/18/08 4:00	11.405	3.579	5.824	21.437	15.879				3/17/08 20:00	22.109

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer "old"	SB38	Date and Time	Barr
3/18/08 8:00	11.499	3.571	5.728	21.414	15.933				3/18/08 0:00	22.088
3/18/08 12:00	11.586	3.597	5.669	21.395	15.968				3/18/08 4:00	22.071
3/18/08 16:00	11.643	3.632	5.711	21.374	15.968				3/18/08 8:00	22.059
3/18/08 20:00	11.711	3.691	5.669	21.355	16.016				3/18/08 12:00	22.05
3/19/08 0:00	11.786	3.763	5.566	21.332	16.065				3/18/08 16:00	22.043
3/19/08 4:00	11.836	3.831	5.517	21.315	16.077				3/18/08 20:00	22.036
3/19/08 8:00	11.892	3.897	5.451	21.294	16.126				3/19/08 0:00	22.034
3/19/08 12:00	11.961	3.969	5.453	21.275	16.185				3/19/08 4:00	22.029
3/19/08 16:00	11.996	4.032	5.632	21.257	16.185				3/19/08 8:00	22.027
3/19/08 20:00	12.027	4.098	5.683	21.238	16.185				3/19/08 12:00	22.027
3/20/08 0:00	12.086	4.17	5.514	21.219	16.261				3/19/08 16:00	22.02
3/20/08 4:00	12.102	4.224	5.51	21.198	16.226				3/19/08 20:00	22.02
3/20/08 8:00	12.14	4.28	5.463	21.182	16.263				3/20/08 0:00	22.022
3/20/08 12:00	12.178	4.332	5.517	21.163	16.282				3/20/08 4:00	22.017
3/20/08 16:00	12.152	4.362	5.855	21.142	16.174				3/20/08 8:00	22.017
3/20/08 20:00	12.13	4.404	5.932	21.121	16.105				3/20/08 12:00	22.013
3/21/08 0:00	12.135	4.444	5.876	21.098	16.079				3/20/08 16:00	22.006
3/21/08 4:00	12.142	4.479	5.862	21.081	16.056				3/20/08 20:00	21.999
3/21/08 8:00	12.173	4.521	5.789	21.062	16.1				3/21/08 0:00	21.991
3/21/08 12:00	12.258	4.575	5.679	21.046	16.24	24.287			3/21/08 4:00	21.984
3/21/08 16:00	12.316	4.624	5.735	21.025	16.31	24.352	7.95	38.491	3/21/08 8:00	21.98
3/21/08 20:00	12.378	4.676	5.632	21.013	16.395	24.439	8.004	38.472	3/21/08 12:00	21.98
3/22/08 0:00	12.432	4.723	5.669	20.995	16.454	24.498	8.018	38.458	3/21/08 16:00	21.98
3/22/08 4:00	12.465	4.755	5.7	20.978	16.473	24.526	8.018	38.441	3/21/08 20:00	21.982
3/22/08 8:00	12.505	4.788	5.733	20.962	16.53	24.582	8.044	38.425	3/22/08 0:00	21.989
3/22/08 12:00	12.555	4.816	5.765	20.948	16.596	24.641	8.065	38.411	3/22/08 4:00	21.989
3/22/08 16:00	12.569	4.837	5.789	20.931	16.575	24.634	8.037	38.397	3/22/08 8:00	21.994
3/22/08 20:00	12.595	4.861	5.812	20.913	16.603	24.671	8.06	38.382	3/22/08 12:00	21.996
3/23/08 0:00	12.635	4.889	5.845	20.899	16.667	24.721	8.074	38.368	3/22/08 16:00	21.999
3/23/08 4:00	12.654	4.907	5.866	20.882	16.657	24.725	8.06	38.354	3/22/08 20:00	22.003
3/23/08 8:00	12.675	4.924	5.892	20.866	16.681	24.751	8.072	38.342	3/23/08 0:00	22.003
3/23/08 12:00	12.703	4.943	5.92	20.849	16.709	24.772	8.072	38.328	3/23/08 4:00	22.006
3/23/08 16:00	12.696	4.954	5.937	20.833	16.652	24.728	8.018	38.316	3/23/08 8:00	22.008
3/23/08 20:00	12.703	4.966	5.953	20.817	16.638	24.714	8.006	38.302	3/23/08 12:00	22.008
3/24/08 0:00	12.722	4.982	5.974	20.8	16.657	24.716	8.001	38.288	3/23/08 16:00	22.006
3/24/08 4:00	12.724	4.996	5.993	20.784	16.629	24.688	7.973	38.276	3/23/08 20:00	22.003
3/24/08 8:00	12.724	5.008	6.01	20.768	16.601	24.662	7.954	38.262	3/24/08 0:00	22.001

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer "old"	SB38	Date and Time	Barr
3/24/08 12:00	12.708	5.01	6.021	20.751	16.539	24.58	7.891	38.253	3/24/08 4:00	21.999
3/24/08 16:00	12.644	4.994	6.01	20.728	16.365	24.404	7.781	38.239	3/24/08 8:00	21.994
3/24/08 20:00	12.599	4.985	6.003	20.707	16.266	24.299	7.738	38.225	3/24/08 12:00	21.984
3/25/08 0:00	12.578	4.982	6.007	20.688	16.221	24.228	7.708	38.213	3/24/08 16:00	21.966
3/25/08 4:00	12.559	4.987	6.017	20.672	16.181	24.259	7.694	38.199	3/24/08 20:00	21.954
3/25/08 8:00	12.583	5.003	6.04	20.651	16.256	24.221	7.766	38.187	3/25/08 0:00	21.942
3/25/08 12:00	12.649	5.031	6.078	20.639	16.386	24.303	7.837	38.175	3/25/08 4:00	21.93
3/25/08 16:00	12.684	5.055	6.108	20.622	16.433	24.378	7.858	38.161	3/25/08 8:00	21.921
3/25/08 20:00	12.717	5.078	6.136	20.606	16.48	24.406	7.898	38.149	3/25/08 12:00	21.914
3/26/08 0:00	12.755	5.099	6.167	20.592	16.549	24.463	7.924	38.137	3/25/08 16:00	21.909
3/26/08 4:00	12.778	5.116	6.195	20.578	16.572	24.514	7.931	38.126	3/25/08 20:00	21.907
3/26/08 8:00	12.793	5.125	6.218	20.562	16.579	24.524	7.931	38.114	3/26/08 0:00	21.905
3/26/08 12:00	12.802	5.13	6.24	20.545	16.577	24.51	7.903	38.1	3/26/08 4:00	21.902
3/26/08 16:00	12.774	5.125	6.247	20.529	16.485	24.43	7.835	38.088	3/26/08 8:00	21.9
3/26/08 20:00	12.76	5.127	6.254	20.51	16.445	24.388	7.809	38.076	3/26/08 12:00	21.895
3/27/08 0:00	12.755	5.13	6.265	20.494	16.421	24.343	7.778	38.064	3/26/08 16:00	21.886
3/27/08 4:00	12.727	5.123	6.268	20.475	16.341	24.268	7.736	38.053	3/26/08 20:00	21.877
3/27/08 8:00	12.722	5.125	6.282	20.459	16.344	24.256	7.745	38.038	3/27/08 0:00	21.867
3/27/08 12:00	12.736	5.132	6.303	20.442	16.379	24.27	7.767	38.027	3/27/08 4:00	21.855
3/27/08 16:00	12.762	5.142	6.327	20.431	16.44	24.327	7.821	38.017	3/27/08 8:00	21.844
3/27/08 20:00	12.811	5.158	6.357	20.416	16.542	24.425	7.893	38.003	3/27/08 12:00	21.834
3/28/08 0:00	12.868	5.177	6.397	20.405	16.662	24.575	7.959	37.994	3/27/08 16:00	21.83
3/28/08 4:00	12.908	5.191	6.432	20.393	16.73	24.622	8.001	37.982	3/27/08 20:00	21.827
3/28/08 8:00	12.953	5.207	6.47	20.381	16.832	24.725	8.062	37.973	3/28/08 0:00	21.83
3/28/08 12:00	12.995	5.221	6.505	20.37	16.905	24.812	8.081	37.961	3/28/08 4:00	21.83
3/28/08 16:00	12.998	5.219	6.524	20.358	16.858	24.777	8.032	37.951	3/28/08 8:00	21.834
3/28/08 20:00	13.002	5.223	6.54	20.344	16.858	24.821	8.034	37.94	3/28/08 12:00	21.837
3/29/08 0:00	13.026	5.233	6.561	20.335	16.905	24.859	8.058	37.93	3/28/08 16:00	21.834
3/29/08 4:00	13.036	5.235	6.582	20.323	16.902	24.864	8.041	37.918	3/28/08 20:00	21.832
3/29/08 8:00	13.035	5.235	6.596	20.309	16.881	24.854	8.025	37.909	3/29/08 0:00	21.83
3/29/08 12:00	13.031	5.233	6.608	20.295	16.855	24.819	7.98	37.899	3/29/08 4:00	21.83
3/29/08 16:00	12.993	5.219	6.608	20.281	16.742	24.721	7.912	37.89	3/29/08 8:00	21.825
3/29/08 20:00	12.979	5.221	6.618	20.267	16.73	24.709	7.919	37.878	3/29/08 12:00	21.82
3/30/08 0:00	12.995	5.233	6.634	20.255	16.773	24.728	7.931	37.867	3/29/08 16:00	21.808
3/30/08 4:00	13.002	5.237	6.648	20.243	16.77	24.725	7.929	37.857	3/29/08 20:00	21.799
3/30/08 8:00	13.026	5.249	6.672	20.234	16.841	24.781	7.973	37.848	3/30/08 0:00	21.794
3/30/08 12:00	13.038	5.256	6.69	20.225	16.848	24.789	7.966	37.838	3/30/08 4:00	21.787

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer "old"	SB38	Date and Time	Barr
3/30/08 16:00	13.033	5.254	6.702	20.208	16.817	24.76	7.938	37.829	3/30/08 8:00	21.783
3/30/08 20:00	13.026	5.254	6.714	20.199	16.801	24.749	7.933	37.819	3/30/08 12:00	21.776
3/31/08 0:00	13.033	5.256	6.728	20.187	16.815	24.746	7.926	37.81	3/30/08 16:00	21.766
3/31/08 4:00	12.995	5.24	6.726	20.171	16.671	24.615	7.858	37.798	3/30/08 20:00	21.759
3/31/08 8:00	12.628	5.043	6.611	20.363	16.556	24.538	7.976	37.789	3/31/08 0:00	21.75
3/31/08 12:00	12.482	4.603	6.5	20.566	16.518	24.477	8.008	37.777	3/31/08 4:00	21.736
3/31/08 16:00	12.517	4.334	6.437	20.005	16.558	24.486	7.778	37.768	3/31/08 8:00	21.684
3/31/08 20:00	12.613	4.201	6.42	19.733	16.714	24.617	7.668	37.758	3/31/08 12:00	21.663
4/1/08 0:00	12.717	4.161	6.432	19.574	16.877	24.781	7.682	37.751	3/31/08 16:00	21.647
4/1/08 4:00	12.797	4.166	6.449	19.745	16.98	24.899	7.75	37.742	3/31/08 20:00	21.642
4/1/08 8:00	12.873	4.21	6.479	19.677	17.103	25.044	7.785	37.732	4/1/08 0:00	21.642
4/1/08 12:00	12.946	4.269	6.514	19.656	17.212	25.173	7.922	37.723	4/1/08 4:00	21.647
4/1/08 16:00	12.995	4.327	6.535	19.78	17.245	25.293	8.053	37.716	4/1/08 8:00	21.658
4/1/08 20:00	13.031	4.386	6.557	19.799	17.266	25.272	8.058	37.706	4/1/08 12:00	21.668
4/2/08 0:00	13.064	4.444	6.575	19.766	17.294	25.309	8.077	37.699	4/1/08 16:00	21.675
4/2/08 4:00	13.082	4.496	6.589	19.787	17.285	25.311	8.046	37.69	4/1/08 20:00	21.682
4/2/08 8:00	13.097	4.54	6.601	19.794	17.273	25.328	8.149	37.683	4/2/08 0:00	21.687
4/2/08 12:00	13.101	4.58	6.613	20.129	17.252	25.311	8.314	37.676	4/2/08 4:00	21.691
4/2/08 16:00	13.071	4.608	6.611	20.412	17.141	25.204	8.335	37.669	4/2/08 8:00	21.694
4/2/08 20:00	13.042	4.641	6.604	19.983	17.07	25.119	8.1	37.659	4/2/08 12:00	21.689
4/3/08 0:00	13.045	4.678	6.611	19.974	17.072	25.121	8.03	37.65	4/2/08 16:00	21.679
4/3/08 4:00	13.028	4.706	6.613	19.962	16.999	25.056	8.013	37.643	4/2/08 20:00	21.67
4/3/08 8:00	13.012	4.732	6.613	19.953	16.961	24.985	7.99	37.636	4/3/08 0:00	21.661
4/3/08 12:00	12.988	4.737	6.596	20.079	16.85	24.948	8.053	37.626	4/3/08 4:00	21.651
4/3/08 16:00	12.915	4.659	6.545	20.035	16.721	24.894	7.966	37.619	4/3/08 8:00	21.64
4/3/08 20:00	12.861	4.524	6.51	19.897	16.827	24.943	7.882	37.61	4/3/08 12:00	21.593
4/4/08 0:00	12.875	4.423	6.5	19.838	16.886	24.993	7.882	37.603	4/3/08 16:00	21.534
4/4/08 4:00	12.887	4.36	6.498	19.82	16.91	25.009	7.889	37.593	4/3/08 20:00	21.511
4/4/08 8:00	12.922	4.339	6.51	19.733	16.995	25.089	7.978	37.586	4/4/08 0:00	21.501
4/4/08 12:00	12.936	4.33	6.517	19.974	16.999	25.164	8.1	37.579	4/4/08 4:00	21.492
4/4/08 16:00	12.934	4.337	6.521	20.152	16.966	25.051	8.098	37.57	4/4/08 8:00	21.489
4/4/08 20:00	12.929	4.36	6.524	20.072	16.947	25.004	7.985	37.563	4/4/08 12:00	21.482
4/5/08 0:00	12.943	4.397	6.535	19.895	16.976	25.061	7.964	37.556	4/4/08 16:00	21.473
4/5/08 4:00	12.943	4.435	6.545	19.824	16.964	25.042	7.945	37.549	4/4/08 20:00	21.466
4/5/08 8:00	12.958	4.477	6.559	19.766	16.999	25.075	7.98	37.541	4/5/08 0:00	21.461
4/5/08 12:00	12.965	4.514	6.573	20.11	17.002	25.082	8.135	37.534	4/5/08 4:00	21.457
4/5/08 16:00	12.939	4.545	6.575	20.182	16.924	24.976	8.168	37.527	4/5/08 8:00	21.452

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer "old"	SB38	Date and Time	Barr
4/5/08 20:00	12.917	4.58	6.575	19.93	16.881	24.929	7.973	37.518	4/5/08 12:00	21.442
4/6/08 0:00	12.929	4.627	6.589	19.787	16.917	24.964	7.947	37.513	4/5/08 16:00	21.431
4/6/08 4:00	12.917	4.655	6.596	19.775	16.865	24.908	7.943	37.506	4/5/08 20:00	21.421
4/6/08 8:00	12.929	4.699	6.613	19.77	16.917	24.948	7.959	37.499	4/6/08 0:00	21.414
4/6/08 12:00	12.943	4.734	6.634	19.761	16.954	24.974	8.011	37.492	4/6/08 4:00	21.407
4/6/08 16:00	12.953	4.772	6.651	19.752	16.966	24.978	8.025	37.485	4/6/08 8:00	21.4
4/6/08 20:00	12.979	4.814	6.674	19.745	17.044	25.021	8.023	37.478	4/6/08 12:00	21.396
4/7/08 0:00	13.033	4.861	6.709	19.742	17.174	25.166	8.105	37.471	4/6/08 16:00	21.386
4/7/08 4:00	13.078	4.903	6.742	19.735	17.249	25.248	8.133	37.461	4/6/08 20:00	21.386
4/7/08 8:00	13.101	4.931	6.768	19.731	17.285	25.325	8.166	37.457	4/7/08 0:00	21.391
4/7/08 12:00	13.139	4.964	6.796	19.726	17.36	25.391	8.189	37.452	4/7/08 4:00	21.396
4/7/08 16:00	13.137	4.975	6.81	19.717	17.296	25.356	8.14		4/7/08 8:00	21.403
4/7/08 20:00	13.144	4.999	6.822	19.71	17.325	25.356	8.147	37.475	4/7/08 12:00	21.405
4/8/08 0:00	13.16	5.015	6.843	19.703	17.344	25.384	8.149	37.468	4/7/08 16:00	21.403
4/8/08 4:00	13.151	5.025	6.85	19.705	17.318	25.377	8.114	37.461	4/7/08 20:00	21.405
4/8/08 8:00	11.942	4.697	6.359	19.668	16.634	25.264	8.03	37.452	4/8/08 0:00	21.403
4/8/08 12:00	11.164	4.093	6.092	19.684	16.518	25.166	7.903	37.445	4/8/08 4:00	21.358
4/8/08 16:00	11.178	3.766	5.916	19.593	16.487	25.128	7.825	37.438	4/8/08 8:00	21.159
4/8/08 20:00	10.992	3.532	5.766	19.508	16.509	25.114	7.727	37.428	4/8/08 12:00	21.06
4/9/08 0:00	11.074	3.471	5.676	19.431	16.605	25.143	7.715	37.421	4/8/08 16:00	20.987
4/9/08 4:00	11.187	3.49	5.611	19.401	16.617	25.121	7.698	37.414	4/8/08 20:00	20.95
4/9/08 8:00	11.293	3.553	5.566	19.38	16.645	25.117	7.687	37.407	4/9/08 0:00	20.94
4/9/08 12:00	11.39	3.63	5.533	19.59	16.662	25.07	7.858	37.4	4/9/08 4:00	20.933
4/9/08 16:00	11.428	3.71	5.5	19.745	16.596	24.988	7.856	37.393	4/9/08 8:00	20.933
4/9/08 20:00	11.442	3.794	5.47	19.703	16.523	24.889	7.738	37.386	4/9/08 12:00	20.931
4/10/08 0:00	11.461	3.873	5.449	19.649	16.461	24.798	7.717	37.377	4/9/08 16:00	20.929
4/10/08 4:00	11.437	3.939	5.418	19.766	16.339	24.653	7.792	37.369	4/9/08 20:00	20.926
4/10/08 8:00	11.378	3.979	5.385	19.857	16.171	24.481	7.795	37.362	4/10/08 0:00	20.922
4/10/08 12:00	10.876	3.869	5.28	19.787	15.82	24.263	7.783	37.353	4/10/08 4:00	20.91
4/10/08 16:00	10.68	3.714	5.19	19.796	15.726	24.12	7.748	37.344	4/10/08 8:00	20.868
4/10/08 20:00	10.315	3.525	5.068	19.616	15.711	24.104	7.489	37.334	4/10/08 12:00	20.797
4/11/08 0:00	10.181	3.389	4.963	19.426	15.678	24.055	7.304	37.325	4/10/08 16:00	20.741
4/11/08 4:00	10.15	3.331	4.902	19.148	15.754	24.069	7.165	37.318	4/10/08 20:00	20.678
4/11/08 8:00	10.249	3.361	4.864	19.012	15.834	24.099	7.095	37.306	4/11/08 0:00	20.6
4/11/08 12:00	10.402	3.401	4.85	18.947	15.947	24.202	7.088	37.296	4/11/08 4:00	20.577
4/11/08 16:00	10.574	3.434	4.852	18.895	16.053	24.256	7.076	37.287	4/11/08 8:00	20.572
4/11/08 20:00	10.723	3.487	4.859	18.935	16.143	24.32	7.024	37.28	4/11/08 12:00	20.565

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer "old"	SB38	Date and Time	Barr
4/12/08 0:00	10.852	3.55	4.874	18.972	16.204	24.383	7.055	37.275	4/11/08 16:00	20.574
4/12/08 4:00	10.925	3.604	4.881	18.965	16.209	24.385	7.088	37.261	4/11/08 20:00	20.588
4/12/08 8:00	11.003	3.663	4.895	18.923	16.244	24.402	7.097	37.256	4/12/08 0:00	20.605
4/12/08 12:00	11.109	3.733	4.925	18.919	16.322	24.465	7.177	37.247	4/12/08 4:00	20.617
4/12/08 16:00	11.182	3.789	4.949	18.97	16.332	24.467	7.205	37.238	4/12/08 8:00	20.633
4/12/08 20:00	11.258	3.845	4.977	18.883	16.374	24.486	7.142	37.233	4/12/08 12:00	20.652
4/13/08 0:00	11.326	3.904	5.005	18.867	16.402	24.507	7.182	37.223	4/12/08 16:00	20.67
4/13/08 4:00	11.366	3.962	5.028	18.921	16.384	24.488	7.179	37.219	4/12/08 20:00	20.689
4/13/08 8:00	11.432	4.025	5.064	18.89	16.44	24.528	7.146	37.209	4/13/08 0:00	20.708
4/13/08 12:00	11.51	4.091	5.101	18.933	16.494	24.573	7.313	37.2	4/13/08 4:00	20.724
4/13/08 16:00	11.545	4.147	5.129	19.136	16.471	24.549	7.367	37.193	4/13/08 8:00	20.741
4/13/08 20:00	11.573	4.208	5.153	19.038	16.454	24.51	7.2	37.186	4/13/08 12:00	20.76
4/14/08 0:00	11.606	4.266	5.181	18.935	16.454	24.495	7.217	37.181	4/13/08 16:00	20.774
4/14/08 4:00	11.635	4.32	5.204	19.216	16.438	24.46	7.203	37.169	4/13/08 20:00	20.785
4/14/08 8:00	11.677	4.379	5.237	19.206	16.469	24.486	7.229	37.165	4/14/08 0:00	20.797
4/14/08 12:00	11.715	4.423	5.27	19.197	16.464	24.47	7.379	37.155	4/14/08 4:00	20.809
4/14/08 16:00	11.708	4.46	5.287	19.183	16.391	24.374	7.407	37.148	4/14/08 8:00	20.821
4/14/08 20:00	11.687	4.496	5.294	19.169	16.299	24.306	7.299	37.141	4/14/08 12:00	20.83
4/15/08 0:00	11.701	4.535	5.315	19.157	16.287	24.245	7.236	37.132	4/14/08 16:00	20.832
4/15/08 4:00	11.698	4.563	5.334	19.146	16.235	24.165	7.214	37.125	4/14/08 20:00	20.837
4/15/08 8:00	11.701	4.589	5.35	19.132	16.197	24.111	7.268	37.117	4/15/08 0:00	20.842
4/15/08 12:00	11.672	4.605	5.359	19.118	16.091	24.003	7.064	37.11	4/15/08 4:00	20.844
4/15/08 16:00	11.628	4.624	5.357	19.101	15.973	23.83	7.001	37.103	4/15/08 8:00	20.844
4/15/08 20:00	11.597	4.652	5.359	19.085	15.886	23.736	6.973	37.094	4/15/08 12:00	20.837
4/16/08 0:00	11.621	4.688	5.378	19.071	15.895	23.691	6.965	37.084	4/15/08 16:00	20.828
4/16/08 4:00	11.611	4.711	5.395	19.057	15.834	23.602	6.935	37.077	4/15/08 20:00	20.818
4/16/08 8:00	11.628	4.744	5.416	19.045	15.829	23.572	6.94	37.07	4/16/08 0:00	20.816
4/16/08 12:00	11.675	4.779	5.451	19.029	15.891	23.588	6.975	37.061	4/16/08 4:00	20.809
4/16/08 16:00	11.705	4.812	5.481	19.015	15.893	23.579	6.977	37.054	4/16/08 8:00	20.802
4/16/08 20:00	11.75	4.851	5.514	19.003	15.938	23.649	7.024	37.047	4/16/08 12:00	20.8
4/17/08 0:00	11.819	4.889	5.559	18.991	16.018	23.675	7.064	37.037	4/16/08 16:00	20.797
4/17/08 4:00	11.84	4.912	5.589	18.977	15.999	23.748	7.048	37.03	4/16/08 20:00	20.8
4/17/08 8:00	11.861	4.931	5.62	18.965	16.004	23.661	7.05	37.021	4/17/08 0:00	20.804
4/17/08 12:00	11.892	4.947	5.653	18.961	16.032	23.684	7.055	37.014	4/17/08 4:00	20.807
4/17/08 16:00	11.882	4.945	5.674	18.972	15.957	23.614	7.005	37.007	4/17/08 8:00	20.809
4/17/08 20:00	11.783	4.879	5.557	18.891	15.733	23.583	6.921	36.997	4/17/08 12:00	20.814
4/18/08 0:00	10.883	4.414	5.336	18.844	15.452	23.499	6.853	36.988	4/17/08 16:00	20.809

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer “old”	SB38	Date and Time	Barr
4/18/08 4:00	10.713	4.018	5.214	18.928	15.365	23.384	6.787	36.981	4/17/08 20:00	20.701
4/18/08 8:00	10.774	3.761	5.148	18.825	15.383	23.375	6.799	36.971	4/18/08 0:00	20.588
4/18/08 12:00	10.84	3.604	5.113	18.867	15.4	23.335	6.787	36.969	4/18/08 4:00	20.537
4/18/08 16:00	10.913	3.541	5.094	18.832	15.417	23.354	6.785	36.96	4/18/08 8:00	20.502
4/18/08 20:00	10.994	3.518	5.087	18.743	15.452	23.318	6.822	36.948	4/18/08 12:00	20.483
4/19/08 0:00	11.09	3.515	5.101	18.673	15.501	23.337	6.836	36.938	4/18/08 16:00	20.473
4/19/08 4:00	11.159	3.539	5.113	18.607	15.527	23.361	6.846	36.929	4/18/08 20:00	20.471
4/19/08 8:00	11.234	3.576	5.139	18.488	15.596	23.403	6.893	36.92	4/19/08 0:00	20.473
4/19/08 12:00	11.314	3.628	5.169	18.537	15.659	23.476	6.921	36.913	4/19/08 4:00	20.478
4/19/08 16:00	11.345	3.686	5.188	18.778	15.641	23.452	6.886	36.903	4/19/08 8:00	20.485
4/19/08 20:00	11.357	3.768	5.202	18.748	15.619	23.401	6.881	36.896	4/19/08 12:00	20.497
4/20/08 0:00	11.392	3.857	5.226	18.568	15.641	23.41	6.888	36.887	4/19/08 16:00	20.502
4/20/08 4:00	11.408	3.941	5.244	18.504	15.638	23.408	6.874	36.88	4/19/08 20:00	20.509
4/20/08 8:00	11.42	4.021	5.266	18.49	15.634	23.401	6.869	36.87	4/20/08 0:00	20.516
4/20/08 12:00	11.416	4.091	5.28	18.858	15.593	23.372	6.825	36.865	4/20/08 4:00	20.523
4/20/08 16:00	11.373	4.147	5.284	18.848	15.499	23.25	6.764	36.854	4/20/08 8:00	20.53
4/20/08 20:00	11.359	4.217	5.294	18.851	15.468	23.197	6.764	36.847	4/20/08 12:00	20.53
4/21/08 0:00	11.397	4.29	5.317	18.729	15.508	23.204	6.792	36.837	4/20/08 16:00	20.525
4/21/08 4:00	11.418	4.351	5.341	18.589	15.501	23.211	6.782	36.83	4/20/08 20:00	20.525
4/21/08 8:00	11.446	4.407	5.371	18.577	15.532	23.309	6.818	36.821	4/21/08 0:00	20.527
4/21/08 12:00	11.484	4.461	5.404	18.565	15.567	23.255	6.827	36.814	4/21/08 4:00	20.53
4/21/08 16:00	11.51	4.51	5.432	18.556	15.577	23.309	6.822	36.807	4/21/08 8:00	20.532
4/21/08 20:00	11.526	4.554	5.456	18.542	15.565	24.13	6.829	36.797	4/21/08 12:00	20.537
4/22/08 0:00	11.571	4.601	5.493	18.532	15.629	23.431	6.857	36.788	4/21/08 16:00	20.537
4/22/08 4:00	11.59	4.632	5.521	18.521	15.619	23.398	6.872	36.781	4/21/08 20:00	20.541
4/22/08 8:00	11.649	4.664	5.564	18.511	15.709	23.415	6.93	36.774	4/22/08 0:00	20.549
4/22/08 12:00	11.698	4.69	5.604	18.504	15.761	23.529	6.947	36.766	4/22/08 4:00	20.556
4/22/08 16:00	11.722	4.72	5.636	18.495	15.768	23.471	6.93	36.759	4/22/08 8:00	20.565
4/22/08 20:00	11.734	4.751	5.66	18.483	15.747	23.473	6.947	36.752	4/22/08 12:00	20.572
4/23/08 0:00	11.781	4.788	5.695	18.474	15.81	23.52	6.975	36.743	4/22/08 16:00	20.577
4/23/08 4:00	11.8	4.814	5.723	18.467	15.806	23.527	6.973	36.736	4/22/08 20:00	20.581
4/23/08 8:00	11.828	4.84	5.756	18.458	15.836	23.551	6.984	36.729	4/23/08 0:00	20.593
4/23/08 12:00	11.835	4.859	5.78	18.448	15.813	23.52	6.944	36.722	4/23/08 4:00	20.6
4/23/08 16:00	11.804	4.877	5.794	18.436	15.728	23.476	6.881	36.715	4/23/08 8:00	20.607
4/23/08 20:00	11.651	4.84	5.742	18.366	15.643	23.398	6.843	36.705	4/23/08 12:00	20.61
4/24/08 0:00	11.175	4.475	5.582	18.359	15.504	23.349	6.806	36.696	4/23/08 16:00	20.61
4/24/08 4:00	11.154	4.173	5.505	18.39	15.431	23.272	6.764	36.691	4/23/08 20:00	20.53

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer "old"	SB38	Date and Time	Barr
4/24/08 8:00	11.232	4.002	5.475	18.394	15.412	23.222	6.745	36.684	4/24/08 0:00	20.441
4/24/08 12:00	11.286	3.89	5.46	18.614	15.365	23.159	6.717	36.677	4/24/08 4:00	20.408
4/24/08 16:00	11.319	3.846	5.458	18.685	15.315	23.091	6.693	36.668	4/24/08 8:00	20.389
4/24/08 20:00	11.361	3.862	5.463	18.626	15.31	23.068	6.7	36.66	4/24/08 12:00	20.37
4/25/08 0:00	11.394	3.902	5.477	18.647	15.294	23.016	6.67	36.653	4/24/08 16:00	20.358
4/25/08 4:00	11.392	3.944	5.479	18.631	15.225	22.925	6.59	36.644	4/24/08 20:00	20.351
4/25/08 8:00	9.464	3.408	4.848	18.394	14.886	22.892	6.409	36.632	4/25/08 0:00	20.344
4/25/08 12:00	9.132	3.16	4.66	17.926	14.959	22.929	6.428	36.625	4/25/08 4:00	20.307
4/25/08 16:00	9.259	3.149	4.606	17.826	15.034	22.941	6.414	36.618	4/25/08 8:00	20.117
4/25/08 20:00	9.45	3.242	4.599	17.659	15.105	22.96	6.416	36.609	4/25/08 12:00	20.025
4/26/08 0:00	9.636	3.364	4.613	18.008	15.155	22.983	6.404	36.602	4/25/08 16:00	19.99
4/26/08 4:00	9.768	3.478	4.627	18.109	15.145	22.953	6.371	36.595	4/25/08 20:00	19.978
4/26/08 8:00	9.909	3.588	4.653	18.104	15.192	22.983	6.388	36.585	4/26/08 0:00	19.978
4/26/08 12:00	10.069	3.698	4.69	18.097	15.244	23.018	6.374	36.578	4/26/08 4:00	19.983
4/26/08 16:00	10.152	3.797	4.712	18.092	15.204	23.347	6.327	36.569	4/26/08 8:00	19.992
4/26/08 20:00	10.237	3.89	4.737	18.085	15.192	22.95	6.32	36.559	4/26/08 12:00	20.004
4/27/08 0:00	10.347	3.974	4.754	18.067	15.211	22.939	6.32	36.547	4/26/08 16:00	20.014
4/27/08 4:00	10.38	3.907	4.737	18.06	15.143	22.906	6.291	36.54	4/26/08 20:00	20.028
4/27/08 8:00	10.428	3.834	4.754	18.05	15.157	22.875	6.277	36.536	4/27/08 0:00	20.014
4/27/08 12:00	10.47	3.787	4.775	18.041	15.119	22.831	6.23	36.526	4/27/08 4:00	19.988
4/27/08 16:00	10.475	3.78	4.787	18.034	15.034	22.695	6.167	36.519	4/27/08 8:00	19.988
4/27/08 20:00	10.484	3.822	4.798	18.022	14.971	22.617	6.132	36.51	4/27/08 12:00	19.992
4/28/08 0:00	10.505	3.883	4.813	18.013	14.916	22.524	6.085	36.503	4/27/08 16:00	19.992
4/28/08 4:00	10.524	3.951	4.831	18.001	14.886	22.463	6.078	36.493	4/27/08 20:00	19.995
4/28/08 8:00	10.597	4.026	4.869	17.994	14.94	22.484	6.11	36.486	4/28/08 0:00	19.999
4/28/08 12:00	10.67	4.101	4.911	17.985	14.971	22.491	6.113	36.423	4/28/08 4:00	20.002
4/28/08 16:00	10.715	4.173	4.942	17.975	14.957	22.442	6.087	36.411	4/28/08 8:00	20.009
4/28/08 20:00	10.746	4.246	4.967	17.966	14.935	22.392	6.085	36.404	4/28/08 12:00	20.018
4/29/08 0:00	10.779	4.311	4.998	17.957	14.919	22.371	6.071	36.392	4/28/08 16:00	20.025
4/29/08 4:00	10.812	4.37	5.026	17.947	14.912	22.35	6.073	36.385	4/28/08 20:00	20.035
4/29/08 8:00	10.852	4.424	5.064	17.938	14.924	22.345	6.068	36.375	4/29/08 0:00	20.044
4/29/08 12:00	10.859	4.468	5.09	17.926	14.872	22.292	6.028	36.366	4/29/08 4:00	20.053
4/29/08 16:00	10.828	4.505	5.099	17.915	14.761	22.158	5.96	36.357	4/29/08 8:00	20.063
4/29/08 20:00	10.809	4.55	5.111	17.903	14.692	22.059	5.939	36.347	4/29/08 12:00	20.068
4/30/08 0:00	10.819	4.592	5.132	17.891	14.662	22.008	5.916	36.338	4/29/08 16:00	20.065

TABLE S1.1 (Cont.)

	Water Level (ft below reference point)									Water Level (ft)
Date and Time	McPike	Potter	Hughes	Burks	MoDOT	Morgan	Clizer "old"	SB38	Date and Time	Barr
4/30/08 4:00	10.8	4.62	5.144	17.882	14.577	21.914	5.876	36.328	4/29/08 20:00	20.065
4/30/08 8:00	10.793	4.646	5.16	17.868	14.539	21.865	5.859	36.319	4/30/08 0:00	20.065
									4/30/08 4:00	20.063
									4/30/08 8:00	20.058

TABLE S1.2 Summary of daily rainfall events at St. Joseph, Missouri, October 2007-April 2008.

Date	Rainfall (in.)	Date	Rainfall (in.)
11/12/2007	0.04	2/17/2008	0.77
11/23/2007	0.01	2/22/2008	0.04
11/24/2007	0.01	2/25/2008	0.01
12/1/2007	0.80	3/2/2008	0.64
12/11/2007	0.87	3/4/2008	0.04
12/12/2007	0.01	3/14/2008	0.10
12/13/2007	0.19	3/15/2008	0.15
12/14/2007	0.04	3/16/2008	0.01
12/17/2007	0.17	3/17/2008	0.88
12/18/2007	0.08	3/31/2008	0.07
12/21/2007	0.01	4/3/2008	0.41
12/24/2007	0.04	4/8/2008	1.46
12/29/2007	0.02	4/9/2008	0.01
12/30/2007	0.01	4/10/2008	0.43
12/31/2007	0.01	4/11/2008	0.02
1/3/2008	0.01	4/12/2008	0.01
1/8/2008	0.22	4/17/2008	0.95
1/10/2008	0.49	4/18/2008	0.08
1/20/2008	0.01	4/19/2008	0.01
2/3/2008	0.21	4/22/2008	0.10
2/4/2008	0.06	4/23/2008	0.89
2/5/2008	0.12	4/24/2008	0.01
2/7/2008	0.16	4/25/2008	0.44
2/8/2008	0.31	4/26/2008	0.23
2/16/2008	0.33	4/27/2008	0.01

Source of data: MUE (2008).

Supplement 2:

Quality Control for Sample Collection, Handling, and Analysis

Supplement 2:

Quality Control for Sample Collection, Handling, and Analysis

Soil and groundwater sampling was conducted during the 2007-2008 investigation to complete the scope of work presented in the Phase I *Work Plan* for Savannah (Argonne 2007). The QA/QC procedures for sample collection, handling, and analysis followed during the investigation are described in detail in the *MWPK* (Argonne 2002).

The following sections discuss the quality of the analytical data generated during the investigation. Evaluation of the organic analytical data was consistent with regulatory guidelines (EPA 1994).

S2.1 Sampling to Monitor Sampling Collection, Handling, and Analysis Procedures

Sample collection and handling activities were monitored by the documentation of samples as they were collected and the use of chain-of-custody forms and custody seals to ensure sample integrity during handling and shipment. Trip blanks were collected to monitor sample collection and handling activities. Field replicate samples were collected, and samples were selected for duplicate analyses as a measure of analytical precision. Waste characterization samples were collected to determine the appropriate handling procedure for wastewater generated during development and sampling of wells. In addition, to verify the dry ice soil preservation methodology used during CCC/USDA investigations, soil samples collected with Encore sampling devices were preserved on regular ice at 4°C. The QA/QC samples are listed in Table S2.1. Analytical results for carbon tetrachloride and chloroform in QA/QC samples collected to monitor sample collection and handling activities are in Table S2.2.

S2.1.1 Trip Blanks

As an indicator of potential cross-contamination of samples during shipment, 31 trip blanks were prepared and shipped with soil or water samples sent to laboratories for organic analyses. Included in this total were 10 water trip blanks and 17 soil trip blanks sent to the AGEM Laboratory, 1 water trip blank sent to Envirosystems, and 3 soil trip blanks sent to

TestAmerica. The analytical results (Table S2.2) indicate that sample handling procedures were followed during the investigation and that cross-contamination did not occur during shipment.

S2.1.2 Replicate Samples and Duplicate Analyses

As an indicator of the consistency of the sampling methodology followed and to provide a measure of analytical precision, replicate soil and groundwater samples were collected, and samples were selected by the AGEM Laboratory for duplicate organic analyses. In addition, selected soil and groundwater samples were submitted for verification organic analysis at a secondary laboratory. Replicate samples and samples selected for duplicate analyses are listed in Table S2.1.

S2.1.3 Preservation of Soil Samples on Dry Ice versus Encore Sampling

In the soil sample preservation methodology used during CCC/USDA investigations, soil samples are quick-frozen on dry ice after collection. In response to the request of the MoDNR to verify this methodology, aliquots corresponding to 37 soil samples were collected by using 25-g Encore sampling devices. These samples were preserved on ice at 4°C. Both types of samples were subjected to headspace analysis (modification of EPA Method 5021) and purge-and-trap sample preparation with GC-MS analysis (EPA Methods 5030b and 8260B), as referenced in the EPA's SW-846 compendium (EPA 1998).

S2.1.4 Waste Characterization Samples

Eight waste characterization samples (Table S2.1) were collected to determine the appropriate waste handling and disposal procedures for the containerized purge water. Five waste samples were collected for organic analyses, and three samples were collected for total nitrogen and heavy metals analyses. The analytical results for VOCs are in Table S2.2.

S2.2 Quality Control for Organic Analyses of Soil and Water Samples at the AGEM Laboratory

To investigate for potential carbon tetrachloride soil sources, two soil sampling and analysis methodologies were used. Surficial and shallow subsurface soil samples (collected at 1-12 ft BGL) were initially collected at 41 locations across the former CCC/USDA facility. Analysis of these samples by the headspace method provided a sensitive indicator of possible soil contamination in the deeper vadose zone. Though they are not quantitative, the headspace data were examined to determine contaminant distribution patterns and prioritize locations for follow-up sampling of deeper subsurface soils. Subsequently, all the soil samples were subjected to purge-and-trap sample preparation with analysis by GC-MS to provide a quantitative measure of contamination.

Surficial and shallow subsurface soil sampling was conducted at the selected 41 locations to determine a contaminant distribution pattern. The samples were analyzed at the AGEM Laboratory with a modification of the protocol in U.S. EPA Method 5021 (headspace analysis on a gas chromatograph with electron capture detection). An 11-point calibration of the GC system was established on the basis of the masses of known quantities of carbon tetrachloride and chloroform, ranging in concentration from 0.125 ng to 4 ng. Typical detection limits achieved were 0.10 µg/kg for carbon tetrachloride and 0.75 µg/kg for chloroform. Replicate samples showed good agreement, with relative percent difference (RPD) values of 0-11% for carbon tetrachloride and 7-18% for chloroform. The analytical data obtained with this method are acceptable for qualitative determination of contaminant distribution.

On the basis of the headspace analytical results, 4 locations were selected for deeper subsurface soil sampling. In total, 240 soil samples were collected, and 14 replicate samples were collected for QC purposes. The samples were analyzed at the AGEM Laboratory for carbon tetrachloride, chloroform, and methylene chloride (contaminants of concern in the investigation) by using a modification of EPA Method 8260B (the purge-and-trap method) to achieve a quantitation limit of 10 µg/kg.

In the established CCC/USDA protocol (Argonne 2002), soil samples were quick-frozen on dry ice as they were collected. For comparison, 37 soil samples from selected locations were also collected by using Encore sampling devices; these comparison samples were preserved at 4°C. The VOCs present in each soil sample were extracted with methanol from the sample

matrix at the laboratory. For the purge-and-trap soil analyses, an aliquot of the methanol extract was purged, and the volatile species were transferred to a sorbent tube. After purging, the sorbent tube was heated and backflushed with an inert gas to desorb the components into the GC-MS system.

Groundwater sampling was conducted at 15 locations, including 13 private wells and 2 monitoring wells installed as part of the investigation. In addition, 2 surface water samples were collected (from the Savannah municipal reservoir and from a small pond on the Hughes property), plus 1 sample of (treated) water from the Savannah public water distribution system. A total of 20 water samples (and 1 additional field replicate sample) were collected for organic analyses at the AGEM Laboratory by EPA Method 524.2 (EPA 1995) to achieve a quantitation limit of 1.0 µg/L.

Water samples shipped to the AGEM Laboratory were analyzed by the purge-and-trap method on a GC-MS system. For the purge-and-trap analyses, VOCs present in the groundwater sample were extracted (purged) from the sample matrix by bubbling an inert gas through the sample. The purged components were trapped in a sorbent tube. After the purging, the sorbent tube was heated and backflushed with an inert gas to desorb the components into the GC-MS system.

For both the soil and water analyses, the compounds eluting from the GC column were identified by retention time and by comparison with reference library spectra. The concentration of each component was calculated by comparison of the MS response for the quantitation ion to corresponding calibration curves, the response for internal standards, or both. The internal standard recovery limits were 80-120%. Calibration checks with each sample delivery group (SDG) were required to be within ±20% of the standard.

Samples submitted to the AGEM Laboratory for organic analyses with the purge-and-trap method were analyzed in 30 SDGs, as shown in Table S2.3. The QA/QC procedures included analysis of instrument calibration check standards, analysis of laboratory blanks, monitoring of surrogate spike recovery, and duplicate laboratory analyses. Significant results include the following:

- Samples shipped to the AGEM Laboratory were received with custody seals intact and at the appropriate temperature. Samples were analyzed within required holding times.

- Carbon tetrachloride and chloroform were not detected in laboratory method blanks analyzed with the samples.

- For each SDG, analytical instrument calibration was monitored by the analysis of calibration check standards. Table S2.3 shows the RPD values between the known and calculated concentrations of the standards. The concentrations of calibration check standards measured in all SDGs were within the acceptable ±20% limit for carbon tetrachloride and chloroform. Slightly elevated RPD values for methylene chloride calibration standards (20.6-21.9%) in 6 of the 30 SDGs are accepted without qualification of the associated data.

- Surrogate standard determinations were performed on samples and blanks by using surrogate spike compounds fluorobenzene, dichlorobenzene-d_4, and bromofluorobenzene. Table S2.3 shows the percent recovery of these system-monitoring compounds for each of the analyses. With three exceptions described below, the surrogate recoveries were within the specified limit of 80-120% for all samples in either the initial analysis of the sample or a successful reanalysis.

  - In the analysis of vertical-profile subsurface soil sample SVSB7-S-25296 in SDG 07-11-7b, results for two of three surrogates were above the QC limit. Reanalysis was conducted in SDG 07-11-8b with low recovery. Because high recovery does not inhibit contaminant detection, the result from the initial analysis is accepted without qualification.

  - In the analysis of vertical-profile subsurface soil sample SVSB35-S-25320 in SDG 07-11-8b, the result for one surrogate was above the QC limit. Reanalysis was not conducted. Because high recovery does not inhibit contaminant detection, the result for the sample is accepted without qualification.

- In the analysis of trip blank SVQCTB-S-25309 in SDG 07-11-15b, the result for one surrogate was above the QC limit. Cross-contamination of samples associated with the trip blank is not indicated, and the result is accepted without qualification.

- Throughout the investigation, secondary QC analyses of soil and groundwater samples were conducted at the AGEM Laboratory with the purge-and-trap method as a measure of consistency in the sampling and analytical methodologies. The secondary analyses were accomplished through the analysis of replicate samples submitted to the laboratory or through duplicate analyses of samples selected by the laboratory. Table S2.4 summarizes the analytical results for the Primarys and the associated replicate or duplicate analyses. Consistency in both the sampling and analytical methodologies is indicated by the average RPD values of 30% for carbon tetrachloride and 10% for chloroform in dual analyses with the contaminants present above the method quantitation limit.

The analytical data from the AGEM Laboratory are acceptable for quantitative determination of contaminant distribution.

S2.3 Quality Control for Verification Organic Analysis of Soil Samples by TestAmerica

In accordance with the QA/QC procedures defined in the *Master Work Plan* (Argonne 2002), selected soil samples analyzed at the AGEM Laboratory with EPA Method 8260B were subjected to verification analysis at a second laboratory with the same analytical procedure. Of the 240 vertical-profile soil samples analyzed by the AGEM Laboratory, 25 (10% of the soil samples) were also analyzed by TestAmerica. The results were reported in 3 SDGs. The quality of the organic analytical data from TestAmerica is discussed below.

The QA/QC procedures included initial and continuing calibration of instruments, analysis of laboratory blanks, monitoring of surrogate spike recovery, and analyses of laboratory QC samples. Significant results included the following:

- Soil samples shipped to TestAmerica were received with custody seals intact and at the appropriate temperature. All samples were analyzed within required holding times.

- Analytical instruments were properly tuned; initial and continuing calibration checks remained within the allowable limits.

- Carbon tetrachloride and chloroform, the contaminants of primary concern in the investigation, were not detected in the blanks analyzed with the samples. Low levels of methylene chloride and 1,1,1-trichloroethane (present in the methanol used for soil extraction) and 2-butanone, toluene, and xylene (present in instrument blanks) are not reported.

- Surrogate standard determinations were performed on samples and blanks by using the surrogate spike compounds toluene-d_8, 1,2-dichloroethane-d_4, bromofluorobenzene, and 1,2-dichlorobenzene-d_4. Table S2.5 shows the recoveries of the system-monitoring compounds for each of the analyses. Low recovery was evident for two of the soil verification samples, while high recovery (approximately 200% in all surrogates) was evident for one of the samples. The carbon tetrachloride concentrations reported by TestAmerica for these samples are, therefore, qualified.

- To evaluate the matrix effect of samples on the analytical methodology, laboratory QC samples containing a suite of spike compounds (including carbon tetrachloride and chloroform) were analyzed with each SDG. Table S2.6 shows the recoveries of carbon tetrachloride and chloroform in the spiked analyses. The QC limits were met for these analyses.

Analytical results for soil samples analyzed at the AGEM Laboratory with EPA Method 8260B are supported by the analytical results obtained by TestAmerica with the same method. The verification organic results for the soil samples are summarized in Table S2.7. The low carbon tetrachloride concentrations detected in analysis at the AGEM Laboratory are supported by the verification analyses.

S2.4 Quality Control for Verification Organic Analysis of Groundwater Samples by Envirosystems

In accordance with the QA/QC procedures defined in the *Master Work Plan* (Argonne 2002), the analyses of water samples at the AGEM Laboratory with EPA Method 524.2 were verified at a second laboratory with EPA-defined CLP methodology. Of the 20 groundwater samples collected as part of the investigation, 3 samples (15% of the groundwater samples) were also analyzed according to CLP methodology by Envirosystems. The results were reported in 1 SDG. The quality of the CLP data is discussed below.

The QA/QC procedures in the CLP analyses included initial and continuing calibration of instruments, analysis of laboratory blanks, and monitoring of surrogate spike recovery. Significant results include the following:

- Water samples shipped to Envirosystems were received with custody seals intact and at the appropriate temperature. All samples were analyzed within required holding times.

- Analytical instruments were properly tuned; initial and continuing calibration checks remained within the allowable limits for all contaminants of interest.

- Carbon tetrachloride and chloroform were not detected in the laboratory method blanks.

- Surrogate standard determinations were performed on samples and blanks by using the surrogate spike compounds toluene-d_8, bromofluorobenzene, and 1,1-dichloroethene-d_4. Table S2.8 shows the percent recovery of the system-monitoring compounds for each of the CLP analyses. The recoveries of the surrogate spikes were within the acceptable range (identified in Table S2.8) specific to each surrogate.

Analytical results for groundwater samples analyzed at the AGEM Laboratory with EPA Method 524.2 are supported by the CLP results from Envirosystems. The verification organic results for the groundwater samples are summarized in Table S2.9. Agreement is good over the

range of contaminant concentrations detected. The concentrations detected in groundwater in analysis at the AGEM Laboratory are supported by the verification CLP analyses.

S2.5 Quality Control for Inorganic Analyses of Groundwater Samples by TestAmerica

Groundwater samples were collected for inorganic analyses to aid in geochemical characterization of the water-bearing zone. Groundwater samples collected for inorganic analyses were shipped immediately to TestAmerica for filtration and analysis. The analyses included dissolved anion concentrations (chloride, sulfate, nitrate, and phosphate) by EPA Method 300, nitrate/nitrite nitrogen by EPA Method 353.2, and dissolved metals (aluminum, calcium, iron, magnesium, manganese, phosphorus, potassium, silicon, sodium, and zinc) by EPA Method 6010. At the request of the MoDNR, the waste purge water was analyzed for additional metals (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, nickel, selenium, silver, thallium, and vanadium) by EPA Method 6010.

Inorganic analyses of the groundwater samples were conducted in 4 SDGs. The QA/QC procedures included instrument calibration through analysis of spiked calibration check standards, verification of interelement and background correction factors through analysis of inductively coupled plasma interference check samples, and analyses of laboratory QC samples. Significant points are the following:

- Samples shipped to TestAmerica for inorganic analyses were received with custody seals intact and at the appropriate preservation conditions. Although the analyses for nitrate were performed beyond the 48-hr holding time limit specified by Method 300, the primary analyses for nitrate nitrogen by Method 353.2 were performed on preserved sample volumes. Holding times were met for other analyses.

- Initial and continuing calibration of analytical equipment was verified according to method protocol by the analysis of instrument check standards to determine instrument drift.

- Accuracy in the analytical methodology followed was measured by the analysis of laboratory QC samples with each SDG. The recoveries of known

concentrations of the metals and anions of concern in spiked laboratory QC samples, shown in Table S2.10, were within the desired range of 80-120%.

On the basis of the recovery of known concentrations of the analytes of concern in laboratory QC samples analyzed with the groundwater samples, the inorganic results for groundwater samples from TestAmerica are acceptable for geochemical characterization.

TABLE S2.1 Quality control samples collected to monitor sample collection, handling and analytical activities during the 2007 investigation at Savannah.

Location	Sample	Depth (ft BGL)	Sample Date	Sample Description
Soil samples collected by using Encore sampling devices for comparison with dry ice preservation method				
SB01	SVSB1A-S-25261	8	10/28/07	Encore sample comparable to sample SVSB1-S-25261.
SB02	SVSB2A-S-25166	8	10/25/07	Encore sample comparable to sample SVSB2-S-25166.
SB03	SVSB3A-S-25274	4	10/28/07	Encore sample comparable to sample SVSB3-S-25274.
SB04	SVSB4A-S-25298	1	10/29/07	Encore sample comparable to sample SVSB4-S-25298.
SB06	SVSB6A-S-25208	8	10/26/07	Encore sample comparable to sample SVSB6-S-25208.
SB08	SVSB8A-S-25237	4	10/27/07	Encore sample comparable to sample SVSB8-S-25237.
SB09	SVSB9A-S-25243	8	10/27/07	Encore sample comparable to sample SVSB9-S-25243.
SB10	SVSB10A-S-25250	12	10/27/07	Encore sample comparable to sample SVSB10-S-25250.
SB11	SVSB11A-S-25264	4	10/28/07	Encore sample comparable to sample SVSB11-S-25264.
SB12	SVSB12A-S-25203	4	10/26/07	Encore sample comparable to sample SVSB12-S-25203.
SB13	SVSB13A-S-25232	1	10/27/07	Encore sample comparable to sample SVSB13-S-25232.
SB14	SVSB14A-S-25172	12	10/25/07	Encore sample comparable to sample SVSB14-S-25172.
SB15	SVSB15A-S-25213	12	10/26/07	Encore sample comparable to sample SVSB15-S-25213.
SB16	SVSB16A-S-25161	4	10/25/07	Encore sample comparable to sample SVSB16-S-25161.
SB17	SVSB17A-S-25195	1	10/26/07	Encore sample comparable to sample SVSB17-S-25195.
SB18	SVSB18A-S-25231	12	10/26/07	Encore sample comparable to sample SVSB18-S-25231.
SB19	SVSB19A-S-25335	8	10/30/07	Encore sample comparable to sample SVSB19-S-25335.
SB20	SVSB20A-S-25277	1	10/29/07	Encore sample comparable to sample SVSB20-S-25277.
SB21	SVSB21A-S-25282	4	10/29/07	Encore sample comparable to sample SVSB21-S-25282.
SB22	SVSB22A-S-25173	1	10/25/07	Encore sample comparable to sample SVSB22-S-25173.
SB24	SVSB24A-S-25251	1	10/27/07	Encore sample comparable to sample SVSB24-S-25251.
SB25	SVSB25A-S-25272	12	10/28/07	Encore sample comparable to sample SVSB25-S-25272.
SB26	SVSB26A-S-25182	4	10/25/07	Encore sample comparable to sample SVSB26-S-25182.
SB27	SVSB27A-S-25214	1	10/26/07	Encore sample comparable to sample SVSB27-S-25214.
SB28	SVSB28A-S-25223	4	10/26/07	Encore sample comparable to sample SVSB28-S-25223.
SB29	SVSB29A-S-25318	12	10/30/07	Encore sample comparable to sample SVSB29-S-25318.
SB30	SVSB30A-S-25287	8	10/30/07	Encore sample comparable to sample SVSB30-S-25287.

TABLE S2.1 (Cont.)

Location	Sample	Depth (ft BGL)	Sample Date	Sample Description
Soil samples collected by using Encore sampling devices for comparison with dry ice preservation method (cont.)				
SB31	SVSB31A-S-25177	1	10/25/07	Encore sample comparable to sample SVSB31-S-25177.
SB32	SVSB32A-S-25189	8	10/26/07	Encore sample comparable to sample SVSB32-S-25189.
SB33	SVSB33A-S-25194	12	10/26/07	Encore sample comparable to sample SVSB33-S-25194.
SB34	SVSB34A-S-25220	8	10/26/07	Encore sample comparable to sample SVSB34-S-25220.
SB35	SVSB35A-S-25320	4	10/30/07	Encore sample comparable to sample SVSB35-S-25320.
SB36	SVSB36A-S-25324	1	10/30/07	Encore sample comparable to sample SVSB36-S-25324.
SB37	SVSB37A-S-25329	4	10/30/07	Encore sample comparable to sample SVSB37-S-25329.
SB38	SVSB38A-S-25306	4	10/30/07	Encore sample comparable to sample SVSB38-S-25306.
SB39	SVSB39A-S-25313	8	10/30/07	Encore sample comparable to sample SVSB39-S-25313.
SB40	SVSB40A-S-25292	8	10/29/07	Encore sample comparable to sample SVSB40-S-25292.
Water samples selected for duplicate analysis by the AGEM Laboratory				
City treated	SVCITYTR-W-25384	–	10/29/07	City water plant – treated water. Combination of lake and well water. Of the two taps, one is treated water, and the second is untreated water.
MoDOT	SVMDOT-W-25369	44	10/26/07	MoDOT private well in maintenance building. Depth to water from TOC = 22.45 ft. Depth of well = 44.00 ft. Diameter = 2.5 ft. Sample collected after purging of 825 gal.
Moore	SVMOORE-W-25361	–	10/25/07	Moore private well. Tap at kitchen sink. Water clear. Ran water at sink for 30 min. Well is used for all domestic purposes.
SB24ts	SVSB24S-W-25409	53-58	11/3/07	Shallow temporary piezometer. Water level rising since installation though initially dry. Not purged because of long recharge time. Water clear.
SB24ts	SV-24S-W-25400	53-58	12/5/07	Shallow piezometer.
Soil samples selected for duplicate analysis by the AGEM Laboratory				
SB01	SVSB1-S-25261	8	10/28/07	Near-surface soil sampling location. Northwest corner of former CCC/USDA facility.
SB08	SVSB8-S-25236	1	10/27/07	Near-surface soil sampling location. Northeast corner of former CCC/USDA facility.
SB13	SVSB13A-S-25232	1	10/27/07	Encore sample comparable to sample SVSB13-S-25232.

TABLE S2.1 (Cont.)

Location	Sample	Depth (ft BGL)	Sample Date	Sample Description
Soil samples selected for duplicate analysis by the AGEM Laboratory (cont.)				
SB15	SVSB15-S-25211	4	10/26/07	Near-surface soil sampling location. Near center of former CCC/USDA facility.
SB16	SVSB16-S-25163	12	10/25/07	Near-surface soil sampling location. West central portion of former CCC/USDA facility.
SB22	SVSB22-S-25174	4	10/25/07	Near-surface soil sampling location. West central portion of former CCC/USDA facility.
SB24	SVSB24-S-25563	60	11/1/07	Vertical-profile subsurface soil sampling location. Near southern Quonset doorway.
SB25	SVSB25A-S-25272	12	10/28/07	Encore sample comparable to sample SVSB25-S-25272.
SB29	SVSB29-S-25629	60	1/30/08	Vertical-profile subsurface soil sampling location. South side of southern Quonset.
SB30	SVSB30-S-25286	4	10/30/07	Near-surface soil sampling location. Southeastern portion of former CCC/USDA facility.
SB30	SVSB30A-S-25287	8	10/30/07	Encore sample comparable to sample SVSB30-S-25287
SB35	SVSB35-S-25319	1	10/30/07	Near-surface soil sampling location. Southern portion of former CCC/USDA facility.
SB35	SVSB35A-S-25320	4	10/30/07	Encore sample comparable to sample SVSB35-S-25320
SB35	SVSB35-S-25323	8	10/30/07	
SB38	SVSB38-S-25594	16	1/28/08	Vertical-profile subsurface soil sampling. Southeast corner of former CCC/USDA facility, near driveway.
SB38	SVSB38-S-25598	36	1/28/08	
SB38	SVSB38-S-25602	60	1/28/08	
SB38	SVSB38-S-25617	96	1/29/08	
SB42	SVSB42-S-25587	48	1/28/08	Vertical-profile subsurface soil sampling. Northern portion of former CCC/USDA facility, within former bin array.
SB42	SVSB42-S-25582	84	11/2/07	
Replicate groundwater sample				
MoDOT	SVMDOT-W-25369	44	10/26/07	Replicate of sample SVMDOT-W-25368.
Replicate vertical-profile soil samples				
SB02	SVSB2-S-25168	4	10/25/07	Replicate of sample SVSB2-S-25165.
SB13	SVSB13-S-25240	8	10/27/07	Replicate of sample SVSB13-S-25234.

TABLE S2.1 (Cont.)

Location	Sample	Depth (ft BGL)	Sample Date	Sample Description
Replicate vertical-profile soil samples (cont.)				
SB21	SVSB21-S-25289	8	10/29/07	Replicate of sample SVSB21-S-25283.
SB24	SVSB24-S-25567	88	11/1/07	Replicate of sample SVSB24-S-25566.
SB28	SVSB28-S-25226	4	10/26/07	Replicate of sample SVSB28-S-25223.
SB29	SVSB29-S-25629	60	1/30/08	Replicate of sample SVSB29-S-25630.
SB29	SVSB29-S-25639	80	1/31/08	Replicate of sample SVSB29-S-25638.
SB29	SVSB29-S-25634	84	1/30/08	Replicate of sample SVSB29-S-25633.
SB33	SVSB33-S-25201	8	10/26/07	Replicate of sample SVSB33-S-25193.
SB36	SVSB36-S-25332	12	10/30/07	Replicate of sample SVSB36-S-25327.
SB38	SVSB38-S-25608	32	1/29/08	Replicate of sample SVSB38-S-25607.
SB38	SVSB38-S-25602	60	1/28/08	Replicate of sample SVSB38-S-25601.
SB42	SVSB42-S-25587	48	1/28/08	Replicate of sample SVSB42-S-25586.
SB42	SVSB42-S-25577	52	11/2/07	Replicate of sample SVSB42-S-25576.
Trip blanks shipped with soil samples				
QC	SVQCTB-S-25186	–	10/25/07	Trip blank sent to the AGEM Laboratory with soil samples preserved on dry ice and listed on chain-of-custody forms (COCs) 6300 and 6302.
QC	SVQCTB-S-25200	–	10/26/07	Trip blank sent to the AGEM Laboratory with Encore soil samples preserved on regular ice and listed on COC 6303.
QC	SVQCTB-S-25199	–	10/26/07	Trip blank sent to the AGEM Laboratory with soil samples preserved on dry ice and listed on COCs 6304 and 6305.
QC	SVQCTB-S-25227	–	10/26/07	Trip blank sent to the AGEM Laboratory with soil samples preserved on dry ice listed on COCs 6306 and 6307.
QC	SVQCTB-S-25245	–	10/27/07	Trip blank sent to the AGEM Laboratory with soil samples preserved on dry ice and listed on COCs 6308 and 6309.
QC	SVQCTB-S-25246	–	10/27/07	Trip blank sent to the AGEM Laboratory with Encore soil samples preserved on regular ice and listed on COC 6314.

TABLE S2.1 (Cont.)

Location	Sample	Depth (ft BGL)	Sample Date	Sample Description
Trip blanks shipped with soil samples (cont.)				
QC	SVTB-S-25304	–	10/29/07	Trip blank with Encore soil samples to AGEM Laboratory preserved on regular ice listed on COC 6322.
QC	SVTB-S-25303	–	10/29/07	Trip blank with soil samples to AGEM Laboratory preserved on dry ice listed on COCs 6315, 6317, 6319 and 6328.
QC	SVTB-S-25302	–	10/29/07	Trip blank with soil samples to AGEM Laboratory preserved on dry ice listed on COCs 6321 and 6324.
QC	SVQCTB-S-25310	–	10/30/07	Trip blank with Encore soil samples to AGEM Laboratory preserved on regular ice listed on COC 6320.
QC	SVQCTB-S-25309	–	10/30/07	Trip blank with soil samples to AGEM Laboratory preserved on dry ice listed on COCs 6310, 6323 and 6311.
QC	SVQCTB-S-25354	–	10/31/07	Trip blank with soil samples to AGEM Laboratory preserved on dry ice listed on COCs 6313 and 6334.
QC	SVQCTB-S-25564	–	11/1/07	Trip blank with soil samples to AGEM Laboratory preserved on dry ice listed on COC 6335.
QC	SV-S-Meoh-01Nov07	–	11/1/07	Trip blank with soil samples to TestAmerica Laboratory for verification organic analysis listed on COC 3440.
QC	SVQCTB-S-25580	–	11/2/07	Trip blank with soil samples to AGEM Laboratory preserved on dry ice listed on COC 6332.
QC	SV-S-Meoh-06Nov07	–	11/6/07	Trip blank with soil samples to TestAmerica Laboratory for verification organic analysis listed on COC 4044.
QC	SVQCTB-S-25591	–	1/28/08	Trip blank with soil samples to AGEM Laboratory listed on COCs 6049 and 6050.
QC	SVQCTB-S-25612	–	1/29/08	Trip blank with soil samples to AGEM Laboratory listed on COCs 4778 and 4779.
QC	SVQCTB-S-25625	–	1/30/08	Trip blank with soil samples to AGEM Laboratory listed on COCs 4780 and 4781.
QC	SV-TB-020708	–	2/8/08	Trip blank sent to TestAmerica for verification organic analysis with soil samples listed on COC 4045.
Trip blanks shipped with groundwater samples				
QC	SVTB-W-25362	–	10/25/07	Trip blank sent to the AGEM Laboratory with water samples listed on COC 3999.
QC	SVTB-W-25370	–	10/26/07	Trip blank sent to the AGEM Laboratory with water samples listed on COC 4000.
QC	SVTB-W-25375	–	10/27/07	Trip blank sent to the AGEM Laboratory with water samples listed on COC 6316.
QC	SVTB-W-25383	–	10/29/07	Trip blank sent to the AGEM Laboratory with water samples listed on COCs 6325 and 6326.

TABLE S2.1 (Cont.)

Location	Sample	Depth (ft BGL)	Sample Date	Sample Description
Trip blanks shipped with groundwater samples (cont.)				
QC	SVTB-W-25387	–	10/29/07	Trip blank sent to Envirosystems for verification organic analysis with water samples listed on COC 6327.
QC	SVTB-W-25395	–	10/30/07	Trip blank sent to the AGEM Laboratory with wastewater samples listed on COC 6330.
QC	SVQCTB-W-25358	–	10/31/07	Trip blank sent to the AGEM Laboratory with water sample listed on COC 6336.
QC	SVQCTB-W-25415	–	11/5/07	Trip blank sent to the AGEM Laboratory with water samples listed on COC 6011.
QC	SVQCTB-W-25413	–	11/9/07	Trip blank sent to the AGEM Laboratory with waste sample listed on COC 6021.
QC	SV-TB-W-25403	–	12/5/07	Trip blank sent to the AGEM Laboratory with water sample listed on COC 6378.
QC	SVQCTB-W-25407	–	3/21/08	Trip blank sent to the AGEM Laboratory with water sample listed on COC 6101.
Waste purge water characterization samples				
QC	SVWWTANK1-W-25388	–	10/30/07	Waste purge water from private well sampling. Tank #1. Tanker truck.
QC	SVWWTANK2-W-25389	–	10/30/07	Waste purge water from private well sampling. Tank #2. 1500 gal.
QC	SVWWTANK3-W-25390	–	10/30/07	Waste purge water from private well sampling. Tank #3. 900 gal.
QC	SVWWTANK4-W-25392	–	10/30/07	Waste purge water from private well sampling. Tank #4. Smaller tank, approximately 200 gal.
QC	SVTANK1-W-25408	–	11/1/07	Waste sample from Tank #1 (tanker truck) for total nitrogen and heavy metals analysis, per publicly owned treatment works and MoDNR requirements.
QC	SVCOMB-W-25409	–	11/1/07	Composite waste sample from Tanks #2-#4 for total nitrogen and heavy metals analysis, per publicly owned treatment works and MoDNR requirements.
QC	SVTANK2-W-25411	–	11/3/07	Resampling of waste purge water tank #2 for total nitrogen and heavy metals analysis.
QC	SVTANK2-W-25412	–	11/9/07	Resampling of waste purge water tank #2 for VOCs analyses at the AGEM Laboratory.

TABLE S2.2 Analytical results for quality control samples monitoring sample collection and handling activities during the 2007-2008 investigation at Savannah.

Sample	Sample Date	Medium	Analysis Date	EPA Analytical Method	Laboratory[a]	Carbon Tetrachloride	Chloroform	Methylene Chloride	Quantitation Limit	Units
Trip blanks										
SVTB-W-25362	10/25/07	Water	10/26/07	524.2	AGEM	ND[b]	ND	ND	1.0	µg/L
SVQCTB-S-25186	10/25/07	Soil	10/31/07	8260B	AGEM	ND	ND	ND	10	µg/kg
SVTB-W-25370	10/26/07	Water	10/27/07	524.2	AGEM	ND	ND	ND	1.0	µg/L
SVQCTB-S-25199	10/26/07	Soil	11/1/07	8260B	AGEM	ND	ND	ND	10	µg/kg
SVQCTB-S-25200	10/26/07	Soil	10/30/07	8260B	AGEM	ND	ND	ND	10	µg/kg
SVQCTB-S-25227	10/26/07	Soil	11/1/07	8260B	AGEM	ND	ND	ND	10	µg/kg
SVTB-W-25375	10/27/07	Water	10/29/07	524.2	AGEM	ND	ND	ND	1.0	µg/L
SVQCTB-S-25245	10/27/07	Soil	11/5/07	8260B	AGEM	ND	ND	ND	10	µg/kg
SVTB-W-25383	10/29/07	Water	10/30/07	524.2	AGEM	ND	ND	ND	1.0	µg/L
SVTB-S-25302	10/29/07	Soil	11/8/07	8260B	AGEM	ND	ND	ND	10	µg/kg
SVTB-S-25303	10/29/07	Soil	11/7/07	8260B	AGEM	ND	ND	ND	10	µg/kg
SVTB-S-25304	10/29/07	Soil	11/2/07	8260B	AGEM	ND	ND	ND	10	µg/kg
SVTB-W-25387	10/29/07	Water	10/30/07	8260	ENVSYS	ND	ND	ND	5.0	µg/L
SVTB-W-25395	10/30/07	Water	11/1/07	524.2	AGEM	ND	ND	ND	1.0	µg/L
SVQCTB-S-25309	10/30/07	Soil	11/15/07	8260B	AGEM	ND	ND	ND	10	µg/kg
SVQCTB-S-25310	10/30/07	Soil	11/8/07	8260B	AGEM	ND	ND	ND	10	µg/kg
SVQCTB-W-25358	10/31/07	Water	11/2/07	524.2	AGEM	ND	ND	ND	1.0	µg/L
SVQCTB-S-25354	10/31/07	Soil	11/8/07	8260B	AGEM	ND	ND	ND	10	µg/kg
SVQCTB-S-25564	11/1/07	Soil	11/14/07	8260B	AGEM	ND	ND	ND	10	µg/kg
SV-S-Meoh-01Nov07	11/1/07	Soil	11/12/07	8260B	TA	ND	ND	15	10	µg/kg
SVQCTB-S-25580	11/2/07	Soil	11/7/07	8260B	AGEM	ND	ND	ND	10	µg/kg
SVQCTB-W-25415	11/5/07	Water	11/6/07	524.2	AGEM	ND	ND	ND	1.0	µg/L
SV-S-Meoh-06Nov07	11/6/07	Soil	11/13/07	8260B	TA	ND	ND	25	10	µg/kg
SVQCTB-W-25413	11/9/07	Water	11/12/07	524.2	AGEM	ND	ND	ND	1.0	µg/L
SV-TB-W-25403	12/5/07	Water	12/7/07	524.2	AGEM	ND	ND	ND	1.0	µg/L
SVQCTB-S-25591	1/28/08	Soil	2/4/08	8260B	AGEM	ND	ND	ND	10	µg/kg
SVQCTB-S-25612	1/29/08	Soil	2/4/08	8260B	AGEM	ND	ND	ND	10	µg/kg
SVQCTB-S-25625	1/30/08	Soil	2/7/08	8260B	AGEM	ND	ND	ND	10	µg/kg
SV-TB-020708	2/8/08	Soil	2/12/08	8260B	TA	ND	ND	ND	10	µg/kg
SVQCTB-W-25407	3/21/08	Water	3/25/08	524.2	AGEM	ND	ND	ND	1.0	µg/L
SVQCTB-S-25246	10/27/07	Soil	11/2/07	8260B	AGEM	ND	ND	ND	10	µg/kg

TABLE S2.2 (Cont.)

Sample	Sample Date	Medium	Analysis Date	EPA Analytical Method	Laboratory[a]	Carbon Tetrachloride	Chloroform	Methylene Chloride	Quantitation Limit	Units
Waste characterization samples										
SVWWTANK1-W-25388	10/30/07	Water	10/31/07	524.2	AGEM	ND	ND	ND	1.0	µg/L
SVWWTANK3-W-25390	10/30/07	Water	10/31/07	524.2	AGEM	ND	ND	ND	1.0	µg/L
SVWWTANK4-W-25392	10/30/07	Water	11/1/07	524.2	AGEM	ND	ND	ND	1.0	µg/L
SVWWTANK2-W-25389	10/30/07	Water	10/31/07	524.2	AGEM	36	2.3	ND	1.0	µg/L
SVTANK2-W-25412	11/9/07	Water	11/12/07	524.2	AGEM	0.7 J[c]	0.8 J	ND	1.0	µg/L

[a] Laboratories: AGEM, Applied Geosciences and Environmental Management; ENVSYS, Envirosystems; TA, TestAmerica.

[b] ND, contaminant not detected at the indicated method detection limit.

[c] Qualifier J indicates an estimated concentration below the method quantitation limit.

TABLE S2.3 Calibration and surrogate recovery during organic analyses of soil and water samples at the AGEM Laboratory.

	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
Sample	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 07-10-26, analysis date October 26, 2007									
20-ppb standard	88	84	86	18.98	5.2	19.53	2.4	20.16	0.8
Laboratory blank	104	102	108						
SVMOORE-W-25361	97	98	97						
SVMOORE-W-25361DUP	102	100	102						
SVTB-W-25362	96	98	92						
SVMORGAN-W-25360	86	83	82						
SDG 07-10-27, analysis date October 27, 2007									
20-ppb standard	100	100	100	19.09	4.7	20.79	3.9	21.58	7.6
Laboratory blank	100	100	100						
SVBURK-W-25365	114	109	108						
SVMARSHALL-W-25366	92	101	100						
SVMDOT-W-25368	104	112	117	Outside calibration range for carbon tetrachloride at zero dilution (dilution factor [DF] 1).					
SVMDOT-W-25368	104	111	117	Analysis at DF 10.					
SVMDOT-W-25369	108	118	120	Outside calibration range for CT at DF 1.					
SVMDOT-W-25369	96	98	95	Analysis at DF 10.					
SVMDOT-W-25369DUP	102	102	109	Duplicate analysis at DF 10.					
SVTB-W-25370	91	91	99						
Methanol blank	100	100	100						
SVSB26-S-25183	95	93	97						
SVSB31-S-25180	103	100	110						
SVSB31-S-25179	108	108	112						
SVSB16-S-25161	104	102	106						
SVSB14-S-25171	101	102	109						
SVSB22-S-25173	99	99	109						
SVSB26-S-25184	100	100	110						
SVSB2-S-25166	102	107	113						
SVSB22-S-25174	100	102	113						
SVSB22-S-25174DUP	102	101	108						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 07-10-29, analysis date October 29, 2007									
20-ppb standard	83	83	80	22.77	13.0	23.76	17.2	24.92	21.9
Laboratory blank	100	100	100						
SVMILLER-W-25372	87	86	82						
SVADKINS-W-25374	92	92	92						
SVTB-W-25375	83	85	84						
Methanol blank	100	100	100						
SVSB2-S-25168	91	96	91						
SVSB22-S-25176	93	97	99						
SVSB22-S-25175	91	98	92						
SVSB26-S-25182	102	106	106						
SVSB16-S-25162	90	93	93						
SVSB2-S-25164	80	83	85						
SVSB31-S-25178	64[d]	67[d]	73[d]	Reanalyzed in SDG 07-10-31b; recovery limit met.					
Methanol blank 2	93	91	94						
SVSB26-S-25181	90	103	104						
SVSB16-S-25163	91	102	101						
SVSB16-S-25163DUP	97	100	102						
Methanol blank 3	100	100	100						
SVSB31-S-25177	96	97	96						
SVSB2-S-25165	87	92	97						
SVSB16-S-25160	105	107	106						
SVSB14-S-25169	112	107	113						
SVSB14-S-25170	90	88	91						
SVSB2-S-25167	87	90	96						
SVSB14-S-25172	91	92	94						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 07-10-30, analysis date October 30, 2007									
20-ppb standard	100	100	100	16.42	19.7	17.36	14.1	19.84	0.8
Laboratory blank	99	96	92						
SVMCPIKE-W-25373	103	93	91						
SVPOTTER-W-25376	110	116	117						
SVBARR-W-25377	118	120	120						
SVCLIZERNEW-W-25378	117	119	117						
SVCLIZEROLD-W-25380	97	96	104						
SVHUGHES-W-25381	101	100	107						
SVHUGHESPD-W-25382	105	112	110						
SVCITYTR-W-25384	93	98	104						
SVCITYTR-W-25384DUP	108	109	109						
SVCITYSI-W-25385	101	104	108						
SVTB-W-25383	90	86	89						
Methanol blank	99	88	86						
SVSB14A-S-25172	106	103	100						
SVSB33A-S-25194	111	108	102						
SVSB12A-S-25203	81	81	82						
SVSB15A-S-25213	101	98	99						
SVQCTB-S-25200	99	109	105						
SVSB32-S-25187	96	98	94						
SVSB17-S-25198	106	119	120						
SVSB32-S-25188	105	102	103						
SVSB33-S-25201	97	91	90						
SDG 07-10-31a, analysis date October 31, 2007									
20-ppb standard	105	112	101	18.69	6.8	20.67	3.3	19.69	1.6
Laboratory blank	100	100	100						
SVWWTANK1-W-25388	107	108	102						
SVWWTANK2-W-25389	101	104	102						
SVWWTANK3-W-25390	92	93	94						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 07-10-31a, analysis date October 31, 2007 (cont.)									
SVWWTANK4-W-25392	75[d]	76[d]	79[d]	Reanalyzed in SDG 07-11-1a; recovery limit met.					
SVTB-W-25395	66[d]	68[d]	68[d]	Reanalyzed in SDG 07-11-1a; recovery limit met.					
Methanol blank	100	100	100						
SVSB31A-S-25177	93	97	98						
SVSB26A-S-25182	74[d]	80	83	Reanalyzed in SDG 07-11-2a; recovery limit met.					
SVSB22A-S-25173	94	104	105						
SVSB16A-S-25161	100	110	108						
SVSB2A-S-25166	83	88	89						
SVQCTB-S-25186	92	114	111						
SVSB32A-S-25189	95	110	106						
SVSB32A-S-25189DUP	80	93	95						
SVSB33-S-25191	95	104	104						
SVSB6-S-25207	112	132[d]	127[d]	Reanalyzed in SDG 07-11-2a; recovery limit met.					
SVSB32-S-25189	104	109	110						
SVSB33-S-25192	101	108	108						
SVSB12-S-25204	94	98	98						
SVSB6-S-25208	100	101	100						
SDG 07-10-31b, analysis date October 31, 2007									
20-ppb standard	100	100	100	18.84	6.0	17.32	14.4	21.73	8.3
Methanol blank	92	89	88						
SVSB34A-S-25220	105	109	109						
SVSB28A-S-25223	86	89	89						
SVSB6A-S-25208	104	108	107						
SVSB18A-S-25231	96	96	102						
SVSB17A-S-25195	95	99	97						
SVSB27A-S-25214	96	104	107						
SVSB31-S-25178	103	108	115						
Methanol blank 2	100	100	100						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 07-10-31b, analysis date October 31, 2007 (cont.)									
SVSB33-S-25193	95	95	95						
SVSB6-S-25206	97	93	95						
SVSB17-S-25195	90	93	92						
SVSB32-S-25190	90	91	91						
SVSB12-S-25203	93	98	99						
SVSB12-S-25203DUP	82	85	85						
Methanol blank 3	94	95	93						
SVSB12-S-25202	95	102	108						
SVSB6-S-25209	89	93	96						
SVSB33-S-25194	114	106	108						
SDG 07-11-1a, analysis date November 1, 2007									
20-ppb standard	100	100	100	19.35	3.3	19.19	4.1	21.69	8.1
Laboratory blank	100	100	100						
SVWWTANK4-W-25392	102	99	97						
SVTB-W-25395	104	100	104						
Methanol blank	100	100	100						
SVSB12-S-25205	98	107	102						
SVSB17-S-25196	99	104	103						
SVSB17-S-25197	92	98	98						
SVQCTB-S-25199	89	100	107						
SVSB15-S-25212	61[d]	85	89	Reanalyzed in SDG 07-11-5; recovery limit met.					
SVSB15-S-25213	89	96	96						
SVSB28-S-25226	90	97	95						
SVSB34-S-25219	93	100	103						
SVSB15-S-25210	91	102	108						
SVSB28-S-25224	92	103	106						
Methanol blank 2	95	104	101						
SVSB9A-S-25243	95	106	105						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 07-11-1a, analysis date November 1, 2007 (cont.)									
SVSB10A-S-25250	87	97	99						
SVSB10-S-25248	88	93	96						
SVSB10-S-25247	85	90	92						
Methanol blank 3	91	95	97						
SVSB10-S-25250	86	87	88						
SVSB8-S-25236	86	89	90						
SVSB8-S-25236DUP	91	94	93						
SDG 07-11-1b, analysis date November 1, 2007									
20-ppb standard	100	100	100	18.87	5.8	19.44	2.8	19.73	1.4
Methanol blank	100	100	100						
SVSB27-S-25217	86	91	90						
SVSB18-S-25230	95	106	101						
SVSB18-S-25231	97	107	106						
SVSB34-S-25220	100	106	103						
SVSB28-S-25225	92	101	101						
SVSB28-S-25222	100	111	110						
SVSB18-S-25228	97	103	104						
SVSB27-S-25216	98	105	104						
SVSB28-S-25223	95	101	101						
SVSB27-S-25214	97	103	104						
SVSB34-S-25218	94	102	102						
SVSB15-S-25211	96	100	101						
SVSB15-S-25211DUP	94	99	98						
SVSB18-S-25229	81	90	91						
SVSB34-S-25221	99	104	102						
SVQCTB-S-25227	93	114	107						
SVSB27-S-25215	98	108	105						
SVSB8A-S-25237	100	106	106						
Methanol blank 2	100	104	102						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 07-11-1b, analysis date November 1, 2007 (cont.)									
SVSB24A-S-25251	96	101	101						
SVSB13A-S-25232	95	100	101						
SVSB13A-S-25232DUP	95	99	98						
SDG 07-11-2a, analysis date November 2, 2007									
20-ppb standard	107	101	102	23.02	14.0	22.9	13.5	24.67	20.9
Laboratory blank	100	100	100						
SVSB24-W-25357	95	89	93						
SVQCTB-W-25358	104	99	103						
Methanol blank	100	100	100						
SVSB26A-S-25182	102	106	111						
SVSB6-S-25207	105	111	111						
SVQCTB-S-25246	88	98	102						
SVSB9-S-25242	93	93	96						
SVSB13-S-25234	96	95	99						
SVSB24-S-25252	92	93	95						
Methanol blank 2	90	89	90						
SVSB13-S-25235	92	97	102						
SVSB8-S-25237	97	99	104						
SVSB4A-S-25298	95	100	102						
SVSB20A-S-25277	88	92	94						
SVSB40A-S-25292	98	100	93						
Methanol blank 3	91	99	96						
SVSB11A-S-25264	91	98	96						
SVSB25A-S-25272	95	94	92						
SVSB25A-S-25272DUP	84	83	84						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 07-11-2b, analysis date November 2, 2007									
20-ppb standard	100	100	100	21.03	5.0	23.14	14.6	22.68	12.6
Methanol blank	100	100	100						
SVSB8-S-25238	99	105	106						
SVSB24-S-25254	102	107	106						
SVSB8-S-25239	101	103	103						
SVSB24-S-25251	100	103	105						
SVSB13-S-25233	99	106	107						
SVSB9-S-25243	99	105	104						
SVSB9-S-25244	96	104	101						
Methanol blank 2	100	100	100						
SVSB9-S-25241	96	101	104						
SVSB10-S-25249	94	96	98						
SVSB24-S-25253	94	100	100						
SVSB13-S-25240	99	100	102						
SVSB13-S-25232	97	102	102						
SVSB13-S-25232DUP	97	99	98						
Methanol blank 3	84	89	89						
SVSB21A-S-25282	98	107	105						
SVSB3A-S-25274	99	108	112						
SVSB1A-S-25261	88	99	99						
SVTB-S-25304	86	108	101						
SVSB5-S-25255	86	96	100						
SVSB5-S-25257	77[d]	88	89	Reanalyzed in SDG 07-11-5; recovery limit met.					
Methanol blank 4	92	101	100						
SVSB3-S-25275	97	98	101						
SDG 07-11-5, analysis date November 5, 2007									
20-ppb standard	100	100	100	21.5	7.2	22.42	11.4	24.59	20.6
Methanol blank	83	90	99						
SVSB5-S-25257	97	104	101						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 07-11-5, analysis date November 5, 2007 (cont.)									
SVSB15-S-25212	106	116	116						
SVQCTB-S-25245	100	113	117						
SVSB1-S-25262	101	108	108						
SVSB11-S-25265	96	100	105						
SVSB3-S-25273	83	92	88						
SVSB11-S-25266	85	94	92						
SVSB1-S-25261	94	92	103						
SVSB1-S-25261DUP	92	100	103						
Methanol blank 2	100	100	100						
SVSB3-S-25276	83	89	88						
SVSB11-S-25264	95	94	98						
SVSB1-S-25260	95	103	108						
SVSB1-S-25259	92	103	106						
SVSB5-S-25258	98	108	106						
Methanol blank 3	113	104	105						
SVSB25-S-25270	118	114	115						
SVSB11-S-25263	119	117	120						
SVSB25-S-25272	122[d]	118	120	Reanalyzed in SDG 07-11-7b; recovery limit met.					
SVSB25-S-25271	113	110	109						
SVSB5-S-25256	110	108	112						
SVSB3-S-25274	108	110	113						
SVSB25-S-25269	112	112	115						
SDG 07-11-6, analysis date November 6, 2007									
20-ppb standard	94	100	94	20.54	2.7	19.92	0.4	20.27	1.3
Laboratory blank	100	100	100						
SVSB24S-W-25409	98	99	102						
SVSB24S-W-25409DUP	85	90	94						
SVQCTB-W-25415	99	103	103						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 07-11-6, analysis date November 6, 2007 (cont.)									
Methanol blank	100	100	100						
SVSB40-S-25290	101	102	94						
SVSB20-S-25277	81	74[d]	75[d]	Reanalyzed in SDG 07-11-7a; recovery limit met.					
SVSB4-S-25301	97	98	99						
SVSB4-S-25298	74[d]	68[d]	70[d]	Reanalyzed in SDG 07-11-7a; recovery limit met.					
SVSB40-S-25291	83	79[d]	78[d]	Reanalyzed in SDG 07-11-7a; recovery limit met.					
SVSB21-S-25283	89	86	84						
SVSB20-S-25278	106	98	101						
SVSB40-S-25293	113	110	109						
SVSB4-S-25300	82	82	83						
SVSB21-S-25282	85	84	82						
SVSB42-S-25575	111	105	104						
SVSB42-S-25577	101	92	95						
SVSB42-S-25574	68[d]	67[d]	68[d]	Reanalyzed in SDG 07-11-7a; recovery limit met.					
SVSB42-S-25573	61[d]	64[d]	59[d]	Reanalyzed in SDG 07-11-7a; recovery limit met.					
SVSB42-S-25572	127[d]	127[d]	120	Reanalyzed in SDG 07-11-7a; recovery limit met.					
SVSB42-S-25578	88	90	86						
SDG 07-11-7a, analysis date November 7, 2007									
20-ppb standard	100	100	100	20.21	1.0	21.83	8.7	21.41	6.8
Methanol blank	87	85	88						
SVSB42-S-25572	99	100	106						
SVSB4-S-25298	99	102	107						
SVSB40-S-25291	100	105	109						
SVSB20-S-25277	97	103	105						
SVSB42-S-25574	100	102	105						
SVSB42-S-25573	99	100	106						
Methanol blank 2	100	100	100						
SVQCTB-S-25580	101	117	111						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 07-11-7a, analysis date November 7, 2007 (cont.)									
SVSB42-S-25583	99	102	102						
SVSB24-S-25568	98	99	103						
SVSB42-S-25582	97	98	100						
SVSB42-S-25582DUP	99	104	105						
SVSB42-S-25571	94	95	97						
SVSB42-S-25576	94	97	97						
Methanol blank 3	83	87	87						
SVSB29A-S-25318	94	99	97						
SVTB-S-25303	96	114	110						
SVTB-S-25302	99	121[d]	114	Reanalyzed in SDG 07-11-8b; recovery limit met.					
SVSB39A-S-25313	97	106	109						
SVSB19A-S-25335	93	98	98						
SVSB30A-S-25287	93	98	97						
SVSB30A-S-25287DUP	92	96	93						
SDG 07-11-7b, analysis date November 7, 2007									
20-ppb standard	92	118	118	20.51	2.5	21.03	5.0	20.9	4.4
Methanol blank	111	112	109						
SVSB40-S-25292	89	89	92						
SVSB25-S-25272	100	107	106						
SVSB7-S-25296	113	127[d]	134[d]	Reanalyzed in SDG 07-11-8b with low recovery. Accepted.					
SVSB21-S-25284	100	107	106						
SVSB7-S-25294	104	104	116						
SVSB20-S-25280	82	85	90						
SVSB7-S-25297	106	106	111						
SVSB7-S-25295	105	109	110						
SVSB4-S-25299	86	91	95						
SVSB21-S-25281	70[d]	73[d]	78[d]	Reanalyzed in SDG 07-11-8b; recovery limit met.					
SVSB21-S-25289	92	101	107						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 07-11-7b, analysis date November 7, 2007 (cont.)									
SVSB20-S-25279	79[d]	86	89	Reanalyzed in SDG 07-11-8b; recovery limit met.					
Methanol blank 2	89	88	90						
SVSB35A-S-25320	87	98	96						
SVSB35A-S-25320DUP	83	87	92						
SVSB37A-S-25329	102	110	116						
SVSB36A-S-25324	73[d]	79[d]	78[d]	Reanalyzed in SDG 07-11-8b; recovery limit met.					
SVSB30-S-25286	73[d]	73[d]	77[d]	Reanalyzed in SDG 07-11-8b; recovery limit met.					
SVSB38A-S-25306	101	107	117						
SDG 07-11-8a, analysis date November 8, 2007									
20-ppb standard	100	100	100	17.29	14.5	18.26	9.1	18.76	6.4
Methanol blank	100	100	100						
SVSB36-S-25324	88	87	92						
SVSB30-S-25288	80	84	90						
SVSB38-S-25307	101	107	116						
SVSB38-S-25308	84	90	97						
SVSB38-S-25306	83	88	93						
SVSB19-S-25336	79[d]	91	99	Reanalyzed in SDG 07-11-15b; recovery limit met.					
SVSB37-S-25331	102	116	120						
SVSB37-S-25328	96	106	104						
SVSB38-S-25305	95	105	107						
SVSB35-S-25322	101	120	120						
SVSB36-S-25332	73[d]	81	85	Reanalyzed in SDG 07-11-15b; recovery limit met.					
SVSB37-S-25330	80	89	91						
SVSB29-S-25316	94	107	106						
Methanol blank 2	100	100	100						
SVQCTB-S-25309	79[d]	83	83	Reanalyzed in SDG 07-11-15b; high recovery.					
SVSB39-S-25311	83	90	104						
SVSB36-S-25326	97	100	108						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 07-11-8a, analysis date November 8, 2007 (cont.)									
SVSB19-S-25335	79[d]	77[d]	86	Reanalyzed in SDG 07-11-15b; recovery limit met.					
SVSB35-S-25323	90	91	93						
SVSB35-S-25323DUP	99	104	99						
SDG 07-11-8b, analysis date November 8, 2007									
20-ppb standard	100	100	100	17.94	10.9	20.55	2.7	19.56	2.2
Methanol blank	100	100	100						
SVQCTB-S-25310	106	117	115						
SVSB39-S-25313	110	114	113						
SVSB30-S-25287	100	101	103						
SVSB39-S-25314	103	62[d]	114	Reanalyzed in SDG 07-11-15b; recovery limit met.					
SVSB29-S-25317	104	105	108						
SVSB19-S-25333	104	107	111						
SVSB29-S-25318	92	99	102						
SVSB30-S-25285	93	98	102						
SVSB39-S-25312	85	93	94						
SVSB35-S-25321	87	101	97						
SVSB29-S-25315	86	93	96						
SVSB35-S-25320	97	136[d]	113	Accepted.					
SVSB35-S-25319	89	115	102						
SVSB35-S-25319DUP	90	114	96						
Methanol blank 2	80	80	82						
SVSB7-S-25296	72[d]	77[d]	76[d]	Prior analysis in SDG 07-11-7b with high recovery is accepted.					
SVSB21-S-25281	85	104	102						
SVSB20-S-25279	89	100	102						
SVTB-S-25302	94	120	115						
SVSB36A-S-25324	92	98	99						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 07-11-8b, analysis date November 8, 2007 (cont.)									
SVSB30-S-25286	89	94	94						
SVSB30-S-25286DUP	83	90	88						
SVQCTB-S-25354	89	108	101						
SDG 07-11-9, analysis date November 9, 2007									
20-ppb standard	100	100	100	21.4	6.8	23.1	14.4	22.12	10.1
Methanol blank	100	100	100						
SVSB36-S-25327	108	113	114						
SVSB37-S-25329	83	84	87						
SVSB42-S-25579	105	97	104						
SVSB42-S-25570	94	97	95						
SDG 07-11-12, analysis date November 12, 2007									
20-ppb standard	120	105	102	23.76	17.2	23.02	14.0	23.49	16.0
Laboratory blank	100	100	100						
SVTANK2-W-25412	110	99	96						
SVQCTB-W-25413	105	102	96						
Methanol blank	100	100	100						
SVSB36-S-25325	109	107	114						
SVSB19-S-25334	82	85	91						
SVSB41-S-25350	104	105	107						
SVSB41-S-25352	111	111	108						
SVSB24-S-25341	105	109	114						
SVSB41-S-25351	102	101	109						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 07-11-14a, analysis date November 14, 2007									
20-ppb standard	107	104	104	20.12	0.6	22.08	9.9	19.42	2.9
Laboratory blank	100	100	100						
SVSB24-S-25567	127[d]	131[d]	131[d]	Reanalyzed in SDG 07-11-15b; recovery limit met.					
SVSB24-S-25561	94	103	96						
SVSB24-S-25359	92	94	98						
SVSB24-S-25566	93	99	96						
SVSB24-S-25562	97	106	101						
SVSB24-S-25560	94	100	99						
SVQCTB-S-25564	80	93	90						
SVSB24-S-25356	85	98	95						
SVSB42-S-25581	84	88	89						
SDG 07-11-14b, analysis date November 14, 2007									
20-ppb standard	100	100	100	20.73	3.6	20.82	4.0	21.23	6.0
Laboratory blank	111	115	114						
SVSB24-S-25344	113	119	116						
SVSB24-S-25346	111	112	112						
SVSB24-S-25349	109	107	110						
SVSB24-S-25340	103	107	107						
SVSB24-S-25342	111	115	115						
SVSB41-S-25353	104	99	100						
SVSB24-S-25347	96	93	95						
SVSB24-S-25348	105	99	100						
SVSB24-S-25355	103	100	99						
SVSB24-S-25345	104	102	103						
SVSB24-S-25343	98	95	101						
SVSB24-S-25565	89	85	86						
SVSB24-S-25563	94	89	90						
SVSB24-S-25563DUP	93	85	86						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 07-11-15b, analysis date November 15, 2007									
20-ppb standard	100	100	100	20.66	3.2	21.07	5.2	20.99	4.8
Methanol blank	116	116	116						
SVSB19-S-25336	106	111	109						
SVSB19-S-25335	116	115	114						
SVSB39-S-25314	116	119	117						
SVQCTB-S-25309	102	129[d]	117	Accepted.					
SVSB36-S-25332	94	99	95						
SVSB24-S-25567	100	100	96						
SDG 07-12-7, analysis date December 7, 2007									
20-ppb standard	100	100	100	22.76	12.9	23.22	14.9	24.77	21.3
Laboratory blank	100	100	100						
SV-24S-W-25400	95	107	98						
SV-24S-W-25400DUP	95	103	100						
SV-TB-W-25403	99	111	94						
SDG 08-1-31, analysis date January 31, 2008									
20-ppb standard	100	100	100	22.17	10.3	23.53	16.2	24.63	20.7
Laboratory blank	107	105	100						
SVSB38-S-25610	83	132[d]	135[d]	Reanalyzed in SDG 08-2-1b; recovery limit met.					
SVSB29-S-25619	117	125[d]	129[d]	Reanalyzed in SDG 08-2-4; recovery limit met.					
SVSB38-S-25616	130[d]	131[d]	134[d]	Reanalyzed in SDG 08-2-4; recovery limit met.					
SVSB29-S-25621	109	110	116						
SVSB38-S-25607	67[d]	69[d]	74[d]	Reanalyzed in SDG 08-2-1b; recovery limit met.					
SVSB38-S-25617	97	98	96						
SVSB38-S-25617DUP	100	104	103						
SVSB38-S-25611	97	99	105						
SVSB38-S-25614	76[d]	81	84	Reanalyzed in SDG 08-2-1b; recovery limit met.					

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 08-1-31, analysis date January 31, 2008 (cont.)									
SVSB38-S-25613	72[d]	71[d]	74[d]	Reanalyzed in SDG 08-2-1b; recovery limit met.					
SVSB38-S-25604	55[d]	58[d]	55[d]	Reanalyzed in SDG 08-2-1b; recovery limit met.					
SVSB38-S-25605	80	78[d]	90	Reanalyzed in SDG 08-2-1b; recovery limit met.					
SVSB38-S-25606	92	100	99						
SDG 08-2-1a, analysis date February 1, 2008									
20-ppb standard	100	100	100	19.37	3.2	17.99	10.6	18.41	8.3
Laboratory blank	100	100	100						
SVSB29-S-25620	100	108	106						
SVSB29-S-25622	100	105	113						
SVSB29-S-25618	100	98	102						
SVSB42-S-25593	86	88	89						
SVSB38-S-25602	91	95	89						
SVSB38-S-25602DUP	90	88	89						
SVSB38-S-25595	84	83	86						
SVSB42-S-25590	92	91	97						
SVSB38-S-25600	86	95	92						
SVSB38-S-25596	74[d]	71[d]	75[d]	Reanalyzed in SDG 08-2-4; recovery limit met.					
SVSB42-S-25584	82	80	86						
SVSB38-S-25594	80	81	92						
SVSB38-S-25594DUP	85	84	87						
SDG 08-2-1b, analysis date February 1, 2008									
20-ppb standard	89	91	91	23.54	16.3	22.93	13.7	23.41	15.7
Laboratory blank	109	106	107						
SVSB38-S-25608	141[d]	141[d]	135[d]	Reanalyzed in SDG 08-2-4; recovery limit met.					
SVSB38-S-25610	102	100	104						
SVSB29-S-25619	127[d]	131[d]	131[d]	Reanalyzed in SDG 08-2-4; recovery limit met.					

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 08-2-1b, analysis date February 1, 2008 (cont.)									
SVSB38-S-25616	127[d]	134[d]	133[d]	Reanalyzed in SDG 08-2-4; recovery limit met.					
SVSB38-S-25607	104	112	112						
SVSB38-S-25614	104	108	111						
SVSB38-S-25613	99	106	106						
SVSB38-S-25604	96	100	104						
SVSB38-S-25605	93	93	97						
SVSB42-S-25587	90	93	94						
SVSB42-S-25587DUP	91	91	94						
SVSB42-S-25586	84	84	87						
SVSB38-S-25609	87	91	91						
SVSB38-S-25615	82	87	91						
SDG 08-2-4, analysis date February 4, 2008									
20-ppb standard	100	100	100	17.83	11.5	17.26	14.7	17.03	16.0
Laboratory blank	100	100	100						
SVSB38-S-25596	108	113	112						
SVSB38-S-25608	101	112	106						
SVSB29-S-25619	88	94	91						
SVSB38-S-25616	101	105	98						
SVSB38-S-25603	98	113	104						
SVSB38-S-25599	94	116	104						
SVSB42-S-25588	97	107	99						
SVSB38-S-25598	99	112	103						
SVSB38-S-25598DUP	96	103	96						
SVSB42-S-25589	98	102	94						
SVSB38-S-25597	93	106	94						
SVSB42-S-25585	99	105	100						
SVSB42-S-25592	90	97	98						
SVSB38-S-25601	96	99	99						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 08-2-4, analysis date February 4, 2008 (cont.)									
SVQCTB-S-25612	84	96	89						
SVQCTB-S-25591	84	93	90						
SDG 08-2-6, analysis date February 6, 2008									
20-ppb standard	100	100	100	20.02	0.1	20.97	4.7	22.77	13.0
Laboratory blank	104	102	103						
SVSB29-S-25638	113	122[d]	114	Reanalyzed in SDG 08-2-8; recovery limit met.					
SVSB29-S-25633	106	112	111						
SVSB29-S-25635	108	115	104						
SVSB29-S-25637	96	93	93						
SVSB29-S-25628	109	110	110						
SVSB29-S-25634	94	101	100						
SVSB29-S-25629	101	107	103						
SVSB29-S-25629DUP	102	113	100						
Methanol blank 2	96	98	97						
SVSB29-S-25627	94	88	89						
SVSB29-S-25626	93	94	87						
SVSB29-S-25639	85	83	81						
SVSB29-S-25624	82	92	82						
SVSB29-S-25636	75[d]	83	84	Reanalyzed in SDG 08-2-7; recovery limit met.					
SVSB29-S-25631	94	100	89						
SDG 08-2-7, analysis date February 7, 2008									
20-ppb standard	100	100	100	23.05	14.2	19.79	1.1	16.23	20.8
Laboratory blank	100	100	100						
SVSB29-S-25623	111	114	115						
SVSB29-S-25632	113	126[d]	120	Reanalyzed in SDG 08-2-8; recovery limit met.					
SVSB29-S-25630	104	103	108						

TABLE S2.3 (Cont.)

Sample	Recovery of Surrogate Compounds[a] (%)			Measured Concentration and RPD Value for Calibration Check Standard					
				Carbon Tetrachloride		Chloroform		Methylene Chloride	
	Fluorobenzene	Bromo-fluorobenzene	Dichloro-benzene-d_4	ppb[b]	RPD[c]	ppb	RPD	ppb	RPD
SDG 08-2-7, analysis date February 7, 2008 (cont.)									
SVQCTB-S-25625	93	103	97						
SVSB29-S-25638	72[d]	72[d]	75[d]	Reanalyzed in SDG 08-2-8; with recovery limit met.					
SVSB29-S-25636	87	89	92						
SDG 08-2-8, analysis date February 8, 2008									
20-ppb standard	100	100	100	18.52	7.7	18.91	5.6	19.92	0.4
Laboratory blank	102	97	97						
SVSB29-S-25632	109	111	111						
SVSB29-S-25638	108	115	116						
SDG 08-3-25, analysis date March 25, 2008									
20-ppb standard	110	115	113	16.4	19.8	17.65	12.5	16.83	17.2
Laboratory blank	104	111	104						
SVSB38-W-25397	101	102	100						
SVQCTB-W-25407	98	87	89						

[a] Quality control range for recovery = 80-120%.

[b] Concentration in parts per billion (µg/L in water or µg/kg in soil).

[c] Quality control range for RPD = ±20%.

[d] Surrogate recovery outside quality control range.

TABLE S2.4 Results for secondary quality control analyses of soil and groundwater samples at the AGEM Laboratory during the 2007-2008 investigation at Savannah.

Sample						Analysis			Concentration			
Medium	Type[a]	Location	Depth (ft BGL)	Date	Identifier	Type	Date	EPA Method	Carbon Tetrachloride	Chloroform	Methylene Chloride	Units
Water	PW	City treated	–	10/29/07	SVCITYTR-W-25384	Primary	10/30/07	524.2	ND[b]	43	ND	µg/L
					SVCITYTR-W-25384DUP	Duplicate	10/30/07	524.2	ND	39	ND	µg/L
Water	DW	MoDOT	44	10/26/07	SVMDOT-W-25368	Primary	10/27/07	524.2	150	7.4	ND	µg/L
					SVMDOT-W-25369	Replicate	10/27/07	524.2	155	7.2	ND	µg/L
					SVMDOT-W-25369DUP	Duplicate	10/27/07	524.2	144	6.7	ND	µg/L
Water	DW	Moore	–	10/25/07	SVMOORE-W-25361	Primary	10/26/07	524.2	ND	ND	ND	µg/L
					SVMOORE-W-25361DUP	Duplicate	10/26/07	524.2	ND	ND	ND	µg/L
Soil	GEO	SB01	8	10/28/07	SVSB1-S-25261	Primary	11/5/07	8260B	ND	ND	ND	µg/kg
					SVSB1-S-25261DUP	Duplicate	11/5/07	8260B	ND	ND	ND	µg/kg
Soil	CPT	SB02	4	10/25/07	SVSB2-S-25165	Primary	10/29/07	8260B	ND	ND	ND	µg/kg
					SVSB2-S-25168	Replicate	10/29/07	8260B	ND	ND	ND	µg/kg
Soil	CPT	SB08	1	10/27/07	SVSB8-S-25236	Primary	11/1/07	8260B	ND	ND	ND	µg/kg
					SVSB8-S-25236DUP	Duplicate	11/1/07	8260B	ND	ND	ND	µg/kg
Soil	CPT	SB13	1	10/27/07	SVSB13A-S-25232	Encore	11/1/07	8260B	ND	ND	ND	µg/kg
					SVSB13A-S-25232DUP	Duplicate	11/1/07	8260B	ND	ND	ND	µg/kg
Soil	CPT	SB13	8	10/27/07	SVSB13-S-25234	Primary	11/2/07	8260B	ND	ND	ND	µg/kg
					SVSB13-S-25240	Replicate	11/2/07	8260B	ND	ND	ND	µg/kg
Soil	CPT	SB15	4	10/26/07	SVSB15-S-25211	Primary	11/1/07	8260B	ND	ND	ND	µg/kg
					SVSB15-S-25211DUP	Duplicate	11/1/07	8260B	ND	ND	ND	µg/kg
Soil	CPT	SB16	12	10/25/07	SVSB16-S-25163	Primary	10/29/07	8260B	ND	ND	ND	µg/kg
					SVSB16-S-25163DUP	Duplicate	10/29/07	8260B	ND	ND	ND	µg/kg
Soil	CPT	SB21	8	10/29/07	SVSB21-S-25283	Primary	11/6/07	8260B	ND	ND	ND	µg/kg
					SVSB21-S-25289	Replicate	11/7/07	8260B	ND	ND	ND	µg/kg
Soil	CPT	SB22	4	10/25/07	SVSB22-S-25174	Primary	10/27/07	8260B	ND	ND	ND	µg/kg
					SVSB22-S-25174DUP	Duplicate	10/27/07	8260B	ND	ND	ND	µg/kg

TABLE S2.4 (Cont.)

Sample						Analysis			Concentration			
Medium	Type[a]	Location	Depth (ft BGS)	Date	Identifier	Type	Date	EPA Method	Carbon Tetrachloride	Chloroform	Methylene Chloride	Units
Soil	CPT	SB24	60	11/1/07	SVSB24-S-25563	Primary	11/14/07	8260B	2.5 J	ND	ND	µg/kg
					SVSB24-S-25563DUP	Duplicate	11/14/07	8260B	3.0 J	ND	ND	µg/kg
Soil	CPT	SB24	88	11/1/07	SVSB24-S-25566	Primary	11/14/07	8260B	ND	ND	ND	µg/kg
					SVSB24-S-25567	Replicate	11/15/07	8260B	ND	ND	ND	µg/kg
Water	CPT/P	SB24ts	53-58	12/5/07	SV-24S-W-25400	Primary	12/7/07	524.2	6.4	4.4	ND	µg/L
					SV-24S-W-25400DUP	Duplicate	12/7/07	524.2	6.8	4.7	ND	µg/L
Water	CPT/P	SB24ts	53-58	11/3/07	SVSB24S-W-25409	Primary	11/6/07	524.2	4.2	3.5	ND	µg/L
					SVSB24S-W-25409DUP	Duplicate	11/6/07	524.2	4.8	4.2	ND	µg/L
Soil	GEO	SB25	12	10/28/07	SVSB25A-S-25272	Encore	11/2/07	8260B	ND	ND	ND	µg/kg
					SVSB25A-S-25272DUP	Duplicate	11/2/07	8260B	ND	ND	ND	µg/kg
Soil	CPT	SB28	4	10/26/07	SVSB28-S-25223	Primary	11/1/07	8260B	ND	ND	ND	µg/kg
					SVSB28-S-25226	Replicate	11/1/07	8260B	ND	ND	ND	µg/kg
Soil	CPT	SB29	60	1/30/08	SVSB29-S-25629	Primary	2/6/08	8260B	ND	ND	ND	µg/kg
					SVSB29-S-25629DUP	Duplicate	2/6/08	8260B	ND	ND	ND	µg/kg
					SVSB29-S-25630	Replicate	2/7/08	8260B	1.5 J	ND	ND	µg/kg
Soil	CPT	SB29	80	1/31/08	SVSB29-S-25638	Primary	2/8/08	8260B	ND	ND	ND	µg/kg
					SVSB29-S-25639	Replicate	2/6/08	8260B	ND	ND	ND	µg/kg
Soil	CPT	SB29	84	1/30/08	SVSB29-S-25633	Primary	2/6/08	8260B	ND	ND	ND	µg/kg
					SVSB29-S-25634	Replicate	2/6/08	8260B	ND	ND	ND	µg/kg
Soil	CPT	SB30	4	10/30/07	SVSB30-S-25286	Primary	11/8/07	8260B	ND	ND	ND	µg/kg
					SVSB30-S-25286DUP	Duplicate	11/8/07	8260B	ND	ND	ND	µg/kg
Soil	CPT	SB30	8	10/30/07	SVSB30A-S-25287	Encore	11/7/07	8260B	ND	ND	ND	µg/kg
					SVSB30A-S-25287DUP	Duplicate	11/7/07	8260B	ND	ND	ND	µg/kg
Soil	CPT	SB33	8	10/26/07	SVSB33-S-25193	Primary	10/31/07	8260B	ND	ND	ND	µg/kg
					SVSB33-S-25201	Replicate	10/30/07	8260B	ND	ND	ND	µg/kg
Soil	GEO	SB35	1	10/30/07	SVSB35-S-25319	Primary	11/8/07	8260B	ND	ND	ND	µg/kg
					SVSB35-S-25319DUP	Duplicate	11/8/07	8260B	ND	ND	ND	µg/kg

TABLE S2.4 (Cont.)

Sample						Analysis			Concentration			
Medium	Type[a]	Location	Depth (ft BGS)	Date	Identifier	Type	Date	EPA Method	Carbon Tetrachloride	Chloroform	Methylene Chloride	Units
Soil	GEO	SB35	4	10/30/07	SVSB35A-S-25320	Encore	11/7/07	8260B	ND	ND	ND	µg/kg
					SVSB35A-S-25320DUP	Duplicate	11/7/07	8260B	ND	ND	ND	µg/kg
Soil	GEO	SB35	8	10/30/07	SVSB35-S-25323	Primary	11/8/07	8260B	ND	ND	ND	µg/kg
					SVSB35-S-25323DUP	Duplicate	11/8/07	8260B	ND	ND	ND	µg/kg
Soil	GEO	SB36	12	10/30/07	SVSB36-S-25327	Primary	11/9/07	8260B	ND	ND	ND	µg/kg
					SVSB36-S-25332	Replicate	11/15/07	8260B	ND	ND	ND	µg/kg
Soil	CPT	SB38	16	1/28/08	SVSB38-S-25594	Primary	2/1/08	8260B	3.3 J	ND	ND	µg/kg
					SVSB38-S-25594DUP	Duplicate	2/1/08	8260B	3.4 J	ND	ND	µg/kg
Soil	CPT	SB38	32	1/29/08	SVSB38-S-25607	Primary	2/1/08	8260B	24	ND	ND	µg/kg
					SVSB38-S-25608	Replicate	2/4/08	8260B	10	ND	ND	µg/kg
Soil	CPT	SB38	36	1/28/08	SVSB38-S-25598	Primary	2/4/08	8260B	7.4 J	ND	ND	µg/kg
					SVSB38-S-25598DUP	Duplicate	2/4/08	8260B	8.1 J	ND	ND	µg/kg
Soil	CPT	SB38	60	1/28/08	SVSB38-S-25601	Primary	2/4/08	8260B	6.2 J	ND	ND	µg/kg
					SVSB38-S-25602	Replicate	2/1/08	8260B	7.5 J	ND	ND	µg/kg
					SVSB38-S-25602DUP	Duplicate	2/1/08	8260B	8.5 J	ND	ND	µg/kg
Soil	CPT	SB38	96	1/29/08	SVSB38-S-25617	Primary	1/31/08	8260B	ND	ND	ND	µg/kg
					SVSB38-S-25617DUP	Duplicate	1/31/08	8260B	ND	ND	ND	µg/kg
Soil	CPT	SB42	48	1/28/08	SVSB42-S-25586	Primary	2/1/08	8260B	126	3.3 J	ND	µg/kg
					SVSB42-S-25587	Replicate	2/1/08	8260B	121	1 J	ND	µg/kg
					SVSB42-S-25587DUP	Duplicate	2/1/08	8260B	120	1.7 J	ND	µg/kg
Soil	CPT	SB42	52	11/2/07	SVSB42-S-25576	Primary	11/7/07	8260B	15	1.6 J	ND	µg/kg
					SVSB42-S-25577	Replicate	11/6/07	8260B	32	ND	ND	µg/kg
Soil	CPT	SB42	84	11/2/07	SVSB42-S-25582	Primary	11/7/07	8260B	ND	ND	ND	µg/kg
					SVSB42-S-25582DUP	Duplicate	11/7/07	8260B	ND	ND	ND	µg/kg

[a] Sample types: CPT, cone penetrometer; CPT/P, piezometer; DW, domestic well; GEO, Geoprobe; PW, public water supply.

[b] ND, not detected at an instrument detection limit of 0.1 µg/L for water samples or 1.0 g/kg for soil samples.

[c] Qualifier J indicates an estimated concentration below the purge-and-trap method quantitation limit of 1.0 µg/L for water samples or 10 µg/kg for soil samples.

TABLE S2.5 Recovery of system-monitoring compounds in verification organic analysis of soil samples by TestAmerica with EPA Method 8260B.

			Recovery[a] (%)			
Sample	Analysis Date	SDG	1,2-Dichloro-ethane-d_4	Toluene-d_8	Bromofluoro-benzene	1,2-Dichloro-benzene-d_4
MEOH111207LCS	11/12/07	122812	109	99	95	86
MEOH111207BLK	11/12/07	122812	97	90	97	88
SV-S-Meoh-01Nov07	11/12/07	122812	96	89	96	85
SVSB2-S-25168	11/12/07	122812	97	93	99	87
SVSB2-S-25165	11/12/07	122812	94	89	95	85
SVSB16A-S-25161	11/12/07	122812	90	85	94	83
SVSB12-S-25202	11/12/07	122812	91	86	94	85
SVSB15A-S-25213	11/12/07	122812	91	89	96	86
SVSB34-S-25220	11/12/07	122812	94	91	95	84
SVSB27-S-25215	11/12/07	122812	94	90	97	87
SVSB17-S-25196	11/12/07	122812	91	90	98	83
MEOH111307LCS	11/13/07	122812	101	88	97	88
MEOH111307BLK	11/13/07	122812	97	89	99	88
SVSB8-S-25236	11/12/07	122812	86	91	99	87
SVSB13-S-25233	11/12/07	122812	96	92	97	88
SVSB20-S-25277	11/12/07	122812	94	90	99	87
SVSB5-S-25257	11/12/07	122812	94	91	101	88
SVSB1-S-25259	11/12/07	122812	94	89	96	87
SVSB21-S-25284	11/12/07	122812	95	90	98	86
MB111207LCS	11/12/07	122812	98	90	98	89
MBLK111207MB	11/12/07	122812	99	89	100	88
MA111307LCS	11/13/07	122812	92	93	97	88
MBLK111307MA	11/13/07	122812	95	94	97	89
MEOH111307LCS	11/13/07	122902	101	88	97	88
MEOH111307BLK	11/13/07	122902	97	89	99	88
SVSB38-S-25305	11/13/07	122902	90	89	96	88
SVSB41-S-25353	11/13/07	122902	93	90	99	90
SVSB24-S-25568	11/13/07	122902	93	89	96	88
SVSB35A-S-25320	11/13/07	122902	91	89	98	88
SVSB39-S-25314	11/13/07	122902	87	90	96	88
SVSB30-S-25288	11/13/07	122902	90	89	98	86
SVSB42-S-25578	11/13/07	122902	90	89	98	87
SV-S-Meoh-06Nov07	11/13/07	122902	91	90	97	86
MA111307LCS	11/13/07	122902	92	93	97	88
MBLK111307MA	11/13/07	122902	95	94	97	89
MEOH021208LCS	2/12/08	124082	100	93	88	89
MEOHBLK021208MA	2/12/08	124082	81	91	92	87
SV-TB-020708	2/12/08	124082	85	81[b]	36[b]	86
SVSB29-S-25639	2/12/08	124082	80	95	88	88
SVSB38-S-25613	2/12/08	124082	52[b]	57[b]	48[b]	59[b]
SVSB42-S-25593	2/12/08	124082	57[b]	62[b]	54[b]	61[b]
SVSB38-S-25599	2/12/08	124082	197[b]	221[b]	192[b]	186[b]
MA021208LCS	2/12/08	124082	86	98	91	96
MBLK021208MA	2/12/08	124082	81	93	89	89

TABLE S2.5 (Cont.)

[a] Quality control ranges for recovery:

Compound	Range (%)
1,2-Dichloroethane-d_4	80–120
Toluene-d_8	85–110
Bromofluorobenzene	85–135
1,2-Dichlorobenzene-d_4	75–125

[b] Recovery outside quality control range.

TABLE S2.6 Recovery of contaminants of concern in quality control samples during verification organic analysis of soil samples by TestAmerica.

			Carbon Tetrachloride			Chloroform		
Sample	Analysis Date	SDG	Spiked Concentration (ppb)[a]	Detected Concentration (ppb)[a]	Recovery[b] (%)	Spiked Concentration (ppb)[a]	Detected Concentration (ppb)[a]	Recovery[b] (%)
MB111207LCS	11/12/07	122812	10	10.2	102	10	10.8	108
MEOH111207LCS	11/12/07	122812	200	190	95	200	200	100
MA111307LCS	11/13/07	122902	10	10	100	10	10.6	106
MEOH111307LCS	11/13/07	122902	200	190	95	200	200	100
MA021208LCS	2/12/08	124082	10	9.8	98	10	10	100
MEOH021208LCS	2/12/08	124082	200	180	90	200	210	105

[a] Concentration in parts per billion (µg/L in water or µg/kg in soil).

[b] Quality control ranges for recovery:

Compound	Range (%)
Carbon tetrachloride	80–115
Chloroform	80–115

TABLE S2.7 Results of verification organic analyses of soil samples by TestAmerica.

				Concentration (µg/kg)					
				AGEM Laboratory			TestAmerica		
Location	Sample	Depth (ft BGL)	Sample Date	Carbon Tetrachloride	Chloroform	Quantitation Limit	Carbon Tetrachloride	Chloroform	Quantitation Limit
SB01	SVSB1-S-25259	1	10/28/07	ND[a]	ND	10	ND	ND	8.2
SB02	SVSB2-S-25165	4	10/25/07	ND	ND	10	ND	ND	8.3
SB02	SVSB2-S-25168	4	10/25/07	ND	ND	10	ND	ND	11
SB05	SVSB5-S-25257	8	10/27/07	ND	ND	10	ND	ND	9.9
SB08	SVSB8-S-25236	1	10/27/07	ND	ND	10	ND	ND	8.3
SB12	SVSB12-S-25202	1	10/26/07	ND	ND	10	ND	ND	10
SB13	SVSB13-S-25233	4	10/27/07	ND	ND	10	ND	ND	9.4
SB15	SVSB15A-S-25213	12	10/26/07	ND	ND	10	ND	ND	11
SB16	SVSB16A-S-25161	4	10/25/07	ND	ND	10	ND	ND	9.4
SB17	SVSB17-S-25196	4	10/26/07	ND	ND	10	ND	ND	9.7
SB20	SVSB20-S-25277	1	10/29/07	ND	ND	10	ND	ND	7.4
SB21	SVSB21-S-25284	12	10/29/07	ND	ND	10	ND	ND	9.3
SB24	SVSB24-S-25568	90.5	11/1/07	ND	ND	10	ND	ND	8.2
SB27	SVSB27-S-25215	4	10/26/07	ND	ND	10	ND	ND	8.4
SB29	SVSB29-S-25639	80	1/31/08	ND	ND	10	ND	ND	7.6
SB30	SVSB30-S-25288	12	10/30/07	ND	ND	10	ND	ND	10
SB34	SVSB34-S-25220	8	10/26/07	ND	ND	10	ND	ND	11
SB35	SVSB35A-S-25320	4	10/30/07	ND	ND	10	ND	ND	12
SB38	SVSB38-S-25305	1	10/30/07	ND	ND	10	ND	ND	1
SB38	SVSB38-S-25599	44	1/28/08	2.6 J[b]	ND	10	47 S[c]	ND	11
SB38	SVSB38-S-25613	72	1/29/08	ND	ND	10	18 S	ND	9
SB39	SVSB39-S-25314	12	10/30/07	ND	ND	10	ND	ND	8.7
SB41	SVSB41-S-25353	12	10/31/07	ND	ND	10	ND	ND	9.7
SB42	SVSB42-S-25578	60	11/2/07	ND	ND	10	2.1 J	ND	8.5
SB42	SVSB42-S-25593	88	1/28/08	ND	ND	10	ND	ND	11

[a] ND, not detected at an instrument detection limit of 1.0 µg/kg.

[b] Qualifier J indicates an estimated concentration below the indicated method quantitation limit.

[c] Qualifier S indicates that surrogate recovery was outside the control limits for this analysis.

TABLE S2.8 Recovery of system-monitoring compounds in verification organic analysis of water samples by Envirosystems.

Sample	Analysis Date	SDG	Recovery[a] (%)		
			Toluene-d_8	Bromofluoro-benzene	1,1-Dichloro-ethene-d_4
SVMOORE-W-25361	10/30/07	070290	102	97	83
SVMDOT-W-25368	10/30/07	070290	104	99	86
SVMORGAN-W-25360	10/30/07	070290	104	101	87
SVTB-W-25387	10/30/07	070290	102	99	88
VBLKFH	10/30/07	070290	108	102	86

a Quality control ranges for recovery:

Compound	Range (%)
Toluene-d_8	88-110
Bromofluorobenzene	76-114
1,1-Dichloroethene-d_4	80-120

TABLE S2.9 Results of verification organic analysis of groundwater samples by Envirosystems.

				Concentration (µg/L)								
				AGEM Laboratory			Envirosystems, Inc.			Relative Percent Difference		
Location	Sample	Well Depth (ft)	Sample Date	Carbon Tetrachloride	Chloroform	Methylene Chloride	Carbon Tetrachloride	Chloroform	Methylene Chloride	Carbon Tetrachloride	Chloroform	Methylene Chloride
MoDOT	SVMDOT-W-25368	44	10/26/07	150	7.4	ND[a]	100	5.9	ND	40.0	22.6	–
Moore	SVMOORE-W-25361	Unknown	10/25/07	ND	ND	ND	ND	ND	ND	–	–	–
Morgan	SVMORGAN-W-25360	60.58	10/25/07	13	1	ND	10	ND	ND	26.1	–	–

[a] ND, contaminant not detected at an instrument detection limit of 0.1 µg/L for purge-and-trap analysis by the AGEM Laboratory or 1.0 µg/L for CLP analysis by Envirosystems, Inc.

TABLE S2.10 Recovery of known analyte concentrations achieved during inorganic analyses of quality control samples by TestAmerica.

Compound	Recovery[a] (%)			
	SDG 122808	SDG 122809	SDG 122865	SDG 122954
Chloride	94.3	NA[b]	NA	NA
Nitrate as nitrogen	101.5	NA	NA	NA
Nitrate/nitrite nitrogen	NA	103.2	95.6	96-103
Phosphate	98	NA	NA	NA
Sulfate	101.8	NA	NA	NA
Aluminum	100.8	98.1	100.8	NA
Antimony	NA	96.9	101.2	NA
Arsenic	NA	98	101.5	NA
Barium	NA	97.4	101	NA
Beryllium	NA	100.8	103.6	NA
Cadmiun	NA	96.2	101.8	NA
Calcium	100.5	98.4	102.2	NA
Chromium	NA	99.7	103.3	NA
Cobalt	NA	96.1	100.5	NA
Copper	NA	97.6	105.4	NA
Iron	99	95.5	100.4	NA
Lead	NA	96.4	97.3	NA
Magnesium	100.6	99.9	102.2	NA
Manganese	102.7	97.4	102	NA
Nickel	NA	97	102	NA
Phosphorus	102.4	NA	NA	NA
Potassium	98.9	96.6	100.4	NA
Selenium	NA	94.4	99.6	NA
Silicon	101.8	NA	NA	NA
Silver	NA	93	97.4	NA
Sodium	99.9	97.8	101.8	NA
Thallium	NA	92.8	91.5	NA
Vanadium	NA	97.2	99.8	NA
Zinc	101.7	95.5	100.8	NA

[a] Quality control limits for recovery = 90-110%.

[b] NA, samples in this SDG were not analyzed for the indicated constituent.

Supplement 3:

Outside Laboratory Data

Supplement 3 Contents

Report for TA Soil SDG 122812 ..... 3 of 235

Report for TA Soil SDG 122902 ..... 58 of 235

Report for TA Soil SDG 124082 ..... 89 of 235

Report for ENVSYS Water (VOCs) SDG 070290 ..... 111 of 235

Report for TA Water (Cations and Anions) SDG 122808 ..... 133 of 235

Report for TA Water (Total Nitrogen) SDG 122954 ..... 175 of 235

Report for TA Water (Trace Metals and Nitrate) SDG 122809 ..... 202 of 235

Report for TA Water (Trace Metals and Nitrate) SDG 122865 ..... 220 of 235

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

November 16, 2007

Mr. Clyde Dennis
Argonne National Laboratory
9700 S. Cass Avenue
Building 203, Office B149
Argonne, IL 60439

Re: Laboratory Project No. 21005
Case: SAVANNAH; SDG: 122812

Dear Mr. Dennis:

Enclosed are analytical results for samples that were received by TestAmerica Burlington on November 2nd, 2007. Laboratory identification numbers were assigned, and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 11/02/07 ETR No: 122812		
730893	SV-S-25168 (10A)	10/30/07	LIQUID
730894	SV-S-25165 (20A)	10/30/07	LIQUID
730895	SV-S-25161A (30A)	10/30/07	LIQUID
730896	SV-S-25202 (20A)	10/30/07	LIQUID
730897	SV-S-25213A (10A)	10/30/07	LIQUID
730898	SV-S-25220 (10A)	10/30/07	LIQUID
730899	SV-S-25215 (20A)	10/30/07	LIQUID
730900	SV-S-25196 (30A)	10/30/07	LIQUID
730901	SV-S-25236 (10A)	10/30/07	LIQUID
730902	SV-S-25233 (20A)	10/30/07	LIQUID
730903	SV-S-25277 (30A)	10/30/07	LIQUID
730904	SV-S-25257 (10A)	10/30/07	LIQUID
730905	SV-S-25259 (20A)	10/30/07	LIQUID
730906	SV-S-25284 (10A)	10/30/07	LIQUID
730907	SV-S-MEOH	10/30/07	LIQUID

Documentation of the condition of the samples at the time of their receipt and any exception to the laboratory's Sample Acceptance Policy is documented in the Sample Handling section of this submittal. In order to accommodate field length limitations in processing the data summary forms, the laboratory did, in certain instances, abbreviate the sample identifier. The electronically formatted data provides for the full sample identifier.

30 Community Drive, Suite 11 South Burlington, VT 05403 **tel** 802.660.1990 **fax** 802.660.1919 **www.testamericainc.com**

The samples were analyzed by Method 8260B, using a low-level calibration. In performing the analytical work, 500 microliters of the methanol extract were added to the 5 milliliter purge volume. Each of the analyses associated with the sample set did exhibit an acceptable internal standard performance, and there was an acceptable recovery of the surrogate controls in each analysis. Two types of laboratory control sample analyses were performed in the course of performing the analytical work. One was performed to evaluate method performance, and one was performed with 500 microliters of methanol added to the purge volume in order to characterize the affect on the analytical process. With the exception of those for acrolein and acetone, there was an acceptable recovery of each target analyte in each of the laboratory control sample analyses that defined method performance. The recovery of acrolein was low in each of those analyses (approximating 18 percent), and the recovery of acetone trended high (approximating 140 percent). In the laboratory control sample analyses with methanol, several of the earlier eluting compounds did exhibit a lower recovery performance, as did isobutyl alcohol. Most profoundly affected was the performance of acrolein (approximating 4 percent) and methyl iodide (approximating 6 percent). Chloroform and carbon tetrachloride were recovered well in each of the laboratory control sample analyses. Matrix spike and matrix spike duplicate analyses were not performed on samples in this sample set. A relatively high concentration of methylene chloride was identified in the analysis sample SV-S-MEOH, as was a trace concentration of 1,1,1-trichloroethane. The laboratory did associate the analysis of SV-S-MEOH with the analysis of each of the field samples in order to reference the blank association, and accordingly qualify the reported results. The instrument blanks associated with the analytical work were free of contamination. The laboratory did provide for methanol blanks in each analytical sequence in order to properly characterize the results of the laboratory control sample analyses that were performed with 500 microliters of methanol added to the purge volume.

The analytical results associated with the samples presented in this test report were generated under a quality system that adheres to requirements specified in the NELAC standard. Release of the data in this test report and any associated electronic deliverables is authorized by the Laboratory Director's designee as verified by the following signature.

If there are any questions regarding this submittal, please contact me at 802 660-1990.

Sincerely,

Kirk F. Young
Project Manager

Enclosure
KFY/hsf

TestAmerica Burlington Data Qualifier Definitions

Organic

U: Compound analyzed but not detected at a concentration above the reporting limit.

J: Estimated value.

N: Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds (TICs) where the identification of a compound is based on a mass spectral library search.

P: SW-846: Greater than 40% difference for detected concentrations between two GC columns. Unless otherwise specified the higher of the two values is reported on the Form I.

CLP SOW: Greater than 25% difference for detected concentrations between two GC columns. Unless otherwise specified the lower of the two values is reported on the Form I.

C: Pesticide result whose identification has been confirmed by GC/MS.

B: Analyte is found in the sample and the associated method blank. The flag is used for tentatively identified compounds as well as positively identified compounds.

E: Compounds whose concentrations exceed the upper limit of the calibration range of the instrument for that specific analysis.

D: Concentrations identified from analysis of the sample at a secondary dilution.

A: Tentatively identified compound is a suspected aldol condensation product.

X,Y,Z: Laboratory defined flags that may be used alone or combined, as needed. If used, the description of the flag is defined in the project narrative.

Inorganic/Metals

E: Reported value is estimated due to the presence of interference.

N: Matrix spike sample recovery is not within control limits.

* Duplicate sample analysis is not within control limits.

B: The result reported is less than the reporting limit but greater than the instrument detection limit.

U: Analyte was analyzed for but not detected above the reporting limit.

Method Codes:

P ICP-AES
MS ICP-MS
CV Cold Vapor AA
AS Semi-Automated Spectrophotometric

3440

MATRIX: Soil - Methanol	ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD*	Shipping Container No.
RECEIVING LAB: STL- Transamerica		Shipping Info:
PROJECT/SITE: SAVANNAH		ANL Field Contact (Name & Temporary Phone):
SAMPLER(S) (Signature) Sedini/Lafemiere		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOCs										REMARKS: MASS (g)	REMARKS: Volume (mL)
10/30/07	SV-S-25168 (10A) B	1-20mL	✓										9.291	10.0 (ten)
	SV-S-25165 (20A) B		✓										12.049	10.0
	SV-S-25161A (30A) B		✓										10.607	10.0
	SV-S-25202 (20A) G		✓										9.646	10.0
	SV-S-25213A (10A) G		✓										9.276	10.0
	SV-S-25220 (10A) R		✓										9.070	10.0
	SV-S-25215 (20A) R		✓										11.912	10.0
	SV-S-25196 (30A) G		✓										10.351	10.0
	SV-S-25236 (10A) Bk		✓										12.043	10.0
	SV-S-25233 (20A) Bk		✓										10.668	10.0
	SV-S-25277 (30A) G		✓										13.563	10.0
	SV-S-25257 (10A) G		✓										10.117	10.0
	SV-S-25259 (20A) G		✓										12.179	10.0
	SV-S-25284 (10A) B		✓										10.791	10.0
	SV-S-MeOA		✓										—	10.0

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
[signature]	11/1/07	9:30	[signature] 11/02/070925				

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks

Y	N	FOR LAB USE ONLY
X		Custody seal was intact when shipment received.
X		Sample containers were intact when received.
X		Shipment was at required temperature when received.
	X	Sample labels, Tags and COC agree. Labels do not list date.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Research Division, 9700 S. Cass Avenue, Argonne, IL 60439

ER-160 (4-01)

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25161A 30A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730895

Sample wt/vol: 10.6 (g/mL) G Lab File ID: 730895E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	9.4	U
74-87-3	Chloromethane	9.4	U
75-01-4	Vinyl Chloride	9.4	U
74-83-9	Bromomethane	9.4	U
75-00-3	Chloroethane	9.4	U
75-69-4	Trichlorofluoromethane	9.4	U
107-02-8	Acrolein	47	U
75-35-4	1,1-Dichloroethene	9.4	U
76-13-1	Freon TF	9.4	U
67-64-1	Acetone	47	U
74-88-4	Methyl Iodide	9.4	U
75-15-0	Carbon Disulfide	9.4	U
107-05-1	Allyl Chloride	9.4	U
75-09-2	Methylene Chloride	9.4	U
107-13-1	Acrylonitrile	9.4	U
156-60-5	trans-1,2-Dichloroethene	9.4	U
1634-04-4	Methyl-t-Butyl Ether	9.4	U
540-59-0	1,2-Dichloroethene (total)	9.4	U
75-34-3	1,1-Dichloroethane	9.4	U
108-05-4	Vinyl Acetate	9.4	U
126-99-8	Chloroprene	9.4	U
594-20-7	2,2-Dichloropropane	9.4	U
156-59-2	cis-1,2-Dichloroethene	9.4	U
78-93-3	2-Butanone	47	U
107-12-0	Propionitrile	38	U
74-97-5	Bromochloromethane	9.4	U
126-98-7	Methacrylonitrile	9.4	U
109-99-9	Tetrahydrofuran	130	U
67-66-3	Chloroform	9.4	U
71-55-6	1,1,1-Trichloroethane	9.4	U
56-23-5	Carbon Tetrachloride	9.4	U
563-58-6	1,1-Dichloropropene	9.4	U
71-43-2	Benzene	9.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25161A 30A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730895

Sample wt/vol: 10.6 (g/mL) G Lab File ID: 730895E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	470	U
107-06-2	1,2-Dichloroethane	9.4	U
79-01-6	Trichloroethene	9.4	U
78-87-5	1,2-Dichloropropane	9.4	U
74-95-3	Dibromomethane	9.4	U
80-62-6	Methyl Methacrylate	9.4	U
123-91-1	1,4-Dioxane	470	U
75-27-4	Bromodichloromethane	9.4	U
110-75-8	2-Chloroethyl Vinyl Ether	9.4	U
10061-01-5	cis-1,3-Dichloropropene	9.4	U
108-10-1	4-Methyl-2-pentanone	47	U
108-88-3	Toluene	9.4	U
10061-02-6	trans-1,3-Dichloropropene	9.4	U
97-63-2	Ethyl Methacrylate	9.4	U
79-00-5	1,1,2-Trichloroethane	9.4	U
127-18-4	Tetrachloroethene	9.4	U
142-28-9	1,3-Dichloropropane	9.4	U
591-78-6	2-Hexanone	47	U
124-48-1	Dibromochloromethane	9.4	U
106-93-4	1,2-Dibromoethane	9.4	U
108-90-7	Chlorobenzene	9.4	U
630-20-6	1,1,1,2-Tetrachloroethane	9.4	U
100-41-4	Ethylbenzene	9.4	U
1330-20-7	Xylene (m,p)	9.4	U
95-47-6	Xylene (o)	9.4	U
1330-20-7	Xylene (total)	9.4	U
100-42-5	Styrene	9.4	U
75-25-2	Bromoform	9.4	U
98-82-8	Isopropylbenzene	9.4	U
1476-11-5	cis-1,4-Dichloro-2-butene	9.4	U
108-86-1	Bromobenzene	9.4	U
79-34-5	1,1,2,2-Tetrachloroethane	9.4	U
96-18-4	1,2,3-Trichloropropane	9.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25161A 30A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730895

Sample wt/vol: 10.6 (g/mL) G Lab File ID: 730895E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	9.4	U
103-65-1	n-Propylbenzene	9.4	U
95-49-8	2-Chlorotoluene	9.4	U
106-43-4	4-Chlorotoluene	9.4	U
108-67-8	1,3,5-Trimethylbenzene	9.4	U
98-06-6	tert-Butylbenzene	9.4	U
95-63-6	1,2,4-Trimethylbenzene	9.4	U
135-98-8	sec-Butylbenzene	9.4	U
541-73-1	1,3-Dichlorobenzene	9.4	U
99-87-6	4-Isopropyltoluene	9.4	U
106-46-7	1,4-Dichlorobenzene	9.4	U
95-50-1	1,2-Dichlorobenzene	9.4	U
104-51-8	n-Butylbenzene	9.4	U
96-12-8	1,2-Dibromo-3-Chloropropane	9.4	U
120-82-1	1,2,4-Trichlorobenzene	9.4	U
87-68-3	Hexachlorobutadiene	9.4	U
91-20-3	Naphthalene	9.4	U
87-61-6	1,2,3-Trichlorobenzene	9.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25165 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730894

Sample wt/vol: 12.0 (g/mL) G Lab File ID: 730894E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.3	U
74-87-3	Chloromethane	8.3	U
75-01-4	Vinyl Chloride	8.3	U
74-83-9	Bromomethane	8.3	U
75-00-3	Chloroethane	8.3	U
75-69-4	Trichlorofluoromethane	8.3	U
107-02-8	Acrolein	41	U
75-35-4	1,1-Dichloroethene	8.3	U
76-13-1	Freon TF	8.3	U
67-64-1	Acetone	41	U
74-88-4	Methyl Iodide	8.3	U
75-15-0	Carbon Disulfide	8.3	U
107-05-1	Allyl Chloride	8.3	U
75-09-2	Methylene Chloride	8.3	U
107-13-1	Acrylonitrile	8.3	U
156-60-5	trans-1,2-Dichloroethene	8.3	U
1634-04-4	Methyl-t-Butyl Ether	8.3	U
540-59-0	1,2-Dichloroethene (total)	8.3	U
75-34-3	1,1-Dichloroethane	8.3	U
108-05-4	Vinyl Acetate	8.3	U
126-99-8	Chloroprene	8.3	U
594-20-7	2,2-Dichloropropane	8.3	U
156-59-2	cis-1,2-Dichloroethene	8.3	U
78-93-3	2-Butanone	41	U
107-12-0	Propionitrile	33	U
74-97-5	Bromochloromethane	8.3	U
126-98-7	Methacrylonitrile	8.3	U
109-99-9	Tetrahydrofuran	120	U
67-66-3	Chloroform	8.3	U
71-55-6	1,1,1-Trichloroethane	8.3	U
56-23-5	Carbon Tetrachloride	8.3	U
563-58-6	1,1-Dichloropropene	8.3	U
71-43-2	Benzene	8.3	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25165 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730894

Sample wt/vol: 12.0 (g/mL) G Lab File ID: 730894E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	410	U
107-06-2	1,2-Dichloroethane	8.3	U
79-01-6	Trichloroethene	8.3	U
78-87-5	1,2-Dichloropropane	8.3	U
74-95-3	Dibromomethane	8.3	U
80-62-6	Methyl Methacrylate	8.3	U
123-91-1	1,4-Dioxane	410	U
75-27-4	Bromodichloromethane	8.3	U
110-75-8	2-Chloroethyl Vinyl Ether	8.3	U
10061-01-5	cis-1,3-Dichloropropene	8.3	U
108-10-1	4-Methyl-2-pentanone	41	U
108-88-3	Toluene	8.3	U
10061-02-6	trans-1,3-Dichloropropene	8.3	U
97-63-2	Ethyl Methacrylate	8.3	U
79-00-5	1,1,2-Trichloroethane	8.3	U
127-18-4	Tetrachloroethene	8.3	U
142-28-9	1,3-Dichloropropane	8.3	U
591-78-6	2-Hexanone	41	U
124-48-1	Dibromochloromethane	8.3	U
106-93-4	1,2-Dibromoethane	8.3	U
108-90-7	Chlorobenzene	8.3	U
630-20-6	1,1,1,2-Tetrachloroethane	8.3	U
100-41-4	Ethylbenzene	8.3	U
1330-20-7	Xylene (m,p)	8.3	U
95-47-6	Xylene (o)	8.3	U
1330-20-7	Xylene (total)	8.3	U
100-42-5	Styrene	8.3	U
75-25-2	Bromoform	8.3	U
98-82-8	Isopropylbenzene	8.3	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.3	U
108-86-1	Bromobenzene	8.3	U
79-34-5	1,1,2,2-Tetrachloroethane	8.3	U
96-18-4	1,2,3-Trichloropropane	8.3	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25165 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730894

Sample wt/vol: 12.0 (g/mL) G Lab File ID: 730894E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.3	U
103-65-1	n-Propylbenzene	8.3	U
95-49-8	2-Chlorotoluene	8.3	U
106-43-4	4-Chlorotoluene	8.3	U
108-67-8	1,3,5-Trimethylbenzene	8.3	U
98-06-6	tert-Butylbenzene	8.3	U
95-63-6	1,2,4-Trimethylbenzene	8.3	U
135-98-8	sec-Butylbenzene	8.3	U
541-73-1	1,3-Dichlorobenzene	8.3	U
99-87-6	4-Isopropyltoluene	8.3	U
106-46-7	1,4-Dichlorobenzene	8.3	U
95-50-1	1,2-Dichlorobenzene	8.3	U
104-51-8	n-Butylbenzene	8.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.3	U
120-82-1	1,2,4-Trichlorobenzene	8.3	U
87-68-3	Hexachlorobutadiene	8.3	U
91-20-3	Naphthalene	8.3	U
87-61-6	1,2,3-Trichlorobenzene	8.3	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25168 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730893

Sample wt/vol: 9.3 (g/mL) G Lab File ID: 730893E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	11	U
74-87-3	Chloromethane	11	U
75-01-4	Vinyl Chloride	11	U
74-83-9	Bromomethane	11	U
75-00-3	Chloroethane	11	U
75-69-4	Trichlorofluoromethane	11	U
107-02-8	Acrolein	54	U
75-35-4	1,1-Dichloroethene	11	U
76-13-1	Freon TF	11	U
67-64-1	Acetone	54	U
74-88-4	Methyl Iodide	11	U
75-15-0	Carbon Disulfide	11	U
107-05-1	Allyl Chloride	11	U
75-09-2	Methylene Chloride	11	U
107-13-1	Acrylonitrile	11	U
156-60-5	trans-1,2-Dichloroethene	11	U
1634-04-4	Methyl-t-Butyl Ether	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
75-34-3	1,1-Dichloroethane	11	U
108-05-4	Vinyl Acetate	11	U
126-99-8	Chloroprene	11	U
594-20-7	2,2-Dichloropropane	11	U
156-59-2	cis-1,2-Dichloroethene	11	U
78-93-3	2-Butanone	54	U
107-12-0	Propionitrile	43	U
74-97-5	Bromochloromethane	11	U
126-98-7	Methacrylonitrile	11	U
109-99-9	Tetrahydrofuran	150	U
67-66-3	Chloroform	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
563-58-6	1,1-Dichloropropene	11	U
71-43-2	Benzene	11	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25168 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730893

Sample wt/vol: 9.3 (g/mL) G Lab File ID: 730893E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	540	U
107-06-2	1,2-Dichloroethane	11	U
79-01-6	Trichloroethene	11	U
78-87-5	1,2-Dichloropropane	11	U
74-95-3	Dibromomethane	11	U
80-62-6	Methyl Methacrylate	11	U
123-91-1	1,4-Dioxane	540	U
75-27-4	Bromodichloromethane	11	U
110-75-8	2-Chloroethyl Vinyl Ether	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
108-10-1	4-Methyl-2-pentanone	54	U
108-88-3	Toluene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
97-63-2	Ethyl Methacrylate	11	U
79-00-5	1,1,2-Trichloroethane	11	U
127-18-4	Tetrachloroethene	11	U
142-28-9	1,3-Dichloropropane	11	U
591-78-6	2-Hexanone	54	U
124-48-1	Dibromochloromethane	11	U
106-93-4	1,2-Dibromoethane	11	U
108-90-7	Chlorobenzene	11	U
630-20-6	1,1,1,2-Tetrachloroethane	11	U
100-41-4	Ethylbenzene	11	U
1330-20-7	Xylene (m,p)	11	U
95-47-6	Xylene (o)	11	U
1330-20-7	Xylene (total)	11	U
100-42-5	Styrene	11	U
75-25-2	Bromoform	11	U
98-82-8	Isopropylbenzene	11	U
1476-11-5	cis-1,4-Dichloro-2-butene	11	U
108-86-1	Bromobenzene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
96-18-4	1,2,3-Trichloropropane	11	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25168 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730893

Sample wt/vol: 9.3 (g/mL) G Lab File ID: 730893E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	11	U
103-65-1	n-Propylbenzene	11	U
95-49-8	2-Chlorotoluene	11	U
106-43-4	4-Chlorotoluene	11	U
108-67-8	1,3,5-Trimethylbenzene	11	U
98-06-6	tert-Butylbenzene	11	U
95-63-6	1,2,4-Trimethylbenzene	11	U
135-98-8	sec-Butylbenzene	11	U
541-73-1	1,3-Dichlorobenzene	11	U
99-87-6	4-Isopropyltoluene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
104-51-8	n-Butylbenzene	11	U
96-12-8	1,2-Dibromo-3-Chloropropane	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
87-68-3	Hexachlorobutadiene	11	U
91-20-3	Naphthalene	11	U
87-61-6	1,2,3-Trichlorobenzene	11	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25196 30A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730900

Sample wt/vol: 10.4 (g/mL) G Lab File ID: 730900E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	9.7	U
74-87-3	Chloromethane	9.7	U
75-01-4	Vinyl Chloride	9.7	U
74-83-9	Bromomethane	9.7	U
75-00-3	Chloroethane	9.7	U
75-69-4	Trichlorofluoromethane	9.7	U
107-02-8	Acrolein	48	U
75-35-4	1,1-Dichloroethene	9.7	U
76-13-1	Freon TF	9.7	U
67-64-1	Acetone	48	U
74-88-4	Methyl Iodide	9.7	U
75-15-0	Carbon Disulfide	9.7	U
107-05-1	Allyl Chloride	9.7	U
75-09-2	Methylene Chloride	9.7	U
107-13-1	Acrylonitrile	9.7	U
156-60-5	trans-1,2-Dichloroethene	9.7	U
1634-04-4	Methyl-t-Butyl Ether	9.7	U
540-59-0	1,2-Dichloroethene (total)	9.7	U
75-34-3	1,1-Dichloroethane	9.7	U
108-05-4	Vinyl Acetate	9.7	U
126-99-8	Chloroprene	9.7	U
594-20-7	2,2-Dichloropropane	9.7	U
156-59-2	cis-1,2-Dichloroethene	9.7	U
78-93-3	2-Butanone	48	U
107-12-0	Propionitrile	39	U
74-97-5	Bromochloromethane	9.7	U
126-98-7	Methacrylonitrile	9.7	U
109-99-9	Tetrahydrofuran	140	U
67-66-3	Chloroform	9.7	U
71-55-6	1,1,1-Trichloroethane	9.7	U
56-23-5	Carbon Tetrachloride	9.7	U
563-58-6	1,1-Dichloropropene	9.7	U
71-43-2	Benzene	9.7	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25196 30A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730900

Sample wt/vol: 10.4 (g/mL) G Lab File ID: 730900E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	480	U
107-06-2	1,2-Dichloroethane	9.7	U
79-01-6	Trichloroethene	9.7	U
78-87-5	1,2-Dichloropropane	9.7	U
74-95-3	Dibromomethane	9.7	U
80-62-6	Methyl Methacrylate	9.7	U
123-91-1	1,4-Dioxane	480	U
75-27-4	Bromodichloromethane	9.7	U
110-75-8	2-Chloroethyl Vinyl Ether	9.7	U
10061-01-5	cis-1,3-Dichloropropene	9.7	U
108-10-1	4-Methyl-2-pentanone	48	U
108-88-3	Toluene	9.7	U
10061-02-6	trans-1,3-Dichloropropene	9.7	U
97-63-2	Ethyl Methacrylate	9.7	U
79-00-5	1,1,2-Trichloroethane	9.7	U
127-18-4	Tetrachloroethene	9.7	U
142-28-9	1,3-Dichloropropane	9.7	U
591-78-6	2-Hexanone	48	U
124-48-1	Dibromochloromethane	9.7	U
106-93-4	1,2-Dibromoethane	9.7	U
108-90-7	Chlorobenzene	9.7	U
630-20-6	1,1,1,2-Tetrachloroethane	9.7	U
100-41-4	Ethylbenzene	9.7	U
1330-20-7	Xylene (m,p)	9.7	U
95-47-6	Xylene (o)	9.7	U
1330-20-7	Xylene (total)	9.7	U
100-42-5	Styrene	9.7	U
75-25-2	Bromoform	9.7	U
98-82-8	Isopropylbenzene	9.7	U
1476-11-5	cis-1,4-Dichloro-2-butene	9.7	U
108-86-1	Bromobenzene	9.7	U
79-34-5	1,1,2,2-Tetrachloroethane	9.7	U
96-18-4	1,2,3-Trichloropropane	9.7	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25196 30A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730900

Sample wt/vol: 10.4 (g/mL) G Lab File ID: 730900E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	9.7	U
103-65-1	n-Propylbenzene	9.7	U
95-49-8	2-Chlorotoluene	9.7	U
106-43-4	4-Chlorotoluene	9.7	U
108-67-8	1,3,5-Trimethylbenzene	9.7	U
98-06-6	tert-Butylbenzene	9.7	U
95-63-6	1,2,4-Trimethylbenzene	9.7	U
135-98-8	sec-Butylbenzene	9.7	U
541-73-1	1,3-Dichlorobenzene	9.7	U
99-87-6	4-Isopropyltoluene	9.7	U
106-46-7	1,4-Dichlorobenzene	9.7	U
95-50-1	1,2-Dichlorobenzene	9.7	U
104-51-8	n-Butylbenzene	9.7	U
96-12-8	1,2-Dibromo-3-Chloropropane	9.7	U
120-82-1	1,2,4-Trichlorobenzene	9.7	U
87-68-3	Hexachlorobutadiene	9.7	U
91-20-3	Naphthalene	9.7	U
87-61-6	1,2,3-Trichlorobenzene	9.7	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25202 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730896

Sample wt/vol: 9.6 (g/mL) G Lab File ID: 730896E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
107-02-8	Acrolein	52	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	Freon TF	10	U
67-64-1	Acetone	52	U
74-88-4	Methyl Iodide	10	U
75-15-0	Carbon Disulfide	10	U
107-05-1	Allyl Chloride	10	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl-t-Butyl Ether	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-3	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
126-99-8	Chloroprene	10	U
594-20-7	2,2-Dichloropropane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	52	U
107-12-0	Propionitrile	41	U
74-97-5	Bromochloromethane	10	U
126-98-7	Methacrylonitrile	10	U
109-99-9	Tetrahydrofuran	150	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	5.5	JB
56-23-5	Carbon Tetrachloride	10	U
563-58-6	1,1-Dichloropropene	10	U
71-43-2	Benzene	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25202 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730896

Sample wt/vol: 9.6 (g/mL) G Lab File ID: 730896E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	520	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
74-95-3	Dibromomethane	10	U
80-62-6	Methyl Methacrylate	10	U
123-91-1	1,4-Dioxane	520	U
75-27-4	Bromodichloromethane	10	U
110-75-8	2-Chloroethyl Vinyl Ether	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	52	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
97-63-2	Ethyl Methacrylate	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
142-28-9	1,3-Dichloropropane	10	U
591-78-6	2-Hexanone	52	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
630-20-6	1,1,1,2-Tetrachloroethane	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (m,p)	10	U
95-47-6	Xylene (o)	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
1476-11-5	cis-1,4-Dichloro-2-butene	10	U
108-86-1	Bromobenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
96-18-4	1,2,3-Trichloropropane	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25202 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730896

Sample wt/vol: 9.6 (g/mL) G Lab File ID: 730896E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	10	U
103-65-1	n-Propylbenzene	10	U
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
108-67-8	1,3,5-Trimethylbenzene	10	U
98-06-6	tert-Butylbenzene	10	U
95-63-6	1,2,4-Trimethylbenzene	10	U
135-98-8	sec-Butylbenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
99-87-6	4-Isopropyltoluene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
104-51-8	n-Butylbenzene	10	U
96-12-8	1,2-Dibromo-3-Chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
87-68-3	Hexachlorobutadiene	10	U
91-20-3	Naphthalene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25213A 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730897

Sample wt/vol: 9.3 (g/mL) G Lab File ID: 730897E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	11	U
74-87-3	Chloromethane	11	U
75-01-4	Vinyl Chloride	11	U
74-83-9	Bromomethane	11	U
75-00-3	Chloroethane	11	U
75-69-4	Trichlorofluoromethane	11	U
107-02-8	Acrolein	54	U
75-35-4	1,1-Dichloroethene	11	U
76-13-1	Freon TF	11	U
67-64-1	Acetone	54	U
74-88-4	Methyl Iodide	11	U
75-15-0	Carbon Disulfide	11	U
107-05-1	Allyl Chloride	11	U
75-09-2	Methylene Chloride	11	U
107-13-1	Acrylonitrile	11	U
156-60-5	trans-1,2-Dichloroethene	11	U
1634-04-4	Methyl-t-Butyl Ether	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
75-34-3	1,1-Dichloroethane	11	U
108-05-4	Vinyl Acetate	11	U
126-99-8	Chloroprene	11	U
594-20-7	2,2-Dichloropropane	11	U
156-59-2	cis-1,2-Dichloroethene	11	U
78-93-3	2-Butanone	54	U
107-12-0	Propionitrile	43	U
74-97-5	Bromochloromethane	11	U
126-98-7	Methacrylonitrile	11	U
109-99-9	Tetrahydrofuran	150	U
67-66-3	Chloroform	11	U
71-55-6	1,1,1-Trichloroethane	9.9	JB
56-23-5	Carbon Tetrachloride	11	U
563-58-6	1,1-Dichloropropene	11	U
71-43-2	Benzene	11	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25213A 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730897

Sample wt/vol: 9.3 (g/mL) G Lab File ID: 730897E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	540	U
107-06-2	1,2-Dichloroethane	11	U
79-01-6	Trichloroethene	11	U
78-87-5	1,2-Dichloropropane	11	U
74-95-3	Dibromomethane	11	U
80-62-6	Methyl Methacrylate	11	U
123-91-1	1,4-Dioxane	540	U
75-27-4	Bromodichloromethane	11	U
110-75-8	2-Chloroethyl Vinyl Ether	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
108-10-1	4-Methyl-2-pentanone	54	U
108-88-3	Toluene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
97-63-2	Ethyl Methacrylate	11	U
79-00-5	1,1,2-Trichloroethane	11	U
127-18-4	Tetrachloroethene	11	U
142-28-9	1,3-Dichloropropane	11	U
591-78-6	2-Hexanone	54	U
124-48-1	Dibromochloromethane	11	U
106-93-4	1,2-Dibromoethane	11	U
108-90-7	Chlorobenzene	11	U
630-20-6	1,1,1,2-Tetrachloroethane	11	U
100-41-4	Ethylbenzene	11	U
1330-20-7	Xylene (m,p)	11	U
95-47-6	Xylene (o)	11	U
1330-20-7	Xylene (total)	11	U
100-42-5	Styrene	11	U
75-25-2	Bromoform	11	U
98-82-8	Isopropylbenzene	11	U
1476-11-5	cis-1,4-Dichloro-2-butene	11	U
108-86-1	Bromobenzene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
96-18-4	1,2,3-Trichloropropane	11	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25213A 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730897

Sample wt/vol: 9.3 (g/mL) G Lab File ID: 730897E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	11	U
103-65-1	n-Propylbenzene	11	U
95-49-8	2-Chlorotoluene	11	U
106-43-4	4-Chlorotoluene	11	U
108-67-8	1,3,5-Trimethylbenzene	11	U
98-06-6	tert-Butylbenzene	11	U
95-63-6	1,2,4-Trimethylbenzene	11	U
135-98-8	sec-Butylbenzene	11	U
541-73-1	1,3-Dichlorobenzene	11	U
99-87-6	4-Isopropyltoluene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
104-51-8	n-Butylbenzene	11	U
96-12-8	1,2-Dibromo-3-Chloropropane	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
87-68-3	Hexachlorobutadiene	11	U
91-20-3	Naphthalene	11	U
87-61-6	1,2,3-Trichlorobenzene	11	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25215 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730899

Sample wt/vol: 11.9 (g/mL) G Lab File ID: 730899E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.4	U
74-87-3	Chloromethane	8.4	U
75-01-4	Vinyl Chloride	8.4	U
74-83-9	Bromomethane	8.4	U
75-00-3	Chloroethane	8.4	U
75-69-4	Trichlorofluoromethane	8.4	U
107-02-8	Acrolein	42	U
75-35-4	1,1-Dichloroethene	8.4	U
76-13-1	Freon TF	8.4	U
67-64-1	Acetone	42	U
74-88-4	Methyl Iodide	8.4	U
75-15-0	Carbon Disulfide	8.4	U
107-05-1	Allyl Chloride	8.4	U
75-09-2	Methylene Chloride	8.4	U
107-13-1	Acrylonitrile	8.4	U
156-60-5	trans-1,2-Dichloroethene	8.4	U
1634-04-4	Methyl-t-Butyl Ether	8.4	U
540-59-0	1,2-Dichloroethene (total)	8.4	U
75-34-3	1,1-Dichloroethane	8.4	U
108-05-4	Vinyl Acetate	8.4	U
126-99-8	Chloroprene	8.4	U
594-20-7	2,2-Dichloropropane	8.4	U
156-59-2	cis-1,2-Dichloroethene	8.4	U
78-93-3	2-Butanone	42	U
107-12-0	Propionitrile	34	U
74-97-5	Bromochloromethane	8.4	U
126-98-7	Methacrylonitrile	8.4	U
109-99-9	Tetrahydrofuran	120	U
67-66-3	Chloroform	8.4	U
71-55-6	1,1,1-Trichloroethane	8.4	U
56-23-5	Carbon Tetrachloride	8.4	U
563-58-6	1,1-Dichloropropene	8.4	U
71-43-2	Benzene	8.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25215 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730899

Sample wt/vol: 11.9 (g/mL) G Lab File ID: 730899E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	420	U
107-06-2	1,2-Dichloroethane	8.4	U
79-01-6	Trichloroethene	8.4	U
78-87-5	1,2-Dichloropropane	8.4	U
74-95-3	Dibromomethane	8.4	U
80-62-6	Methyl Methacrylate	8.4	U
123-91-1	1,4-Dioxane	420	U
75-27-4	Bromodichloromethane	8.4	U
110-75-8	2-Chloroethyl Vinyl Ether	8.4	U
10061-01-5	cis-1,3-Dichloropropene	8.4	U
108-10-1	4-Methyl-2-pentanone	42	U
108-88-3	Toluene	8.4	U
10061-02-6	trans-1,3-Dichloropropene	8.4	U
97-63-2	Ethyl Methacrylate	8.4	U
79-00-5	1,1,2-Trichloroethane	8.4	U
127-18-4	Tetrachloroethene	8.4	U
142-28-9	1,3-Dichloropropane	8.4	U
591-78-6	2-Hexanone	42	U
124-48-1	Dibromochloromethane	8.4	U
106-93-4	1,2-Dibromoethane	8.4	U
108-90-7	Chlorobenzene	8.4	U
630-20-6	1,1,1,2-Tetrachloroethane	8.4	U
100-41-4	Ethylbenzene	8.4	U
1330-20-7	Xylene (m,p)	8.4	U
95-47-6	Xylene (o)	8.4	U
1330-20-7	Xylene (total)	8.4	U
100-42-5	Styrene	8.4	U
75-25-2	Bromoform	8.4	U
98-82-8	Isopropylbenzene	8.4	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.4	U
108-86-1	Bromobenzene	8.4	U
79-34-5	1,1,2,2-Tetrachloroethane	8.4	U
96-18-4	1,2,3-Trichloropropane	8.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25215 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730899

Sample wt/vol: 11.9 (g/mL) G Lab File ID: 730899E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.4	U
103-65-1	n-Propylbenzene	8.4	U
95-49-8	2-Chlorotoluene	8.4	U
106-43-4	4-Chlorotoluene	8.4	U
108-67-8	1,3,5-Trimethylbenzene	8.4	U
98-06-6	tert-Butylbenzene	8.4	U
95-63-6	1,2,4-Trimethylbenzene	8.4	U
135-98-8	sec-Butylbenzene	8.4	U
541-73-1	1,3-Dichlorobenzene	8.4	U
99-87-6	4-Isopropyltoluene	8.4	U
106-46-7	1,4-Dichlorobenzene	8.4	U
95-50-1	1,2-Dichlorobenzene	8.4	U
104-51-8	n-Butylbenzene	8.4	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.4	U
120-82-1	1,2,4-Trichlorobenzene	8.4	U
87-68-3	Hexachlorobutadiene	8.4	U
91-20-3	Naphthalene	8.4	U
87-61-6	1,2,3-Trichlorobenzene	8.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25220 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730898

Sample wt/vol: 9.1 (g/mL) G Lab File ID: 730898E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	11	U
74-87-3	Chloromethane	11	U
75-01-4	Vinyl Chloride	11	U
74-83-9	Bromomethane	11	U
75-00-3	Chloroethane	11	U
75-69-4	Trichlorofluoromethane	11	U
107-02-8	Acrolein	55	U
75-35-4	1,1-Dichloroethene	11	U
76-13-1	Freon TF	11	U
67-64-1	Acetone	55	U
74-88-4	Methyl Iodide	11	U
75-15-0	Carbon Disulfide	11	U
107-05-1	Allyl Chloride	11	U
75-09-2	Methylene Chloride	11	U
107-13-1	Acrylonitrile	11	U
156-60-5	trans-1,2-Dichloroethene	11	U
1634-04-4	Methyl-t-Butyl Ether	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
75-34-3	1,1-Dichloroethane	11	U
108-05-4	Vinyl Acetate	11	U
126-99-8	Chloroprene	11	U
594-20-7	2,2-Dichloropropane	11	U
156-59-2	cis-1,2-Dichloroethene	11	U
78-93-3	2-Butanone	55	U
107-12-0	Propionitrile	44	U
74-97-5	Bromochloromethane	11	U
126-98-7	Methacrylonitrile	11	U
109-99-9	Tetrahydrofuran	150	U
67-66-3	Chloroform	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
563-58-6	1,1-Dichloropropene	11	U
71-43-2	Benzene	11	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25220 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730898

Sample wt/vol: 9.1 (g/mL) G Lab File ID: 730898E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	550	U
107-06-2	1,2-Dichloroethane	11	U
79-01-6	Trichloroethene	11	U
78-87-5	1,2-Dichloropropane	11	U
74-95-3	Dibromomethane	11	U
80-62-6	Methyl Methacrylate	11	U
123-91-1	1,4-Dioxane	550	U
75-27-4	Bromodichloromethane	11	U
110-75-8	2-Chloroethyl Vinyl Ether	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
108-10-1	4-Methyl-2-pentanone	55	U
108-88-3	Toluene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
97-63-2	Ethyl Methacrylate	11	U
79-00-5	1,1,2-Trichloroethane	11	U
127-18-4	Tetrachloroethene	11	U
142-28-9	1,3-Dichloropropane	11	U
591-78-6	2-Hexanone	55	U
124-48-1	Dibromochloromethane	11	U
106-93-4	1,2-Dibromoethane	11	U
108-90-7	Chlorobenzene	11	U
630-20-6	1,1,1,2-Tetrachloroethane	11	U
100-41-4	Ethylbenzene	11	U
1330-20-7	Xylene (m,p)	11	U
95-47-6	Xylene (o)	11	U
1330-20-7	Xylene (total)	11	U
100-42-5	Styrene	11	U
75-25-2	Bromoform	11	U
98-82-8	Isopropylbenzene	11	U
1476-11-5	cis-1,4-Dichloro-2-butene	11	U
108-86-1	Bromobenzene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
96-18-4	1,2,3-Trichloropropane	11	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25220 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730898

Sample wt/vol: 9.1 (g/mL) G Lab File ID: 730898E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	11	U
103-65-1	n-Propylbenzene	11	U
95-49-8	2-Chlorotoluene	11	U
106-43-4	4-Chlorotoluene	11	U
108-67-8	1,3,5-Trimethylbenzene	11	U
98-06-6	tert-Butylbenzene	11	U
95-63-6	1,2,4-Trimethylbenzene	11	U
135-98-8	sec-Butylbenzene	11	U
541-73-1	1,3-Dichlorobenzene	11	U
99-87-6	4-Isopropyltoluene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
104-51-8	n-Butylbenzene	11	U
96-12-8	1,2-Dibromo-3-Chloropropane	11	U
120-82-1	1,2,4-Trichlorobenzene	11	U
87-68-3	Hexachlorobutadiene	11	U
91-20-3	Naphthalene	11	U
87-61-6	1,2,3-Trichlorobenzene	11	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25233 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730902

Sample wt/vol: 10.7 (g/mL) G Lab File ID: 730902E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	9.4	U
74-87-3	Chloromethane	9.4	U
75-01-4	Vinyl Chloride	9.4	U
74-83-9	Bromomethane	9.4	U
75-00-3	Chloroethane	9.4	U
75-69-4	Trichlorofluoromethane	9.4	U
107-02-8	Acrolein	47	U
75-35-4	1,1-Dichloroethene	9.4	U
76-13-1	Freon TF	9.4	U
67-64-1	Acetone	47	U
74-88-4	Methyl Iodide	9.4	U
75-15-0	Carbon Disulfide	9.4	U
107-05-1	Allyl Chloride	9.4	U
75-09-2	Methylene Chloride	9.4	U
107-13-1	Acrylonitrile	9.4	U
156-60-5	trans-1,2-Dichloroethene	9.4	U
1634-04-4	Methyl-t-Butyl Ether	9.4	U
540-59-0	1,2-Dichloroethene (total)	9.4	U
75-34-3	1,1-Dichloroethane	9.4	U
108-05-4	Vinyl Acetate	9.4	U
126-99-8	Chloroprene	9.4	U
594-20-7	2,2-Dichloropropane	9.4	U
156-59-2	cis-1,2-Dichloroethene	9.4	U
78-93-3	2-Butanone	47	U
107-12-0	Propionitrile	37	U
74-97-5	Bromochloromethane	9.4	U
126-98-7	Methacrylonitrile	9.4	U
109-99-9	Tetrahydrofuran	130	U
67-66-3	Chloroform	9.4	U
71-55-6	1,1,1-Trichloroethane	9.4	U
56-23-5	Carbon Tetrachloride	9.4	U
563-58-6	1,1-Dichloropropene	9.4	U
71-43-2	Benzene	9.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25233 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730902

Sample wt/vol: 10.7 (g/mL) G Lab File ID: 730902E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	470	U
107-06-2	1,2-Dichloroethane	9.4	U
79-01-6	Trichloroethene	9.4	U
78-87-5	1,2-Dichloropropane	9.4	U
74-95-3	Dibromomethane	9.4	U
80-62-6	Methyl Methacrylate	9.4	U
123-91-1	1,4-Dioxane	470	U
75-27-4	Bromodichloromethane	9.4	U
110-75-8	2-Chloroethyl Vinyl Ether	9.4	U
10061-01-5	cis-1,3-Dichloropropene	9.4	U
108-10-1	4-Methyl-2-pentanone	47	U
108-88-3	Toluene	9.4	U
10061-02-6	trans-1,3-Dichloropropene	9.4	U
97-63-2	Ethyl Methacrylate	9.4	U
79-00-5	1,1,2-Trichloroethane	9.4	U
127-18-4	Tetrachloroethene	9.4	U
142-28-9	1,3-Dichloropropane	9.4	U
591-78-6	2-Hexanone	47	U
124-48-1	Dibromochloromethane	9.4	U
106-93-4	1,2-Dibromoethane	9.4	U
108-90-7	Chlorobenzene	9.4	U
630-20-6	1,1,1,2-Tetrachloroethane	9.4	U
100-41-4	Ethylbenzene	9.4	U
1330-20-7	Xylene (m,p)	9.4	U
95-47-6	Xylene (o)	9.4	U
1330-20-7	Xylene (total)	9.4	U
100-42-5	Styrene	9.4	U
75-25-2	Bromoform	9.4	U
98-82-8	Isopropylbenzene	9.4	U
1476-11-5	cis-1,4-Dichloro-2-butene	9.4	U
108-86-1	Bromobenzene	9.4	U
79-34-5	1,1,2,2-Tetrachloroethane	9.4	U
96-18-4	1,2,3-Trichloropropane	9.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25233 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730902

Sample wt/vol: 10.7 (g/mL) G Lab File ID: 730902E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	9.4	U
103-65-1	n-Propylbenzene	9.4	U
95-49-8	2-Chlorotoluene	9.4	U
106-43-4	4-Chlorotoluene	9.4	U
108-67-8	1,3,5-Trimethylbenzene	9.4	U
98-06-6	tert-Butylbenzene	9.4	U
95-63-6	1,2,4-Trimethylbenzene	9.4	U
135-98-8	sec-Butylbenzene	9.4	U
541-73-1	1,3-Dichlorobenzene	9.4	U
99-87-6	4-Isopropyltoluene	9.4	U
106-46-7	1,4-Dichlorobenzene	9.4	U
95-50-1	1,2-Dichlorobenzene	9.4	U
104-51-8	n-Butylbenzene	9.4	U
96-12-8	1,2-Dibromo-3-Chloropropane	9.4	U
120-82-1	1,2,4-Trichlorobenzene	9.4	U
87-68-3	Hexachlorobutadiene	9.4	U
91-20-3	Naphthalene	9.4	U
87-61-6	1,2,3-Trichlorobenzene	9.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25236 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730901

Sample wt/vol: 12.0 (g/mL) G Lab File ID: 730901E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.3	U
74-87-3	Chloromethane	8.3	U
75-01-4	Vinyl Chloride	8.3	U
74-83-9	Bromomethane	8.3	U
75-00-3	Chloroethane	8.3	U
75-69-4	Trichlorofluoromethane	8.3	U
107-02-8	Acrolein	42	U
75-35-4	1,1-Dichloroethene	8.3	U
76-13-1	Freon TF	8.3	U
67-64-1	Acetone	42	U
74-88-4	Methyl Iodide	8.3	U
75-15-0	Carbon Disulfide	8.3	U
107-05-1	Allyl Chloride	8.3	U
75-09-2	Methylene Chloride	8.3	U
107-13-1	Acrylonitrile	8.3	U
156-60-5	trans-1,2-Dichloroethene	8.3	U
1634-04-4	Methyl-t-Butyl Ether	8.3	U
540-59-0	1,2-Dichloroethene (total)	8.3	U
75-34-3	1,1-Dichloroethane	8.3	U
108-05-4	Vinyl Acetate	8.3	U
126-99-8	Chloroprene	8.3	U
594-20-7	2,2-Dichloropropane	8.3	U
156-59-2	cis-1,2-Dichloroethene	8.3	U
78-93-3	2-Butanone	42	U
107-12-0	Propionitrile	33	U
74-97-5	Bromochloromethane	8.3	U
126-98-7	Methacrylonitrile	8.3	U
109-99-9	Tetrahydrofuran	120	U
67-66-3	Chloroform	8.3	U
71-55-6	1,1,1-Trichloroethane	8.3	U
56-23-5	Carbon Tetrachloride	8.3	U
563-58-6	1,1-Dichloropropene	8.3	U
71-43-2	Benzene	8.3	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25236 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730901

Sample wt/vol: 12.0 (g/mL) G Lab File ID: 730901E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	420	U
107-06-2	1,2-Dichloroethane	8.3	U
79-01-6	Trichloroethene	8.3	U
78-87-5	1,2-Dichloropropane	8.3	U
74-95-3	Dibromomethane	8.3	U
80-62-6	Methyl Methacrylate	8.3	U
123-91-1	1,4-Dioxane	420	U
75-27-4	Bromodichloromethane	8.3	U
110-75-8	2-Chloroethyl Vinyl Ether	8.3	U
10061-01-5	cis-1,3-Dichloropropene	8.3	U
108-10-1	4-Methyl-2-pentanone	42	U
108-88-3	Toluene	8.3	U
10061-02-6	trans-1,3-Dichloropropene	8.3	U
97-63-2	Ethyl Methacrylate	8.3	U
79-00-5	1,1,2-Trichloroethane	8.3	U
127-18-4	Tetrachloroethene	8.3	U
142-28-9	1,3-Dichloropropane	8.3	U
591-78-6	2-Hexanone	42	U
124-48-1	Dibromochloromethane	8.3	U
106-93-4	1,2-Dibromoethane	8.3	U
108-90-7	Chlorobenzene	8.3	U
630-20-6	1,1,1,2-Tetrachloroethane	8.3	U
100-41-4	Ethylbenzene	8.3	U
1330-20-7	Xylene (m,p)	2.1	J
95-47-6	Xylene (o)	1.1	J
1330-20-7	Xylene (total)	3.3	J
100-42-5	Styrene	8.3	U
75-25-2	Bromoform	8.3	U
98-82-8	Isopropylbenzene	8.3	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.3	U
108-86-1	Bromobenzene	8.3	U
79-34-5	1,1,2,2-Tetrachloroethane	8.3	U
96-18-4	1,2,3-Trichloropropane	8.3	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25236 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730901

Sample wt/vol: 12.0 (g/mL) G Lab File ID: 730901E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.3	U
103-65-1	n-Propylbenzene	8.3	U
95-49-8	2-Chlorotoluene	8.3	U
106-43-4	4-Chlorotoluene	8.3	U
108-67-8	1,3,5-Trimethylbenzene	8.3	U
98-06-6	tert-Butylbenzene	8.3	U
95-63-6	1,2,4-Trimethylbenzene	8.3	U
135-98-8	sec-Butylbenzene	8.3	U
541-73-1	1,3-Dichlorobenzene	8.3	U
99-87-6	4-Isopropyltoluene	8.3	U
106-46-7	1,4-Dichlorobenzene	8.3	U
95-50-1	1,2-Dichlorobenzene	8.3	U
104-51-8	n-Butylbenzene	1.8	J
96-12-8	1,2-Dibromo-3-Chloropropane	8.3	U
120-82-1	1,2,4-Trichlorobenzene	1.7	J
87-68-3	Hexachlorobutadiene	3.0	J
91-20-3	Naphthalene	8.3	U
87-61-6	1,2,3-Trichlorobenzene	8.3	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25257 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730904

Sample wt/vol: 10.1 (g/mL) G Lab File ID: 730904E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	9.9	U
74-87-3	Chloromethane	9.9	U
75-01-4	Vinyl Chloride	9.9	U
74-83-9	Bromomethane	9.9	U
75-00-3	Chloroethane	9.9	U
75-69-4	Trichlorofluoromethane	9.9	U
107-02-8	Acrolein	49	U
75-35-4	1,1-Dichloroethene	9.9	U
76-13-1	Freon TF	9.9	U
67-64-1	Acetone	49	U
74-88-4	Methyl Iodide	9.9	U
75-15-0	Carbon Disulfide	9.9	U
107-05-1	Allyl Chloride	9.9	U
75-09-2	Methylene Chloride	9.9	U
107-13-1	Acrylonitrile	9.9	U
156-60-5	trans-1,2-Dichloroethene	9.9	U
1634-04-4	Methyl-t-Butyl Ether	9.9	U
540-59-0	1,2-Dichloroethene (total)	9.9	U
75-34-3	1,1-Dichloroethane	9.9	U
108-05-4	Vinyl Acetate	9.9	U
126-99-8	Chloroprene	9.9	U
594-20-7	2,2-Dichloropropane	9.9	U
156-59-2	cis-1,2-Dichloroethene	9.9	U
78-93-3	2-Butanone	49	U
107-12-0	Propionitrile	40	U
74-97-5	Bromochloromethane	9.9	U
126-98-7	Methacrylonitrile	9.9	U
109-99-9	Tetrahydrofuran	140	U
67-66-3	Chloroform	9.9	U
71-55-6	1,1,1-Trichloroethane	9.9	U
56-23-5	Carbon Tetrachloride	9.9	U
563-58-6	1,1-Dichloropropene	9.9	U
71-43-2	Benzene	9.9	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25257 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730904

Sample wt/vol: 10.1 (g/mL) G Lab File ID: 730904E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	490	U
107-06-2	1,2-Dichloroethane	9.9	U
79-01-6	Trichloroethene	9.9	U
78-87-5	1,2-Dichloropropane	9.9	U
74-95-3	Dibromomethane	9.9	U
80-62-6	Methyl Methacrylate	9.9	U
123-91-1	1,4-Dioxane	490	U
75-27-4	Bromodichloromethane	9.9	U
110-75-8	2-Chloroethyl Vinyl Ether	9.9	U
10061-01-5	cis-1,3-Dichloropropene	9.9	U
108-10-1	4-Methyl-2-pentanone	49	U
108-88-3	Toluene	9.9	U
10061-02-6	trans-1,3-Dichloropropene	9.9	U
97-63-2	Ethyl Methacrylate	9.9	U
79-00-5	1,1,2-Trichloroethane	9.9	U
127-18-4	Tetrachloroethene	9.9	U
142-28-9	1,3-Dichloropropane	9.9	U
591-78-6	2-Hexanone	49	U
124-48-1	Dibromochloromethane	9.9	U
106-93-4	1,2-Dibromoethane	9.9	U
108-90-7	Chlorobenzene	9.9	U
630-20-6	1,1,1,2-Tetrachloroethane	9.9	U
100-41-4	Ethylbenzene	9.9	U
1330-20-7	Xylene (m,p)	9.9	U
95-47-6	Xylene (o)	9.9	U
1330-20-7	Xylene (total)	9.9	U
100-42-5	Styrene	9.9	U
75-25-2	Bromoform	9.9	U
98-82-8	Isopropylbenzene	9.9	U
1476-11-5	cis-1,4-Dichloro-2-butene	9.9	U
108-86-1	Bromobenzene	9.9	U
79-34-5	1,1,2,2-Tetrachloroethane	9.9	U
96-18-4	1,2,3-Trichloropropane	9.9	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25257 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730904

Sample wt/vol: 10.1 (g/mL) G Lab File ID: 730904E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	9.9	U
103-65-1	n-Propylbenzene	9.9	U
95-49-8	2-Chlorotoluene	9.9	U
106-43-4	4-Chlorotoluene	9.9	U
108-67-8	1,3,5-Trimethylbenzene	9.9	U
98-06-6	tert-Butylbenzene	9.9	U
95-63-6	1,2,4-Trimethylbenzene	9.9	U
135-98-8	sec-Butylbenzene	9.9	U
541-73-1	1,3-Dichlorobenzene	9.9	U
99-87-6	4-Isopropyltoluene	9.9	U
106-46-7	1,4-Dichlorobenzene	9.9	U
95-50-1	1,2-Dichlorobenzene	9.9	U
104-51-8	n-Butylbenzene	9.9	U
96-12-8	1,2-Dibromo-3-Chloropropane	9.9	U
120-82-1	1,2,4-Trichlorobenzene	9.9	U
87-68-3	Hexachlorobutadiene	9.9	U
91-20-3	Naphthalene	9.9	U
87-61-6	1,2,3-Trichlorobenzene	9.9	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25259 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730905

Sample wt/vol: 12.2 (g/mL) G Lab File ID: 730905E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.2	U
74-87-3	Chloromethane	8.2	U
75-01-4	Vinyl Chloride	8.2	U
74-83-9	Bromomethane	8.2	U
75-00-3	Chloroethane	8.2	U
75-69-4	Trichlorofluoromethane	8.2	U
107-02-8	Acrolein	41	U
75-35-4	1,1-Dichloroethene	8.2	U
76-13-1	Freon TF	8.2	U
67-64-1	Acetone	41	U
74-88-4	Methyl Iodide	8.2	U
75-15-0	Carbon Disulfide	8.2	U
107-05-1	Allyl Chloride	8.2	U
75-09-2	Methylene Chloride	8.2	U
107-13-1	Acrylonitrile	8.2	U
156-60-5	trans-1,2-Dichloroethene	8.2	U
1634-04-4	Methyl-t-Butyl Ether	8.2	U
540-59-0	1,2-Dichloroethene (total)	8.2	U
75-34-3	1,1-Dichloroethane	8.2	U
108-05-4	Vinyl Acetate	8.2	U
126-99-8	Chloroprene	8.2	U
594-20-7	2,2-Dichloropropane	8.2	U
156-59-2	cis-1,2-Dichloroethene	8.2	U
78-93-3	2-Butanone	41	U
107-12-0	Propionitrile	33	U
74-97-5	Bromochloromethane	8.2	U
126-98-7	Methacrylonitrile	8.2	U
109-99-9	Tetrahydrofuran	110	U
67-66-3	Chloroform	8.2	U
71-55-6	1,1,1-Trichloroethane	8.2	U
56-23-5	Carbon Tetrachloride	8.2	U
563-58-6	1,1-Dichloropropene	8.2	U
71-43-2	Benzene	8.2	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25259 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730905

Sample wt/vol: 12.2 (g/mL) G Lab File ID: 730905E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	410	U
107-06-2	1,2-Dichloroethane	8.2	U
79-01-6	Trichloroethene	8.2	U
78-87-5	1,2-Dichloropropane	8.2	U
74-95-3	Dibromomethane	8.2	U
80-62-6	Methyl Methacrylate	8.2	U
123-91-1	1,4-Dioxane	410	U
75-27-4	Bromodichloromethane	8.2	U
110-75-8	2-Chloroethyl Vinyl Ether	8.2	U
10061-01-5	cis-1,3-Dichloropropene	8.2	U
108-10-1	4-Methyl-2-pentanone	41	U
108-88-3	Toluene	8.2	U
10061-02-6	trans-1,3-Dichloropropene	8.2	U
97-63-2	Ethyl Methacrylate	8.2	U
79-00-5	1,1,2-Trichloroethane	8.2	U
127-18-4	Tetrachloroethene	8.2	U
142-28-9	1,3-Dichloropropane	8.2	U
591-78-6	2-Hexanone	41	U
124-48-1	Dibromochloromethane	8.2	U
106-93-4	1,2-Dibromoethane	8.2	U
108-90-7	Chlorobenzene	8.2	U
630-20-6	1,1,1,2-Tetrachloroethane	8.2	U
100-41-4	Ethylbenzene	8.2	U
1330-20-7	Xylene (m,p)	8.2	U
95-47-6	Xylene (o)	8.2	U
1330-20-7	Xylene (total)	8.2	U
100-42-5	Styrene	8.2	U
75-25-2	Bromoform	8.2	U
98-82-8	Isopropylbenzene	8.2	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.2	U
108-86-1	Bromobenzene	8.2	U
79-34-5	1,1,2,2-Tetrachloroethane	8.2	U
96-18-4	1,2,3-Trichloropropane	8.2	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25259 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730905

Sample wt/vol: 12.2 (g/mL) G Lab File ID: 730905E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.2	U
103-65-1	n-Propylbenzene	8.2	U
95-49-8	2-Chlorotoluene	8.2	U
106-43-4	4-Chlorotoluene	8.2	U
108-67-8	1,3,5-Trimethylbenzene	8.2	U
98-06-6	tert-Butylbenzene	8.2	U
95-63-6	1,2,4-Trimethylbenzene	8.2	U
135-98-8	sec-Butylbenzene	8.2	U
541-73-1	1,3-Dichlorobenzene	8.2	U
99-87-6	4-Isopropyltoluene	8.2	U
106-46-7	1,4-Dichlorobenzene	8.2	U
95-50-1	1,2-Dichlorobenzene	8.2	U
104-51-8	n-Butylbenzene	8.2	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.2	U
120-82-1	1,2,4-Trichlorobenzene	8.2	U
87-68-3	Hexachlorobutadiene	8.2	U
91-20-3	Naphthalene	8.2	U
87-61-6	1,2,3-Trichlorobenzene	8.2	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25277 30A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730903

Sample wt/vol: 13.6 (g/mL) G Lab File ID: 730903E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	7.4	U
74-87-3	Chloromethane	7.4	U
75-01-4	Vinyl Chloride	7.4	U
74-83-9	Bromomethane	7.4	U
75-00-3	Chloroethane	7.4	U
75-69-4	Trichlorofluoromethane	7.4	U
107-02-8	Acrolein	37	U
75-35-4	1,1-Dichloroethene	7.4	U
76-13-1	Freon TF	7.4	U
67-64-1	Acetone	37	U
74-88-4	Methyl Iodide	7.4	U
75-15-0	Carbon Disulfide	7.4	U
107-05-1	Allyl Chloride	7.4	U
75-09-2	Methylene Chloride	7.4	U
107-13-1	Acrylonitrile	7.4	U
156-60-5	trans-1,2-Dichloroethene	7.4	U
1634-04-4	Methyl-t-Butyl Ether	7.4	U
540-59-0	1,2-Dichloroethene (total)	7.4	U
75-34-3	1,1-Dichloroethane	7.4	U
108-05-4	Vinyl Acetate	7.4	U
126-99-8	Chloroprene	7.4	U
594-20-7	2,2-Dichloropropane	7.4	U
156-59-2	cis-1,2-Dichloroethene	7.4	U
78-93-3	2-Butanone	37	U
107-12-0	Propionitrile	29	U
74-97-5	Bromochloromethane	7.4	U
126-98-7	Methacrylonitrile	7.4	U
109-99-9	Tetrahydrofuran	100	U
67-66-3	Chloroform	7.4	U
71-55-6	1,1,1-Trichloroethane	7.4	U
56-23-5	Carbon Tetrachloride	7.4	U
563-58-6	1,1-Dichloropropene	7.4	U
71-43-2	Benzene	7.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25277 30A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730903

Sample wt/vol: 13.6 (g/mL) G Lab File ID: 730903E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	370	U
107-06-2	1,2-Dichloroethane	7.4	U
79-01-6	Trichloroethene	7.4	U
78-87-5	1,2-Dichloropropane	7.4	U
74-95-3	Dibromomethane	7.4	U
80-62-6	Methyl Methacrylate	7.4	U
123-91-1	1,4-Dioxane	370	U
75-27-4	Bromodichloromethane	7.4	U
110-75-8	2-Chloroethyl Vinyl Ether	7.4	U
10061-01-5	cis-1,3-Dichloropropene	7.4	U
108-10-1	4-Methyl-2-pentanone	37	U
108-88-3	Toluene	7.4	U
10061-02-6	trans-1,3-Dichloropropene	7.4	U
97-63-2	Ethyl Methacrylate	7.4	U
79-00-5	1,1,2-Trichloroethane	7.4	U
127-18-4	Tetrachloroethene	7.4	U
142-28-9	1,3-Dichloropropane	7.4	U
591-78-6	2-Hexanone	37	U
124-48-1	Dibromochloromethane	7.4	U
106-93-4	1,2-Dibromoethane	7.4	U
108-90-7	Chlorobenzene	7.4	U
630-20-6	1,1,1,2-Tetrachloroethane	7.4	U
100-41-4	Ethylbenzene	7.4	U
1330-20-7	Xylene (m,p)	7.4	U
95-47-6	Xylene (o)	7.4	U
1330-20-7	Xylene (total)	7.4	U
100-42-5	Styrene	7.4	U
75-25-2	Bromoform	7.4	U
98-82-8	Isopropylbenzene	7.4	U
1476-11-5	cis-1,4-Dichloro-2-butene	7.4	U
108-86-1	Bromobenzene	7.4	U
79-34-5	1,1,2,2-Tetrachloroethane	7.4	U
96-18-4	1,2,3-Trichloropropane	7.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25277 30A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730903

Sample wt/vol: 13.6 (g/mL) G Lab File ID: 730903E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	7.4	U
103-65-1	n-Propylbenzene	7.4	U
95-49-8	2-Chlorotoluene	7.4	U
106-43-4	4-Chlorotoluene	7.4	U
108-67-8	1,3,5-Trimethylbenzene	7.4	U
98-06-6	tert-Butylbenzene	7.4	U
95-63-6	1,2,4-Trimethylbenzene	7.4	U
135-98-8	sec-Butylbenzene	7.4	U
541-73-1	1,3-Dichlorobenzene	7.4	U
99-87-6	4-Isopropyltoluene	7.4	U
106-46-7	1,4-Dichlorobenzene	7.4	U
95-50-1	1,2-Dichlorobenzene	7.4	U
104-51-8	n-Butylbenzene	7.4	U
96-12-8	1,2-Dibromo-3-Chloropropane	7.4	U
120-82-1	1,2,4-Trichlorobenzene	7.4	U
87-68-3	Hexachlorobutadiene	7.4	U
91-20-3	Naphthalene	7.4	U
87-61-6	1,2,3-Trichlorobenzene	7.4	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25284 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730906

Sample wt/vol: 10.8 (g/mL) G Lab File ID: 730906E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	9.3	U
74-87-3	Chloromethane	9.3	U
75-01-4	Vinyl Chloride	9.3	U
74-83-9	Bromomethane	9.3	U
75-00-3	Chloroethane	9.3	U
75-69-4	Trichlorofluoromethane	9.3	U
107-02-8	Acrolein	46	U
75-35-4	1,1-Dichloroethene	9.3	U
76-13-1	Freon TF	9.3	U
67-64-1	Acetone	46	U
74-88-4	Methyl Iodide	9.3	U
75-15-0	Carbon Disulfide	9.3	U
107-05-1	Allyl Chloride	9.3	U
75-09-2	Methylene Chloride	9.3	U
107-13-1	Acrylonitrile	9.3	U
156-60-5	trans-1,2-Dichloroethene	9.3	U
1634-04-4	Methyl-t-Butyl Ether	9.3	U
540-59-0	1,2-Dichloroethene (total)	9.3	U
75-34-3	1,1-Dichloroethane	9.3	U
108-05-4	Vinyl Acetate	9.3	U
126-99-8	Chloroprene	9.3	U
594-20-7	2,2-Dichloropropane	9.3	U
156-59-2	cis-1,2-Dichloroethene	9.3	U
78-93-3	2-Butanone	46	U
107-12-0	Propionitrile	37	U
74-97-5	Bromochloromethane	9.3	U
126-98-7	Methacrylonitrile	9.3	U
109-99-9	Tetrahydrofuran	130	U
67-66-3	Chloroform	9.3	U
71-55-6	1,1,1-Trichloroethane	9.3	U
56-23-5	Carbon Tetrachloride	9.3	U
563-58-6	1,1-Dichloropropene	9.3	U
71-43-2	Benzene	9.3	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25284 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730906

Sample wt/vol: 10.8 (g/mL) G Lab File ID: 730906E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	460	U
107-06-2	1,2-Dichloroethane	9.3	U
79-01-6	Trichloroethene	9.3	U
78-87-5	1,2-Dichloropropane	9.3	U
74-95-3	Dibromomethane	9.3	U
80-62-6	Methyl Methacrylate	9.3	U
123-91-1	1,4-Dioxane	460	U
75-27-4	Bromodichloromethane	9.3	U
110-75-8	2-Chloroethyl Vinyl Ether	9.3	U
10061-01-5	cis-1,3-Dichloropropene	9.3	U
108-10-1	4-Methyl-2-pentanone	46	U
108-88-3	Toluene	9.3	U
10061-02-6	trans-1,3-Dichloropropene	9.3	U
97-63-2	Ethyl Methacrylate	9.3	U
79-00-5	1,1,2-Trichloroethane	9.3	U
127-18-4	Tetrachloroethene	9.3	U
142-28-9	1,3-Dichloropropane	9.3	U
591-78-6	2-Hexanone	46	U
124-48-1	Dibromochloromethane	9.3	U
106-93-4	1,2-Dibromoethane	9.3	U
108-90-7	Chlorobenzene	9.3	U
630-20-6	1,1,1,2-Tetrachloroethane	9.3	U
100-41-4	Ethylbenzene	9.3	U
1330-20-7	Xylene (m,p)	9.3	U
95-47-6	Xylene (o)	9.3	U
1330-20-7	Xylene (total)	9.3	U
100-42-5	Styrene	9.3	U
75-25-2	Bromoform	9.3	U
98-82-8	Isopropylbenzene	9.3	U
1476-11-5	cis-1,4-Dichloro-2-butene	9.3	U
108-86-1	Bromobenzene	9.3	U
79-34-5	1,1,2,2-Tetrachloroethane	9.3	U
96-18-4	1,2,3-Trichloropropane	9.3	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25284 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730906

Sample wt/vol: 10.8 (g/mL) G Lab File ID: 730906E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	9.3	U
103-65-1	n-Propylbenzene	9.3	U
95-49-8	2-Chlorotoluene	9.3	U
106-43-4	4-Chlorotoluene	9.3	U
108-67-8	1,3,5-Trimethylbenzene	9.3	U
98-06-6	tert-Butylbenzene	9.3	U
95-63-6	1,2,4-Trimethylbenzene	9.3	U
135-98-8	sec-Butylbenzene	9.3	U
541-73-1	1,3-Dichlorobenzene	9.3	U
99-87-6	4-Isopropyltoluene	9.3	U
106-46-7	1,4-Dichlorobenzene	9.3	U
95-50-1	1,2-Dichlorobenzene	9.3	U
104-51-8	n-Butylbenzene	9.3	U
96-12-8	1,2-Dibromo-3-Chloropropane	9.3	U
120-82-1	1,2,4-Trichlorobenzene	9.3	U
87-68-3	Hexachlorobutadiene	9.3	U
91-20-3	Naphthalene	9.3	U
87-61-6	1,2,3-Trichlorobenzene	9.3	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-MEOH

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730907

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 730907E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/12/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
107-02-8	Acrolein	50	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	Freon TF	10	U
67-64-1	Acetone	50	U
74-88-4	Methyl Iodide	10	U
75-15-0	Carbon Disulfide	10	U
107-05-1	Allyl Chloride	10	U
75-09-2	Methylene Chloride	15	
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl-t-Butyl Ether	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-3	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
126-99-8	Chloroprene	10	U
594-20-7	2,2-Dichloropropane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	50	U
107-12-0	Propionitrile	40	U
74-97-5	Bromochloromethane	10	U
126-98-7	Methacrylonitrile	10	U
109-99-9	Tetrahydrofuran	140	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	5.4	J
56-23-5	Carbon Tetrachloride	10	U
563-58-6	1,1-Dichloropropene	10	U
71-43-2	Benzene	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-MEOH

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730907

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 730907E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/12/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	500	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
74-95-3	Dibromomethane	10	U
80-62-6	Methyl Methacrylate	10	U
123-91-1	1,4-Dioxane	500	U
75-27-4	Bromodichloromethane	10	U
110-75-8	2-Chloroethyl Vinyl Ether	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
97-63-2	Ethyl Methacrylate	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
142-28-9	1,3-Dichloropropane	10	U
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
630-20-6	1,1,1,2-Tetrachloroethane	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (m,p)	10	U
95-47-6	Xylene (o)	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
1476-11-5	cis-1,4-Dichloro-2-butene	10	U
108-86-1	Bromobenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
96-18-4	1,2,3-Trichloropropane	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-MEOH

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: 730907

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 730907E

Level: (low/med) MED Date Received: 11/02/07

% Moisture: not dec. _____ Date Analyzed: 11/12/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	10	U
103-65-1	n-Propylbenzene	10	U
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
108-67-8	1,3,5-Trimethylbenzene	10	U
98-06-6	tert-Butylbenzene	10	U
95-63-6	1,2,4-Trimethylbenzene	10	U
135-98-8	sec-Butylbenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
99-87-6	4-Isopropyltoluene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
104-51-8	n-Butylbenzene	10	U
96-12-8	1,2-Dibromo-3-Chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
87-68-3	Hexachlorobutadiene	10	U
91-20-3	Naphthalene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MEOH111207BLK

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: MEOH111207BLK

Sample wt/vol: 10.0 (g/mL) G Lab File ID: MPLB04EE

Level: (low/med) MED Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/12/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
107-02-8	Acrolein	50	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	Freon TF	10	U
67-64-1	Acetone	50	U
74-88-4	Methyl Iodide	10	U
75-15-0	Carbon Disulfide	10	U
107-05-1	Allyl Chloride	10	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl-t-Butyl Ether	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-3	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
126-99-8	Chloroprene	10	U
594-20-7	2,2-Dichloropropane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	86	
107-12-0	Propionitrile	40	U
74-97-5	Bromochloromethane	10	U
126-98-7	Methacrylonitrile	10	U
109-99-9	Tetrahydrofuran	140	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
563-58-6	1,1-Dichloropropene	10	U
71-43-2	Benzene	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MEOH111207BLK

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: MEOH111207BLK

Sample wt/vol: 10.0 (g/mL) G Lab File ID: MPLB04EE

Level: (low/med) MED Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/12/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	500	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
74-95-3	Dibromomethane	10	U
80-62-6	Methyl Methacrylate	10	U
123-91-1	1,4-Dioxane	500	U
75-27-4	Bromodichloromethane	10	U
110-75-8	2-Chloroethyl Vinyl Ether	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	6.0	J
10061-02-6	trans-1,3-Dichloropropene	10	U
97-63-2	Ethyl Methacrylate	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
142-28-9	1,3-Dichloropropane	10	U
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
630-20-6	1,1,1,2-Tetrachloroethane	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (m,p)	2.6	J
95-47-6	Xylene (o)	10	U
1330-20-7	Xylene (total)	2.7	J
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
1476-11-5	cis-1,4-Dichloro-2-butene	10	U
108-86-1	Bromobenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
96-18-4	1,2,3-Trichloropropane	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MEOH111207BLK

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: MEOH111207BLK

Sample wt/vol: 10.0 (g/mL) G Lab File ID: MPLB04EE

Level: (low/med) MED Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/12/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	10	U
103-65-1	n-Propylbenzene	10	U
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
108-67-8	1,3,5-Trimethylbenzene	10	U
98-06-6	tert-Butylbenzene	10	U
95-63-6	1,2,4-Trimethylbenzene	10	U
135-98-8	sec-Butylbenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
99-87-6	4-Isopropyltoluene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
104-51-8	n-Butylbenzene	10	U
96-12-8	1,2-Dibromo-3-Chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
87-68-3	Hexachlorobutadiene	10	U
91-20-3	Naphthalene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MEOH111307BLK

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: MEOH111307BLK

Sample wt/vol: 10.0 (g/mL) G Lab File ID: MPLB04EE

Level: (low/med) MED Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
107-02-8	Acrolein	50	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	Freon TF	10	U
67-64-1	Acetone	50	U
74-88-4	Methyl Iodide	10	U
75-15-0	Carbon Disulfide	10	U
107-05-1	Allyl Chloride	10	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl-t-Butyl Ether	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-3	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
126-99-8	Chloroprene	10	U
594-20-7	2,2-Dichloropropane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	94	
107-12-0	Propionitrile	40	U
74-97-5	Bromochloromethane	10	U
126-98-7	Methacrylonitrile	10	U
109-99-9	Tetrahydrofuran	140	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
563-58-6	1,1-Dichloropropene	10	U
71-43-2	Benzene	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MEOH111307BLK

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: MEOH111307BLK

Sample wt/vol: 10.0 (g/mL) G Lab File ID: MPLB04EE

Level: (low/med) MED Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	500	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
74-95-3	Dibromomethane	10	U
80-62-6	Methyl Methacrylate	10	U
123-91-1	1,4-Dioxane	500	U
75-27-4	Bromodichloromethane	10	U
110-75-8	2-Chloroethyl Vinyl Ether	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	5.7	J
10061-02-6	trans-1,3-Dichloropropene	10	U
97-63-2	Ethyl Methacrylate	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
142-28-9	1,3-Dichloropropane	10	U
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
630-20-6	1,1,1,2-Tetrachloroethane	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (m,p)	2.4	J
95-47-6	Xylene (o)	10	U
1330-20-7	Xylene (total)	2.5	J
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
1476-11-5	cis-1,4-Dichloro-2-butene	10	U
108-86-1	Bromobenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
96-18-4	1,2,3-Trichloropropane	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MEOH111307BLK

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122812

Matrix: (soil/water) SOIL Lab Sample ID: MEOH111307BLK

Sample wt/vol: 10.0 (g/mL) G Lab File ID: MPLB04EE

Level: (low/med) MED Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	10	U
103-65-1	n-Propylbenzene	10	U
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
108-67-8	1,3,5-Trimethylbenzene	10	U
98-06-6	tert-Butylbenzene	10	U
95-63-6	1,2,4-Trimethylbenzene	10	U
135-98-8	sec-Butylbenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
99-87-6	4-Isopropyltoluene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
104-51-8	n-Butylbenzene	10	U
96-12-8	1,2-Dibromo-3-Chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
87-68-3	Hexachlorobutadiene	10	U
91-20-3	Naphthalene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

November 20, 2007

Mr. Clyde Dennis
Argonne National Laboratory
9700 S. Cass Avenue, Bldg. 201
Argonne, IL 60439

Re: Laboratory Project No. 21005
Case: SAVANNAH; SDG: 122902

Dear Mr. Dennis:

Enclosed are analytical results for samples that were received by TestAmerica Burlington on November 8th, 2007. Laboratory identification numbers were assigned, and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 11/08/07 ETR No: 122902		
731457	SV-S-25305 (20A)	11/05/07	LIQUID
731458	SV-S-25353 (10A)	11/05/07	LIQUID
731459	SV-S-25568 (10A)	11/05/07	LIQUID
731460	SV-S-25320 (20A)	11/05/07	LIQUID
731461	SV-S-25314 (30A)	11/05/07	LIQUID
731462	SV-S-25288 (10A)	11/05/07	LIQUID
731463	SV-S-25578 (10A)	11/05/07	LIQUID
731464	SV-MEOH BLANK	11/05/07	LIQUID

Documentation of the condition of the samples at the time of their receipt and any exception to the laboratory's Sample Acceptance Policy is documented in the Sample Handling section of this submittal. In order to accommodate field length limitations in processing the data summary forms, the laboratory did, in certain instances, abbreviate the sample identifier. The electronically formatted data provides for the full sample identifier.

The samples were analyzed by Method 8260B, using a low-level calibration. In performing the analytical work, 500 microliters of the methanol extract were added to the 5 milliliter purge volume. Each of the analyses associated with the sample set did exhibit an acceptable internal standard performance, and there was an acceptable recovery of the surrogate controls in each analysis. Two types of laboratory control sample analyses were performed in the course of performing the analytical work. One was performed to evaluate method performance, and one was performed with 500 microliters of methanol added to the purge volume in order to

30 Community Drive, Suite 11 South Burlington, VT 05403 tel 802.660.1990 fax 802.660.1919 www.testamericainc.com

characterize the affect on the analytical process. With the exception of that for acrolein, there was an acceptable recovery of each target analyte in the laboratory control sample analysis that defined method performance. The recovery of acrolein was low in that analysis (approximating 13 percent). In the laboratory control sample analysis with methanol, several of the earlier eluting compounds did exhibit a lower recovery performance, as did isobutyl alcohol. Most profoundly affected was the performance of acrolein (approximating 4 percent) and methyl iodide (approximating 8 percent). Chloroform and carbon tetrachloride were recovered well in each of the laboratory control sample analyses. Matrix spike and matrix spike duplicate analyses were not performed on samples in this sample set. A relatively high concentration of methylene chloride was identified in the analysis sample SV-MEOH BLANK. The laboratory did associate the analysis of SV-MEOH BLANK with the analysis of each of the field samples in order to reference the blank association, and accordingly qualify the reported results. The instrument blank associated with the analytical work was free of contamination. The laboratory did provide for a methanol blank in the analytical sequence in order to properly characterize the results of the laboratory control sample analysis that was performed with 500 microliters of methanol added to the purge volume.

The analytical results associated with the samples presented in this test report were generated under a quality system that adheres to requirements specified in the NELAC standard. Release of the data in this test report and any associated electronic deliverables is authorized by the Laboratory Director's designee as verified by the following signature.

If there are any questions regarding this submittal, please contact me at 802 660-1990.

Sincerely,

Kirk F. Young
Project Manager

KFY/hsf
Enclosure

TestAmerica Burlington Data Qualifier Definitions

Organic

U: Compound analyzed but not detected at a concentration above the reporting limit.

J: Estimated value.

N: Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds (TICs) where the identification of a compound is based on a mass spectral library search.

P: SW-846: Greater than 40% difference for detected concentrations between two GC columns. Unless otherwise specified the higher of the two values is reported on the Form I.

CLP SOW: Greater than 25% difference for detected concentrations between two GC columns. Unless otherwise specified the lower of the two values is reported on the Form I.

C: Pesticide result whose identification has been confirmed by GC/MS.

B: Analyte is found in the sample and the associated method blank. The flag is used for tentatively identified compounds as well as positively identified compounds.

E: Compounds whose concentrations exceed the upper limit of the calibration range of the instrument for that specific analysis.

D: Concentrations identified from analysis of the sample at a secondary dilution.

A: Tentatively identified compound is a suspected aldol condensation product.

X,Y,Z: Laboratory defined flags that may be used alone or combined, as needed. If used, the description of the flag is defined in the project narrative.

Inorganic/Metals

E: Reported value is estimated due to the presence of interference.

N: Matrix spike sample recovery is not within control limits.

* Duplicate sample analysis is not within control limits.

B: The result reported is less than the reporting limit but greater than the instrument detection limit.

U: Analyte was analyzed for but not detected above the reporting limit.

Method Codes:

P ICP-AES
MS ICP-MS
CV Cold Vapor AA
AS Semi-Automated Spectrophotometric

4044

MATRIX: Soil - Methanol	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***	Shipping Container No.
RECEIVING LAB: STL Transamerica		Shipping Info:
PROJECT/SITE: Savannah		ANL Field Contact (Name & Temporary Phone):
SAMPLER(S) (Signature) [signature]		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS	REMARKS Mass (g)	REMARKS Volume MeOH
11/05/07	SV-S-25305 (20A) R	1-20mL		10.625	10mL
	SV-S-25353 (10A) BK			10.259	10mL
	SV-S-25568 (10A) BK			12.247	10mL
	SV-S-25320A (20A) B			8.459	10mL
	SV-S-25314 (30A) B			11.520	10mL
	SV-S-25288 (10A) R			9.532	10mL
	SV-S-25578 (10A) B			11.767	10mL
	SV-MeOH blank			—	10mL

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
[signature]	11/06/07	9am					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
M. Turpin	11/06/07		[signature]	11/8/07	0930	

Y	N	FOR LAB USE ONLY
X		Custody seal was intact when shipment received.
X		Sample containers were intact when received.
X		Shipment was at required temperature when received.
	X	Sample labels, Tags and COC agree. Labels do not list date.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Research Division, 9700 S. Cass Avenue, Argonne, IL 60439

ER-160 (4-01)

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-MEOH BLANK

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731464

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 731464E2

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
107-02-8	Acrolein	50	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	Freon TF	10	U
67-64-1	Acetone	50	U
74-88-4	Methyl Iodide	10	U
75-15-0	Carbon Disulfide	10	U
107-05-1	Allyl Chloride	10	U
75-09-2	Methylene Chloride	25	
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl-t-Butyl Ether	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-3	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
126-99-8	Chloroprene	10	U
594-20-7	2,2-Dichloropropane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	50	U
107-12-0	Propionitrile	40	U
74-97-5	Bromochloromethane	10	U
126-98-7	Methacrylonitrile	10	U
109-99-9	Tetrahydrofuran	140	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
563-58-6	1,1-Dichloropropene	10	U
71-43-2	Benzene	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-MEOH BLANK

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731464

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 731464E2

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	500	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
74-95-3	Dibromomethane	10	U
80-62-6	Methyl Methacrylate	10	U
123-91-1	1,4-Dioxane	500	U
75-27-4	Bromodichloromethane	10	U
110-75-8	2-Chloroethyl Vinyl Ether	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
97-63-2	Ethyl Methacrylate	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
142-28-9	1,3-Dichloropropane	10	U
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
630-20-6	1,1,1,2-Tetrachloroethane	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (m,p)	10	U
95-47-6	Xylene (o)	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
1476-11-5	cis-1,4-Dichloro-2-butene	10	U
108-86-1	Bromobenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
96-18-4	1,2,3-Trichloropropane	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-MEOH BLANK

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731464

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 731464E2

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	10	U
103-65-1	n-Propylbenzene	10	U
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
108-67-8	1,3,5-Trimethylbenzene	10	U
98-06-6	tert-Butylbenzene	10	U
95-63-6	1,2,4-Trimethylbenzene	10	U
135-98-8	sec-Butylbenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
99-87-6	4-Isopropyltoluene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
104-51-8	n-Butylbenzene	10	U
96-12-8	1,2-Dibromo-3-Chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
87-68-3	Hexachlorobutadiene	10	U
91-20-3	Naphthalene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25288 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731462

Sample wt/vol: 9.5 (g/mL) G Lab File ID: 731462E

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
107-02-8	Acrolein	52	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	Freon TF	10	U
67-64-1	Acetone	52	U
74-88-4	Methyl Iodide	10	U
75-15-0	Carbon Disulfide	10	U
107-05-1	Allyl Chloride	10	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl-t-Butyl Ether	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-3	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
126-99-8	Chloroprene	10	U
594-20-7	2,2-Dichloropropane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	52	U
107-12-0	Propionitrile	42	U
74-97-5	Bromochloromethane	10	U
126-98-7	Methacrylonitrile	10	U
109-99-9	Tetrahydrofuran	150	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	8.3	J
56-23-5	Carbon Tetrachloride	10	U
563-58-6	1,1-Dichloropropene	10	U
71-43-2	Benzene	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25288 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731462

Sample wt/vol: 9.5 (g/mL) G Lab File ID: 731462E

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	520	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
74-95-3	Dibromomethane	10	U
80-62-6	Methyl Methacrylate	10	U
123-91-1	1,4-Dioxane	520	U
75-27-4	Bromodichloromethane	10	U
110-75-8	2-Chloroethyl Vinyl Ether	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	52	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
97-63-2	Ethyl Methacrylate	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
142-28-9	1,3-Dichloropropane	10	U
591-78-6	2-Hexanone	52	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
630-20-6	1,1,1,2-Tetrachloroethane	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (m,p)	10	U
95-47-6	Xylene (o)	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
1476-11-5	cis-1,4-Dichloro-2-butene	10	U
108-86-1	Bromobenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
96-18-4	1,2,3-Trichloropropane	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25288 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731462

Sample wt/vol: 9.5 (g/mL) G Lab File ID: 731462E

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	10	U
103-65-1	n-Propylbenzene	10	U
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
108-67-8	1,3,5-Trimethylbenzene	10	U
98-06-6	tert-Butylbenzene	10	U
95-63-6	1,2,4-Trimethylbenzene	10	U
135-98-8	sec-Butylbenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
99-87-6	4-Isopropyltoluene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
104-51-8	n-Butylbenzene	10	U
96-12-8	1,2-Dibromo-3-Chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
87-68-3	Hexachlorobutadiene	10	U
91-20-3	Naphthalene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25305 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) WATER Lab Sample ID: 731457

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 731457E

Level: (low/med) LOW Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	1.0	U
74-87-3	Chloromethane	1.0	U
75-01-4	Vinyl Chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
107-02-8	Acrolein	5.0	U
75-35-4	1,1-Dichloroethene	1.0	U
76-13-1	Freon TF	1.0	U
67-64-1	Acetone	5.0	U
74-88-4	Methyl Iodide	1.0	U
75-15-0	Carbon Disulfide	1.0	U
107-05-1	Allyl Chloride	1.0	U
75-09-2	Methylene Chloride	1.7	B
107-13-1	Acrylonitrile	1.0	U
156-60-5	trans-1,2-Dichloroethene	1.0	U
1634-04-4	Methyl-t-Butyl Ether	1.0	U
540-59-0	1,2-Dichloroethene (total)	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
108-05-4	Vinyl Acetate	1.0	U
126-99-8	Chloroprene	1.0	U
594-20-7	2,2-Dichloropropane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
78-93-3	2-Butanone	5.0	U
107-12-0	Propionitrile	4.0	U
74-97-5	Bromochloromethane	1.0	U
126-98-7	Methacrylonitrile	1.0	U
109-99-9	Tetrahydrofuran	14	U
67-66-3	Chloroform	1.0	U
71-55-6	1,1,1-Trichloroethane	0.46	J
56-23-5	Carbon Tetrachloride	1.0	U
563-58-6	1,1-Dichloropropene	1.0	U
71-43-2	Benzene	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25305 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) WATER Lab Sample ID: 731457

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 731457E

Level: (low/med) LOW Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
78-83-1	Isobutyl Alcohol	50	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
74-95-3	Dibromomethane	1.0	U
80-62-6	Methyl Methacrylate	1.0	U
123-91-1	1,4-Dioxane	50	U
75-27-4	Bromodichloromethane	1.0	U
110-75-8	2-Chloroethyl Vinyl Ether	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	1.0	U
10061-02-6	trans-1,3-Dichloropropene	1.0	U
97-63-2	Ethyl Methacrylate	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
127-18-4	Tetrachloroethene	1.0	U
142-28-9	1,3-Dichloropropane	1.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	1.0	U
106-93-4	1,2-Dibromoethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U
100-41-4	Ethylbenzene	1.0	U
1330-20-7	Xylene (m,p)	1.0	U
95-47-6	Xylene (o)	1.0	U
1330-20-7	Xylene (total)	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
98-82-8	Isopropylbenzene	1.0	U
1476-11-5	cis-1,4-Dichloro-2-butene	1.0	U
108-86-1	Bromobenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25305 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) WATER Lab Sample ID: 731457

Sample wt/vol: 5.000 (g/mL) ML Lab File ID: 731457E

Level: (low/med) LOW Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume:_____(uL) Soil Aliquot Volume: _____(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
110-57-6	trans-1,4-Dichloro-2-butene	1.0	U
103-65-1	n-Propylbenzene	1.0	U
95-49-8	2-Chlorotoluene	1.0	U
106-43-4	4-Chlorotoluene	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1.0	U
98-06-6	tert-Butylbenzene	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	U
135-98-8	sec-Butylbenzene	1.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
99-87-6	4-Isopropyltoluene	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
104-51-8	n-Butylbenzene	1.0	U
96-12-8	1,2-Dibromo-3-Chloropropane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
91-20-3	Naphthalene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25314 30A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731461

Sample wt/vol: 11.5 (g/mL) G Lab File ID: 731461E

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.7	U
74-87-3	Chloromethane	8.7	U
75-01-4	Vinyl Chloride	8.7	U
74-83-9	Bromomethane	8.7	U
75-00-3	Chloroethane	8.7	U
75-69-4	Trichlorofluoromethane	8.7	U
107-02-8	Acrolein	43	U
75-35-4	1,1-Dichloroethene	8.7	U
76-13-1	Freon TF	8.7	U
67-64-1	Acetone	43	U
74-88-4	Methyl Iodide	8.7	U
75-15-0	Carbon Disulfide	8.7	U
107-05-1	Allyl Chloride	8.7	U
75-09-2	Methylene Chloride	33	B
107-13-1	Acrylonitrile	8.7	U
156-60-5	trans-1,2-Dichloroethene	8.7	U
1634-04-4	Methyl-t-Butyl Ether	8.7	U
540-59-0	1,2-Dichloroethene (total)	8.7	U
75-34-3	1,1-Dichloroethane	8.7	U
108-05-4	Vinyl Acetate	8.7	U
126-99-8	Chloroprene	8.7	U
594-20-7	2,2-Dichloropropane	8.7	U
156-59-2	cis-1,2-Dichloroethene	8.7	U
78-93-3	2-Butanone	43	U
107-12-0	Propionitrile	35	U
74-97-5	Bromochloromethane	8.7	U
126-98-7	Methacrylonitrile	8.7	U
109-99-9	Tetrahydrofuran	120	U
67-66-3	Chloroform	8.7	U
71-55-6	1,1,1-Trichloroethane	8.7	U
56-23-5	Carbon Tetrachloride	8.7	U
563-58-6	1,1-Dichloropropene	8.7	U
71-43-2	Benzene	8.7	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25314 30A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731461

Sample wt/vol: 11.5 (g/mL) G Lab File ID: 731461E

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	430	U
107-06-2	1,2-Dichloroethane	8.7	U
79-01-6	Trichloroethene	8.7	U
78-87-5	1,2-Dichloropropane	8.7	U
74-95-3	Dibromomethane	8.7	U
80-62-6	Methyl Methacrylate	8.7	U
123-91-1	1,4-Dioxane	430	U
75-27-4	Bromodichloromethane	8.7	U
110-75-8	2-Chloroethyl Vinyl Ether	8.7	U
10061-01-5	cis-1,3-Dichloropropene	8.7	U
108-10-1	4-Methyl-2-pentanone	43	U
108-88-3	Toluene	8.7	U
10061-02-6	trans-1,3-Dichloropropene	8.7	U
97-63-2	Ethyl Methacrylate	8.7	U
79-00-5	1,1,2-Trichloroethane	8.7	U
127-18-4	Tetrachloroethene	8.7	U
142-28-9	1,3-Dichloropropane	8.7	U
591-78-6	2-Hexanone	43	U
124-48-1	Dibromochloromethane	8.7	U
106-93-4	1,2-Dibromoethane	8.7	U
108-90-7	Chlorobenzene	8.7	U
630-20-6	1,1,1,2-Tetrachloroethane	8.7	U
100-41-4	Ethylbenzene	8.7	U
1330-20-7	Xylene (m,p)	8.7	U
95-47-6	Xylene (o)	8.7	U
1330-20-7	Xylene (total)	8.7	U
100-42-5	Styrene	8.7	U
75-25-2	Bromoform	8.7	U
98-82-8	Isopropylbenzene	8.7	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.7	U
108-86-1	Bromobenzene	8.7	U
79-34-5	1,1,2,2-Tetrachloroethane	8.7	U
96-18-4	1,2,3-Trichloropropane	8.7	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25314 30A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731461

Sample wt/vol: 11.5 (g/mL) G Lab File ID: 731461E

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.7	U
103-65-1	n-Propylbenzene	8.7	U
95-49-8	2-Chlorotoluene	8.7	U
106-43-4	4-Chlorotoluene	8.7	U
108-67-8	1,3,5-Trimethylbenzene	8.7	U
98-06-6	tert-Butylbenzene	8.7	U
95-63-6	1,2,4-Trimethylbenzene	8.7	U
135-98-8	sec-Butylbenzene	8.7	U
541-73-1	1,3-Dichlorobenzene	8.7	U
99-87-6	4-Isopropyltoluene	8.7	U
106-46-7	1,4-Dichlorobenzene	8.7	U
95-50-1	1,2-Dichlorobenzene	8.7	U
104-51-8	n-Butylbenzene	8.7	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.7	U
120-82-1	1,2,4-Trichlorobenzene	8.7	U
87-68-3	Hexachlorobutadiene	8.7	U
91-20-3	Naphthalene	8.7	U
87-61-6	1,2,3-Trichlorobenzene	8.7	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25320 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731460

Sample wt/vol: 8.5 (g/mL) G Lab File ID: 731460E

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	12	U
74-87-3	Chloromethane	12	U
75-01-4	Vinyl Chloride	12	U
74-83-9	Bromomethane	12	U
75-00-3	Chloroethane	12	U
75-69-4	Trichlorofluoromethane	12	U
107-02-8	Acrolein	59	U
75-35-4	1,1-Dichloroethene	12	U
76-13-1	Freon TF	12	U
67-64-1	Acetone	59	U
74-88-4	Methyl Iodide	12	U
75-15-0	Carbon Disulfide	12	U
107-05-1	Allyl Chloride	12	U
75-09-2	Methylene Chloride	49	B
107-13-1	Acrylonitrile	12	U
156-60-5	trans-1,2-Dichloroethene	12	U
1634-04-4	Methyl-t-Butyl Ether	12	U
540-59-0	1,2-Dichloroethene (total)	12	U
75-34-3	1,1-Dichloroethane	12	U
108-05-4	Vinyl Acetate	12	U
126-99-8	Chloroprene	12	U
594-20-7	2,2-Dichloropropane	12	U
156-59-2	cis-1,2-Dichloroethene	12	U
78-93-3	2-Butanone	59	U
107-12-0	Propionitrile	47	U
74-97-5	Bromochloromethane	12	U
126-98-7	Methacrylonitrile	12	U
109-99-9	Tetrahydrofuran	170	U
67-66-3	Chloroform	12	U
71-55-6	1,1,1-Trichloroethane	12	U
56-23-5	Carbon Tetrachloride	12	U
563-58-6	1,1-Dichloropropene	12	U
71-43-2	Benzene	12	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25320 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731460

Sample wt/vol: 8.5 (g/mL) G Lab File ID: 731460E

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	590	U
107-06-2	1,2-Dichloroethane	12	U
79-01-6	Trichloroethene	12	U
78-87-5	1,2-Dichloropropane	12	U
74-95-3	Dibromomethane	12	U
80-62-6	Methyl Methacrylate	12	U
123-91-1	1,4-Dioxane	590	U
75-27-4	Bromodichloromethane	12	U
110-75-8	2-Chloroethyl Vinyl Ether	12	U
10061-01-5	cis-1,3-Dichloropropene	12	U
108-10-1	4-Methyl-2-pentanone	59	U
108-88-3	Toluene	12	U
10061-02-6	trans-1,3-Dichloropropene	12	U
97-63-2	Ethyl Methacrylate	12	U
79-00-5	1,1,2-Trichloroethane	12	U
127-18-4	Tetrachloroethene	12	U
142-28-9	1,3-Dichloropropane	12	U
591-78-6	2-Hexanone	59	U
124-48-1	Dibromochloromethane	12	U
106-93-4	1,2-Dibromoethane	12	U
108-90-7	Chlorobenzene	12	U
630-20-6	1,1,1,2-Tetrachloroethane	12	U
100-41-4	Ethylbenzene	12	U
1330-20-7	Xylene (m,p)	12	U
95-47-6	Xylene (o)	12	U
1330-20-7	Xylene (total)	12	U
100-42-5	Styrene	12	U
75-25-2	Bromoform	12	U
98-82-8	Isopropylbenzene	12	U
1476-11-5	cis-1,4-Dichloro-2-butene	12	U
108-86-1	Bromobenzene	12	U
79-34-5	1,1,2,2-Tetrachloroethane	12	U
96-18-4	1,2,3-Trichloropropane	12	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25320 20A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731460

Sample wt/vol: 8.5 (g/mL) G Lab File ID: 731460E

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	12	U
103-65-1	n-Propylbenzene	12	U
95-49-8	2-Chlorotoluene	12	U
106-43-4	4-Chlorotoluene	12	U
108-67-8	1,3,5-Trimethylbenzene	12	U
98-06-6	tert-Butylbenzene	12	U
95-63-6	1,2,4-Trimethylbenzene	12	U
135-98-8	sec-Butylbenzene	12	U
541-73-1	1,3-Dichlorobenzene	12	U
99-87-6	4-Isopropyltoluene	12	U
106-46-7	1,4-Dichlorobenzene	12	U
95-50-1	1,2-Dichlorobenzene	12	U
104-51-8	n-Butylbenzene	12	U
96-12-8	1,2-Dibromo-3-Chloropropane	12	U
120-82-1	1,2,4-Trichlorobenzene	12	U
87-68-3	Hexachlorobutadiene	12	U
91-20-3	Naphthalene	12	U
87-61-6	1,2,3-Trichlorobenzene	12	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25353 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731458

Sample wt/vol: 10.3 (g/mL) G Lab File ID: 731458E

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	9.7	U
74-87-3	Chloromethane	9.7	U
75-01-4	Vinyl Chloride	9.7	U
74-83-9	Bromomethane	9.7	U
75-00-3	Chloroethane	9.7	U
75-69-4	Trichlorofluoromethane	9.7	U
107-02-8	Acrolein	49	U
75-35-4	1,1-Dichloroethene	9.7	U
76-13-1	Freon TF	9.7	U
67-64-1	Acetone	49	U
74-88-4	Methyl Iodide	9.7	U
75-15-0	Carbon Disulfide	9.7	U
107-05-1	Allyl Chloride	9.7	U
75-09-2	Methylene Chloride	9.7	U
107-13-1	Acrylonitrile	9.7	U
156-60-5	trans-1,2-Dichloroethene	9.7	U
1634-04-4	Methyl-t-Butyl Ether	9.7	U
540-59-0	1,2-Dichloroethene (total)	9.7	U
75-34-3	1,1-Dichloroethane	9.7	U
108-05-4	Vinyl Acetate	9.7	U
126-99-8	Chloroprene	9.7	U
594-20-7	2,2-Dichloropropane	9.7	U
156-59-2	cis-1,2-Dichloroethene	9.7	U
78-93-3	2-Butanone	49	U
107-12-0	Propionitrile	39	U
74-97-5	Bromochloromethane	9.7	U
126-98-7	Methacrylonitrile	9.7	U
109-99-9	Tetrahydrofuran	140	U
67-66-3	Chloroform	9.7	U
71-55-6	1,1,1-Trichloroethane	9.7	U
56-23-5	Carbon Tetrachloride	9.7	U
563-58-6	1,1-Dichloropropene	9.7	U
71-43-2	Benzene	9.7	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25353 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731458

Sample wt/vol: 10.3 (g/mL) G Lab File ID: 731458E

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	490	U
107-06-2	1,2-Dichloroethane	9.7	U
79-01-6	Trichloroethene	9.7	U
78-87-5	1,2-Dichloropropane	9.7	U
74-95-3	Dibromomethane	9.7	U
80-62-6	Methyl Methacrylate	9.7	U
123-91-1	1,4-Dioxane	490	U
75-27-4	Bromodichloromethane	9.7	U
110-75-8	2-Chloroethyl Vinyl Ether	9.7	U
10061-01-5	cis-1,3-Dichloropropene	9.7	U
108-10-1	4-Methyl-2-pentanone	49	U
108-88-3	Toluene	9.7	U
10061-02-6	trans-1,3-Dichloropropene	9.7	U
97-63-2	Ethyl Methacrylate	9.7	U
79-00-5	1,1,2-Trichloroethane	9.7	U
127-18-4	Tetrachloroethene	9.7	U
142-28-9	1,3-Dichloropropane	9.7	U
591-78-6	2-Hexanone	49	U
124-48-1	Dibromochloromethane	9.7	U
106-93-4	1,2-Dibromoethane	9.7	U
108-90-7	Chlorobenzene	9.7	U
630-20-6	1,1,1,2-Tetrachloroethane	9.7	U
100-41-4	Ethylbenzene	9.7	U
1330-20-7	Xylene (m,p)	9.7	U
95-47-6	Xylene (o)	9.7	U
1330-20-7	Xylene (total)	9.7	U
100-42-5	Styrene	9.7	U
75-25-2	Bromoform	9.7	U
98-82-8	Isopropylbenzene	9.7	U
1476-11-5	cis-1,4-Dichloro-2-butene	9.7	U
108-86-1	Bromobenzene	9.7	U
79-34-5	1,1,2,2-Tetrachloroethane	9.7	U
96-18-4	1,2,3-Trichloropropane	9.7	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25353 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731458

Sample wt/vol: 10.3 (g/mL) G Lab File ID: 731458E

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	9.7	U
103-65-1	n-Propylbenzene	9.7	U
95-49-8	2-Chlorotoluene	9.7	U
106-43-4	4-Chlorotoluene	9.7	U
108-67-8	1,3,5-Trimethylbenzene	9.7	U
98-06-6	tert-Butylbenzene	9.7	U
95-63-6	1,2,4-Trimethylbenzene	9.7	U
135-98-8	sec-Butylbenzene	9.7	U
541-73-1	1,3-Dichlorobenzene	9.7	U
99-87-6	4-Isopropyltoluene	9.7	U
106-46-7	1,4-Dichlorobenzene	9.7	U
95-50-1	1,2-Dichlorobenzene	9.7	U
104-51-8	n-Butylbenzene	9.7	U
96-12-8	1,2-Dibromo-3-Chloropropane	9.7	U
120-82-1	1,2,4-Trichlorobenzene	9.7	U
87-68-3	Hexachlorobutadiene	9.7	U
91-20-3	Naphthalene	9.7	U
87-61-6	1,2,3-Trichlorobenzene	9.7	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25568 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731459

Sample wt/vol: 12.2 (g/mL) G Lab File ID: 731459E

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.2	U
74-87-3	Chloromethane	8.2	U
75-01-4	Vinyl Chloride	8.2	U
74-83-9	Bromomethane	8.2	U
75-00-3	Chloroethane	8.2	U
75-69-4	Trichlorofluoromethane	8.2	U
107-02-8	Acrolein	41	U
75-35-4	1,1-Dichloroethene	8.2	U
76-13-1	Freon TF	8.2	U
67-64-1	Acetone	41	U
74-88-4	Methyl Iodide	8.2	U
75-15-0	Carbon Disulfide	8.2	U
107-05-1	Allyl Chloride	8.2	U
75-09-2	Methylene Chloride	41	B
107-13-1	Acrylonitrile	8.2	U
156-60-5	trans-1,2-Dichloroethene	8.2	U
1634-04-4	Methyl-t-Butyl Ether	8.2	U
540-59-0	1,2-Dichloroethene (total)	8.2	U
75-34-3	1,1-Dichloroethane	8.2	U
108-05-4	Vinyl Acetate	8.2	U
126-99-8	Chloroprene	8.2	U
594-20-7	2,2-Dichloropropane	8.2	U
156-59-2	cis-1,2-Dichloroethene	8.2	U
78-93-3	2-Butanone	41	U
107-12-0	Propionitrile	33	U
74-97-5	Bromochloromethane	8.2	U
126-98-7	Methacrylonitrile	8.2	U
109-99-9	Tetrahydrofuran	110	U
67-66-3	Chloroform	8.2	U
71-55-6	1,1,1-Trichloroethane	8.2	U
56-23-5	Carbon Tetrachloride	8.2	U
563-58-6	1,1-Dichloropropene	8.2	U
71-43-2	Benzene	8.2	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25568 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731459

Sample wt/vol: 12.2 (g/mL) G Lab File ID: 731459E

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	410	U
107-06-2	1,2-Dichloroethane	8.2	U
79-01-6	Trichloroethene	8.2	U
78-87-5	1,2-Dichloropropane	8.2	U
74-95-3	Dibromomethane	8.2	U
80-62-6	Methyl Methacrylate	8.2	U
123-91-1	1,4-Dioxane	410	U
75-27-4	Bromodichloromethane	8.2	U
110-75-8	2-Chloroethyl Vinyl Ether	8.2	U
10061-01-5	cis-1,3-Dichloropropene	8.2	U
108-10-1	4-Methyl-2-pentanone	41	U
108-88-3	Toluene	8.2	U
10061-02-6	trans-1,3-Dichloropropene	8.2	U
97-63-2	Ethyl Methacrylate	8.2	U
79-00-5	1,1,2-Trichloroethane	8.2	U
127-18-4	Tetrachloroethene	8.2	U
142-28-9	1,3-Dichloropropane	8.2	U
591-78-6	2-Hexanone	41	U
124-48-1	Dibromochloromethane	8.2	U
106-93-4	1,2-Dibromoethane	8.2	U
108-90-7	Chlorobenzene	8.2	U
630-20-6	1,1,1,2-Tetrachloroethane	8.2	U
100-41-4	Ethylbenzene	8.2	U
1330-20-7	Xylene (m,p)	8.2	U
95-47-6	Xylene (o)	8.2	U
1330-20-7	Xylene (total)	8.2	U
100-42-5	Styrene	8.2	U
75-25-2	Bromoform	8.2	U
98-82-8	Isopropylbenzene	8.2	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.2	U
108-86-1	Bromobenzene	8.2	U
79-34-5	1,1,2,2-Tetrachloroethane	8.2	U
96-18-4	1,2,3-Trichloropropane	8.2	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25568 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731459

Sample wt/vol: 12.2 (g/mL) G Lab File ID: 731459E

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.2	U
103-65-1	n-Propylbenzene	8.2	U
95-49-8	2-Chlorotoluene	8.2	U
106-43-4	4-Chlorotoluene	8.2	U
108-67-8	1,3,5-Trimethylbenzene	8.2	U
98-06-6	tert-Butylbenzene	8.2	U
95-63-6	1,2,4-Trimethylbenzene	8.2	U
135-98-8	sec-Butylbenzene	8.2	U
541-73-1	1,3-Dichlorobenzene	8.2	U
99-87-6	4-Isopropyltoluene	8.2	U
106-46-7	1,4-Dichlorobenzene	8.2	U
95-50-1	1,2-Dichlorobenzene	8.2	U
104-51-8	n-Butylbenzene	8.2	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.2	U
120-82-1	1,2,4-Trichlorobenzene	8.2	U
87-68-3	Hexachlorobutadiene	8.2	U
91-20-3	Naphthalene	8.2	U
87-61-6	1,2,3-Trichlorobenzene	8.2	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25578 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731463

Sample wt/vol: 11.8 (g/mL) G Lab File ID: 731463E

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	8.5	U
74-87-3	Chloromethane	8.5	U
75-01-4	Vinyl Chloride	8.5	U
74-83-9	Bromomethane	8.5	U
75-00-3	Chloroethane	8.5	U
75-69-4	Trichlorofluoromethane	8.5	U
107-02-8	Acrolein	42	U
75-35-4	1,1-Dichloroethene	8.5	U
76-13-1	Freon TF	8.5	U
67-64-1	Acetone	42	U
74-88-4	Methyl Iodide	8.5	U
75-15-0	Carbon Disulfide	8.5	U
107-05-1	Allyl Chloride	8.5	U
75-09-2	Methylene Chloride	31	B
107-13-1	Acrylonitrile	8.5	U
156-60-5	trans-1,2-Dichloroethene	8.5	U
1634-04-4	Methyl-t-Butyl Ether	8.5	U
540-59-0	1,2-Dichloroethene (total)	8.5	U
75-34-3	1,1-Dichloroethane	8.5	U
108-05-4	Vinyl Acetate	8.5	U
126-99-8	Chloroprene	8.5	U
594-20-7	2,2-Dichloropropane	8.5	U
156-59-2	cis-1,2-Dichloroethene	8.5	U
78-93-3	2-Butanone	42	U
107-12-0	Propionitrile	34	U
74-97-5	Bromochloromethane	8.5	U
126-98-7	Methacrylonitrile	8.5	U
109-99-9	Tetrahydrofuran	120	U
67-66-3	Chloroform	8.5	U
71-55-6	1,1,1-Trichloroethane	8.5	U
56-23-5	Carbon Tetrachloride	2.1	J
563-58-6	1,1-Dichloropropene	8.5	U
71-43-2	Benzene	8.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25578 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731463

Sample wt/vol: 11.8 (g/mL) G Lab File ID: 731463E

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	420	U
107-06-2	1,2-Dichloroethane	8.5	U
79-01-6	Trichloroethene	8.5	U
78-87-5	1,2-Dichloropropane	8.5	U
74-95-3	Dibromomethane	8.5	U
80-62-6	Methyl Methacrylate	8.5	U
123-91-1	1,4-Dioxane	420	U
75-27-4	Bromodichloromethane	8.5	U
110-75-8	2-Chloroethyl Vinyl Ether	8.5	U
10061-01-5	cis-1,3-Dichloropropene	8.5	U
108-10-1	4-Methyl-2-pentanone	42	U
108-88-3	Toluene	8.5	U
10061-02-6	trans-1,3-Dichloropropene	8.5	U
97-63-2	Ethyl Methacrylate	8.5	U
79-00-5	1,1,2-Trichloroethane	8.5	U
127-18-4	Tetrachloroethene	8.5	U
142-28-9	1,3-Dichloropropane	8.5	U
591-78-6	2-Hexanone	42	U
124-48-1	Dibromochloromethane	8.5	U
106-93-4	1,2-Dibromoethane	8.5	U
108-90-7	Chlorobenzene	8.5	U
630-20-6	1,1,1,2-Tetrachloroethane	8.5	U
100-41-4	Ethylbenzene	8.5	U
1330-20-7	Xylene (m,p)	8.5	U
95-47-6	Xylene (o)	8.5	U
1330-20-7	Xylene (total)	8.5	U
100-42-5	Styrene	8.5	U
75-25-2	Bromoform	8.5	U
98-82-8	Isopropylbenzene	8.5	U
1476-11-5	cis-1,4-Dichloro-2-butene	8.5	U
108-86-1	Bromobenzene	8.5	U
79-34-5	1,1,2,2-Tetrachloroethane	8.5	U
96-18-4	1,2,3-Trichloropropane	8.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25578 10A

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: 731463

Sample wt/vol: 11.8 (g/mL) G Lab File ID: 731463E

Level: (low/med) MED Date Received: 11/08/07

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	8.5	U
103-65-1	n-Propylbenzene	8.5	U
95-49-8	2-Chlorotoluene	8.5	U
106-43-4	4-Chlorotoluene	8.5	U
108-67-8	1,3,5-Trimethylbenzene	8.5	U
98-06-6	tert-Butylbenzene	8.5	U
95-63-6	1,2,4-Trimethylbenzene	8.5	U
135-98-8	sec-Butylbenzene	8.5	U
541-73-1	1,3-Dichlorobenzene	8.5	U
99-87-6	4-Isopropyltoluene	8.5	U
106-46-7	1,4-Dichlorobenzene	8.5	U
95-50-1	1,2-Dichlorobenzene	8.5	U
104-51-8	n-Butylbenzene	8.5	U
96-12-8	1,2-Dibromo-3-Chloropropane	8.5	U
120-82-1	1,2,4-Trichlorobenzene	8.5	U
87-68-3	Hexachlorobutadiene	8.5	U
91-20-3	Naphthalene	8.5	U
87-61-6	1,2,3-Trichlorobenzene	8.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MEOH111307BLK

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: MEOH111307BLK

Sample wt/vol: 10.0 (g/mL) G Lab File ID: MPLB04EE

Level: (low/med) MED Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
107-02-8	Acrolein	50	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	Freon TF	10	U
67-64-1	Acetone	50	U
74-88-4	Methyl Iodide	10	U
75-15-0	Carbon Disulfide	10	U
107-05-1	Allyl Chloride	10	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl-t-Butyl Ether	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-3	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
126-99-8	Chloroprene	10	U
594-20-7	2,2-Dichloropropane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	94	
107-12-0	Propionitrile	40	U
74-97-5	Bromochloromethane	10	U
126-98-7	Methacrylonitrile	10	U
109-99-9	Tetrahydrofuran	140	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
563-58-6	1,1-Dichloropropene	10	U
71-43-2	Benzene	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MEOH111307BLK

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: MEOH111307BLK

Sample wt/vol: 10.0 (g/mL) G Lab File ID: MPLB04EE

Level: (low/med) MED Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	500	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
74-95-3	Dibromomethane	10	U
80-62-6	Methyl Methacrylate	10	U
123-91-1	1,4-Dioxane	500	U
75-27-4	Bromodichloromethane	10	U
110-75-8	2-Chloroethyl Vinyl Ether	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	5.7	J
10061-02-6	trans-1,3-Dichloropropene	10	U
97-63-2	Ethyl Methacrylate	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
142-28-9	1,3-Dichloropropane	10	U
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
630-20-6	1,1,1,2-Tetrachloroethane	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (m,p)	2.4	J
95-47-6	Xylene (o)	10	U
1330-20-7	Xylene (total)	2.5	J
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
1476-11-5	cis-1,4-Dichloro-2-butene	10	U
108-86-1	Bromobenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
96-18-4	1,2,3-Trichloropropane	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MEOH111307BLK

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: SAVANNAH SAS No.: SDG No.: 122902

Matrix: (soil/water) SOIL Lab Sample ID: MEOH111307BLK

Sample wt/vol: 10.0 (g/mL) G Lab File ID: MPLB04EE

Level: (low/med) MED Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 11/13/07

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	10	U
103-65-1	n-Propylbenzene	10	U
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
108-67-8	1,3,5-Trimethylbenzene	10	U
98-06-6	tert-Butylbenzene	10	U
95-63-6	1,2,4-Trimethylbenzene	10	U
135-98-8	sec-Butylbenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
99-87-6	4-Isopropyltoluene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
104-51-8	n-Butylbenzene	10	U
96-12-8	1,2-Dibromo-3-Chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
87-68-3	Hexachlorobutadiene	10	U
91-20-3	Naphthalene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

February 22, 2008

Mr. Clyde Dennis
Argonne National Laboratory
9700 S. Cass Avenue
Building 203, Office B149
Argonne, IL 60439

Re: Laboratory Project No. 21005
Case: 21005; SDG: 124082

Dear Mr. Dennis:

Enclosed are analytical results for samples that were received by TestAmerica Burlington on February 9th, 2008. Laboratory identification numbers were assigned, and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 02/09/08 ETR No: 124082		
740273	SV-S-25639	02/07/08	LIQUID
740274	SV-S-25613	02/07/08	LIQUID
740275	SV-S-25593	02/07/08	LIQUID
740276	SV-S-25599	02/07/08	LIQUID
740277	SV-TB-020708	02/07/08	LIQUID

Documentation of the condition of the samples at the time of their receipt and any exception to the laboratory's Sample Acceptance Policy is documented in the Sample Handling section of this submittal. In order to accommodate field length limitations in processing the data summary forms, the laboratory did, in certain instances, abbreviate the sample identifier. The electronically formatted data provides for the full sample identifier.

The samples were analyzed by Method 8260B, using a low-level calibration. In performing the analytical work, 500 microliters of the methanol extract were added to the 5 milliliter purge volume. The analysis of samples SV-S-25613, SV-S-25593, and SV-S-25599 exhibited a particularly low internal standard performance. The affect of the low internal standard responses is reflected in the recovery performance of the surrogate controls in those analyses. In the analysis of samples SV-S-25613 and SV-S-25593 the derived recoveries of the surrogate controls were uniformly low (approximating 55 percent). In the analysis of sample SV-S-25599 the derived recoveries of the surrogate controls were uniformly high (approximating 200 percent). Due to the limited sample volumes, it was not possible to provide for an additional analysis of the

30 Community Drive Suite #11 South Burlington, VT 05403 **tel** 802.660.1990 **fax** 802.660.1919 **www.testamericainc.com**

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THE LEADER IN ENVIRONMENTAL TESTING

samples. Two types of laboratory control sample analyses were performed in the course of performing the analytical work. One was performed to evaluate method performance, and one was performed with 500 microliters of methanol added to the purge volume in order to characterize the affect on the analytical process. There was an acceptable recovery of each target analyte in the laboratory control sample analysis that defined method performance. In the laboratory control sample analysis with methanol, several of the earlier eluting compounds did exhibit a lower recovery performance. Most significantly affected was the recovery performance of methyl iodide (16 percent) and vinyl acetate (13 percent). The recovery of each of the other compounds was greater than 40 percent. Chloroform and carbon tetrachloride were recovered well in each of the laboratory control sample analyses. Matrix spike and matrix spike duplicate analyses were not performed on samples in this sample set. Trace concentrations of acetone and 1,4-dioxane were identified in the analysis of the instrument blank associated with the analytical work. The laboratory did provide for a methanol blank in the analytical sequence in order to properly characterize the results of the laboratory control sample analysis that was performed with 500 microliters of methanol added to the purge volume. A trace concentration of toluene was identified in that analysis.

Any reference within this report to Severn Trent Laboratories, Inc. or STL, should be understood to refer to TestAmerica Laboratories, Inc. (formerly known as Severn Trent Laboratories, Inc.) The analytical results associated with the samples presented in this test report were generated under a quality system that adheres to requirements specified in the NELAC standard. Release of the data in this test report and any associated electronic deliverables is authorized by the Laboratory Director's designee as verified by the following signature.

If there are any questions regarding this submittal, please contact me at 802 660-1990.

Sincerely,

Kirk F. Young
Project Manager

Enclosure

TestAmerica Burlington Data Qualifier Definitions

Organic

U: Compound analyzed but not detected at a concentration above the reporting limit.

J: Estimated value.

N: Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds (TICs) where the identification of a compound is based on a mass spectral library search.

P: SW-846: The relative percent difference for detected concentrations between two GC columns is greater than 40%. Unless otherwise specified the higher of the two values is reported on the Form I.

CLP SOW: Greater than 25% difference for detected concentrations between two GC columns. Unless otherwise specified the lower of the two values is reported on the Form I.

C: Pesticide result whose identification has been confirmed by GC/MS.

B: Analyte is found in the sample and the associated method blank. The flag is used for tentatively identified compounds as well as positively identified compounds.

E: Compounds whose concentrations exceed the upper limit of the calibration range of the instrument for that specific analysis.

D: Concentrations identified from analysis of the sample at a secondary dilution.

A: Tentatively identified compound is a suspected aldol condensation product.

X,Y,Z: Laboratory defined flags that may be used alone or combined, as needed. If used, the description of the flag is defined in the project narrative.

Inorganic/Metals

E: Reported value is estimated due to the presence of interference.

N: Matrix spike sample recovery is not within control limits.

* Duplicate sample analysis is not within control limits.

B: The result reported is less than the reporting limit but greater than the instrument detection limit.

U: Analyte was analyzed for but not detected above the reporting limit.

Method Codes:

P ICP-AES
MS ICP-MS
CV Cold Vapor AA
AS Semi-Automated Spectrophotometric

4045

MATRIX: Soil - Methanol	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***		Shipping Container No.
RECEIVING LAB: STL-TRANS America			Shipping Info:
PROJECT/SITE: Savannah, KS		ANALYSIS	ANL Field Contact (Name & Temporary Phone):
SAMPLER(S) (Signature) Sedivy			

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS	REMARKS Mass (g)	REMARKS Volume (ml)
02/07/08	SV-S-25639 10A(R)			13.181	10.0
	SV-S-25613 (10A(G))			11.052	10.0
	SV-S-25593 20A(B)			9.433	10.0
	SV-S 25599			13.377	10.0
	SV-TB-020708			—	10.0

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
[signature]	2/8/08	9:55am					

Relinquished by (Signature)	Date	Time	Received for Laboratory by	Date	Time	Remarks
[signature]	02/08/08		[signature]	2/9/08	0930	

Y	N	FOR LAB USE ONLY
X		Custody seal was intact when shipment received.
X		Sample containers were intact when received.
X		Shipment was at required temperature when received.
	X	Sample labels, Tags and COC agree.

*A sample is under custody if:
1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Research Division, 9700 S. Cass Avenue, Argonne, IL 60439

ER-160 (4-01)

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25593

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: 21005 SAS No.: SDG No.: 124082

Matrix: (soil/water) SOIL Lab Sample ID: 740275

Sample wt/vol: 9.4 (g/mL) G Lab File ID: 740275

Level: (low/med) MED Date Received: 02/09/08

% Moisture: not dec. _____ Date Analyzed: 02/12/08

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	11	U
74-87-3	Chloromethane	11	U
75-01-4	Vinyl Chloride	11	U
74-83-9	Bromomethane	11	U
75-00-3	Chloroethane	11	U
75-69-4	Trichlorofluoromethane	11	U
107-02-8	Acrolein	53	U
75-35-4	1,1-Dichloroethene	11	U
76-13-1	Freon TF	11	U
67-64-1	Acetone	53	U
74-88-4	Methyl Iodide	11	U
75-15-0	Carbon Disulfide	11	U
107-05-1	Allyl Chloride	11	U
75-09-2	Methylene Chloride	11	U
107-13-1	Acrylonitrile	11	U
156-60-5	trans-1,2-Dichloroethene	11	U
1634-04-4	Methyl-t-Butyl Ether	11	U
540-59-0	1,2-Dichloroethene (total)	11	U
75-34-3	1,1-Dichloroethane	11	U
108-05-4	Vinyl Acetate	11	U
126-99-8	Chloroprene	11	U
594-20-7	2,2-Dichloropropane	11	U
156-59-2	cis-1,2-Dichloroethene	11	U
78-93-3	2-Butanone	53	U
107-12-0	Propionitrile	42	U
74-97-5	Bromochloromethane	11	U
126-98-7	Methacrylonitrile	11	U
109-99-9	Tetrahydrofuran	150	U
67-66-3	Chloroform	11	U
71-55-6	1,1,1-Trichloroethane	11	U
56-23-5	Carbon Tetrachloride	11	U
563-58-6	1,1-Dichloropropene	11	U
71-43-2	Benzene	11	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25593

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: 21005 SAS No.: SDG No.: 124082

Matrix: (soil/water) SOIL Lab Sample ID: 740275

Sample wt/vol: 9.4 (g/mL) G Lab File ID: 740275

Level: (low/med) MED Date Received: 02/09/08

% Moisture: not dec. _____ Date Analyzed: 02/12/08

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	530	U
107-06-2	1,2-Dichloroethane	11	U
79-01-6	Trichloroethene	11	U
78-87-5	1,2-Dichloropropane	11	U
74-95-3	Dibromomethane	11	U
80-62-6	Methyl Methacrylate	11	U
123-91-1	1,4-Dioxane	530	U
75-27-4	Bromodichloromethane	11	U
110-75-8	2-Chloroethyl Vinyl Ether	11	U
10061-01-5	cis-1,3-Dichloropropene	11	U
108-10-1	4-Methyl-2-pentanone	53	U
108-88-3	Toluene	11	U
10061-02-6	trans-1,3-Dichloropropene	11	U
97-63-2	Ethyl Methacrylate	11	U
79-00-5	1,1,2-Trichloroethane	11	U
127-18-4	Tetrachloroethene	11	U
142-28-9	1,3-Dichloropropane	11	U
591-78-6	2-Hexanone	53	U
124-48-1	Dibromochloromethane	11	U
106-93-4	1,2-Dibromoethane	11	U
108-90-7	Chlorobenzene	11	U
630-20-6	1,1,1,2-Tetrachloroethane	11	U
100-41-4	Ethylbenzene	11	U
1330-20-7	Xylene (m,p)	11	U
95-47-6	Xylene (o)	11	U
1330-20-7	Xylene (total)	11	U
100-42-5	Styrene	11	U
75-25-2	Bromoform	11	U
98-82-8	Isopropylbenzene	11	U
1476-11-5	cis-1,4-Dichloro-2-butene	11	U
108-86-1	Bromobenzene	11	U
79-34-5	1,1,2,2-Tetrachloroethane	11	U
96-18-4	1,2,3-Trichloropropane	11	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25593

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: 21005 SAS No.: SDG No.: 124082

Matrix: (soil/water) SOIL Lab Sample ID: 740275

Sample wt/vol: 9.4 (g/mL) G Lab File ID: 740275

Level: (low/med) MED Date Received: 02/09/08

% Moisture: not dec. _____ Date Analyzed: 02/12/08

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	11	U
103-65-1	n-Propylbenzene	11	U
95-49-8	2-Chlorotoluene	11	U
106-43-4	4-Chlorotoluene	11	U
108-67-8	1,3,5-Trimethylbenzene	11	U
98-06-6	tert-Butylbenzene	11	U
95-63-6	1,2,4-Trimethylbenzene	11	U
135-98-8	sec-Butylbenzene	11	U
541-73-1	1,3-Dichlorobenzene	11	U
99-87-6	4-Isopropyltoluene	11	U
106-46-7	1,4-Dichlorobenzene	11	U
95-50-1	1,2-Dichlorobenzene	11	U
104-51-8	n-Butylbenzene	11	U
96-12-8	1,2-Dibromo-3-Chloropropane	11	U
120-82-1	1,2,4-Trichlorobenzene	4.4	J
87-68-3	Hexachlorobutadiene	11	U
91-20-3	Naphthalene	4.8	J
87-61-6	1,2,3-Trichlorobenzene	11	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25599

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: 21005 SAS No.: SDG No.: 124082

Matrix: (soil/water) SOIL Lab Sample ID: 740276

Sample wt/vol: 13.4 (g/mL) G Lab File ID: 740276

Level: (low/med) MED Date Received: 02/09/08

% Moisture: not dec. _____ Date Analyzed: 02/12/08

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	7.5	U
74-87-3	Chloromethane	7.5	U
75-01-4	Vinyl Chloride	7.5	U
74-83-9	Bromomethane	7.5	U
75-00-3	Chloroethane	7.5	U
75-69-4	Trichlorofluoromethane	7.5	U
107-02-8	Acrolein	37	U
75-35-4	1,1-Dichloroethene	7.5	U
76-13-1	Freon TF	7.5	U
67-64-1	Acetone	37	U
74-88-4	Methyl Iodide	7.5	U
75-15-0	Carbon Disulfide	7.5	U
107-05-1	Allyl Chloride	7.5	U
75-09-2	Methylene Chloride	7.5	U
107-13-1	Acrylonitrile	7.5	U
156-60-5	trans-1,2-Dichloroethene	7.5	U
1634-04-4	Methyl-t-Butyl Ether	7.5	U
540-59-0	1,2-Dichloroethene (total)	7.5	U
75-34-3	1,1-Dichloroethane	7.5	U
108-05-4	Vinyl Acetate	7.5	U
126-99-8	Chloroprene	7.5	U
594-20-7	2,2-Dichloropropane	7.5	U
156-59-2	cis-1,2-Dichloroethene	7.5	U
78-93-3	2-Butanone	37	U
107-12-0	Propionitrile	30	U
74-97-5	Bromochloromethane	7.5	U
126-98-7	Methacrylonitrile	7.5	U
109-99-9	Tetrahydrofuran	100	U
67-66-3	Chloroform	7.5	U
71-55-6	1,1,1-Trichloroethane	7.5	U
56-23-5	Carbon Tetrachloride	47	
563-58-6	1,1-Dichloropropene	7.5	U
71-43-2	Benzene	7.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25599

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: 21005 SAS No.: SDG No.: 124082

Matrix: (soil/water) SOIL Lab Sample ID: 740276

Sample wt/vol: 13.4 (g/mL) G Lab File ID: 740276

Level: (low/med) MED Date Received: 02/09/08

% Moisture: not dec. _____ Date Analyzed: 02/12/08

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	370	U
107-06-2	1,2-Dichloroethane	7.5	U
79-01-6	Trichloroethene	7.5	U
78-87-5	1,2-Dichloropropane	7.5	U
74-95-3	Dibromomethane	7.5	U
80-62-6	Methyl Methacrylate	7.5	U
123-91-1	1,4-Dioxane	370	U
75-27-4	Bromodichloromethane	7.5	U
110-75-8	2-Chloroethyl Vinyl Ether	7.5	U
10061-01-5	cis-1,3-Dichloropropene	7.5	U
108-10-1	4-Methyl-2-pentanone	37	U
108-88-3	Toluene	7.5	U
10061-02-6	trans-1,3-Dichloropropene	7.5	U
97-63-2	Ethyl Methacrylate	7.5	U
79-00-5	1,1,2-Trichloroethane	7.5	U
127-18-4	Tetrachloroethene	7.5	U
142-28-9	1,3-Dichloropropane	7.5	U
591-78-6	2-Hexanone	37	U
124-48-1	Dibromochloromethane	7.5	U
106-93-4	1,2-Dibromoethane	7.5	U
108-90-7	Chlorobenzene	7.5	U
630-20-6	1,1,1,2-Tetrachloroethane	7.5	U
100-41-4	Ethylbenzene	7.5	U
1330-20-7	Xylene (m,p)	7.5	U
95-47-6	Xylene (o)	7.5	U
1330-20-7	Xylene (total)	7.5	U
100-42-5	Styrene	5.4	J
75-25-2	Bromoform	7.5	U
98-82-8	Isopropylbenzene	7.5	U
1476-11-5	cis-1,4-Dichloro-2-butene	7.5	U
108-86-1	Bromobenzene	7.5	U
79-34-5	1,1,2,2-Tetrachloroethane	7.5	U
96-18-4	1,2,3-Trichloropropane	7.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25599

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: 21005 SAS No.: SDG No.: 124082

Matrix: (soil/water) SOIL Lab Sample ID: 740276

Sample wt/vol: 13.4 (g/mL) G Lab File ID: 740276

Level: (low/med) MED Date Received: 02/09/08

% Moisture: not dec. _____ Date Analyzed: 02/12/08

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	7.5	U
103-65-1	n-Propylbenzene	7.5	U
95-49-8	2-Chlorotoluene	7.5	U
106-43-4	4-Chlorotoluene	7.5	U
108-67-8	1,3,5-Trimethylbenzene	7.5	U
98-06-6	tert-Butylbenzene	7.5	U
95-63-6	1,2,4-Trimethylbenzene	7.5	U
135-98-8	sec-Butylbenzene	7.5	U
541-73-1	1,3-Dichlorobenzene	7.5	U
99-87-6	4-Isopropyltoluene	7.5	U
106-46-7	1,4-Dichlorobenzene	7.5	U
95-50-1	1,2-Dichlorobenzene	7.5	U
104-51-8	n-Butylbenzene	7.5	U
96-12-8	1,2-Dibromo-3-Chloropropane	7.5	U
120-82-1	1,2,4-Trichlorobenzene	7.5	U
87-68-3	Hexachlorobutadiene	7.5	U
91-20-3	Naphthalene	7.5	U
87-61-6	1,2,3-Trichlorobenzene	7.5	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25613

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: 21005 SAS No.: SDG No.: 124082

Matrix: (soil/water) SOIL Lab Sample ID: 740274

Sample wt/vol: 11.1 (g/mL) G Lab File ID: 740274

Level: (low/med) MED Date Received: 02/09/08

% Moisture: not dec. _____ Date Analyzed: 02/12/08

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	9.0	U
74-87-3	Chloromethane	9.0	U
75-01-4	Vinyl Chloride	9.0	U
74-83-9	Bromomethane	9.0	U
75-00-3	Chloroethane	9.0	U
75-69-4	Trichlorofluoromethane	9.0	U
107-02-8	Acrolein	45	U
75-35-4	1,1-Dichloroethene	9.0	U
76-13-1	Freon TF	9.0	U
67-64-1	Acetone	45	U
74-88-4	Methyl Iodide	9.0	U
75-15-0	Carbon Disulfide	9.0	U
107-05-1	Allyl Chloride	9.0	U
75-09-2	Methylene Chloride	9.0	U
107-13-1	Acrylonitrile	9.0	U
156-60-5	trans-1,2-Dichloroethene	9.0	U
1634-04-4	Methyl-t-Butyl Ether	9.0	U
540-59-0	1,2-Dichloroethene (total)	9.0	U
75-34-3	1,1-Dichloroethane	9.0	U
108-05-4	Vinyl Acetate	9.0	U
126-99-8	Chloroprene	9.0	U
594-20-7	2,2-Dichloropropane	9.0	U
156-59-2	cis-1,2-Dichloroethene	9.0	U
78-93-3	2-Butanone	45	U
107-12-0	Propionitrile	36	U
74-97-5	Bromochloromethane	9.0	U
126-98-7	Methacrylonitrile	9.0	U
109-99-9	Tetrahydrofuran	130	U
67-66-3	Chloroform	9.0	U
71-55-6	1,1,1-Trichloroethane	9.0	U
56-23-5	Carbon Tetrachloride	18	
563-58-6	1,1-Dichloropropene	9.0	U
71-43-2	Benzene	9.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25613

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: 21005 SAS No.: SDG No.: 124082

Matrix: (soil/water) SOIL Lab Sample ID: 740274

Sample wt/vol: 11.1 (g/mL) G Lab File ID: 740274

Level: (low/med) MED Date Received: 02/09/08

% Moisture: not dec. _____ Date Analyzed: 02/12/08

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	450	U
107-06-2	1,2-Dichloroethane	9.0	U
79-01-6	Trichloroethene	9.0	U
78-87-5	1,2-Dichloropropane	9.0	U
74-95-3	Dibromomethane	9.0	U
80-62-6	Methyl Methacrylate	9.0	U
123-91-1	1,4-Dioxane	450	U
75-27-4	Bromodichloromethane	9.0	U
110-75-8	2-Chloroethyl Vinyl Ether	9.0	U
10061-01-5	cis-1,3-Dichloropropene	9.0	U
108-10-1	4-Methyl-2-pentanone	45	U
108-88-3	Toluene	9.0	U
10061-02-6	trans-1,3-Dichloropropene	9.0	U
97-63-2	Ethyl Methacrylate	9.0	U
79-00-5	1,1,2-Trichloroethane	9.0	U
127-18-4	Tetrachloroethene	9.0	U
142-28-9	1,3-Dichloropropane	9.0	U
591-78-6	2-Hexanone	45	U
124-48-1	Dibromochloromethane	9.0	U
106-93-4	1,2-Dibromoethane	9.0	U
108-90-7	Chlorobenzene	9.0	U
630-20-6	1,1,1,2-Tetrachloroethane	9.0	U
100-41-4	Ethylbenzene	9.0	U
1330-20-7	Xylene (m,p)	9.0	U
95-47-6	Xylene (o)	9.0	U
1330-20-7	Xylene (total)	9.0	U
100-42-5	Styrene	9.0	U
75-25-2	Bromoform	9.0	U
98-82-8	Isopropylbenzene	9.0	U
1476-11-5	cis-1,4-Dichloro-2-butene	9.0	U
108-86-1	Bromobenzene	9.0	U
79-34-5	1,1,2,2-Tetrachloroethane	9.0	U
96-18-4	1,2,3-Trichloropropane	9.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25613

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: 21005 SAS No.: SDG No.: 124082

Matrix: (soil/water) SOIL Lab Sample ID: 740274

Sample wt/vol: 11.1 (g/mL) G Lab File ID: 740274

Level: (low/med) MED Date Received: 02/09/08

% Moisture: not dec. _____ Date Analyzed: 02/12/08

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	9.0	U
103-65-1	n-Propylbenzene	9.0	U
95-49-8	2-Chlorotoluene	9.0	U
106-43-4	4-Chlorotoluene	9.0	U
108-67-8	1,3,5-Trimethylbenzene	9.0	U
98-06-6	tert-Butylbenzene	9.0	U
95-63-6	1,2,4-Trimethylbenzene	9.0	U
135-98-8	sec-Butylbenzene	9.0	U
541-73-1	1,3-Dichlorobenzene	9.0	U
99-87-6	4-Isopropyltoluene	9.0	U
106-46-7	1,4-Dichlorobenzene	9.0	U
95-50-1	1,2-Dichlorobenzene	9.0	U
104-51-8	n-Butylbenzene	9.0	U
96-12-8	1,2-Dibromo-3-Chloropropane	9.0	U
120-82-1	1,2,4-Trichlorobenzene	9.0	U
87-68-3	Hexachlorobutadiene	9.0	U
91-20-3	Naphthalene	9.0	U
87-61-6	1,2,3-Trichlorobenzene	9.0	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25639

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: 21005 SAS No.: SDG No.: 124082

Matrix: (soil/water) SOIL Lab Sample ID: 740273

Sample wt/vol: 13.2 (g/mL) G Lab File ID: 740273

Level: (low/med) MED Date Received: 02/09/08

% Moisture: not dec. _____ Date Analyzed: 02/12/08

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	7.6	U
74-87-3	Chloromethane	7.6	U
75-01-4	Vinyl Chloride	7.6	U
74-83-9	Bromomethane	7.6	U
75-00-3	Chloroethane	7.6	U
75-69-4	Trichlorofluoromethane	7.6	U
107-02-8	Acrolein	38	U
75-35-4	1,1-Dichloroethene	7.6	U
76-13-1	Freon TF	7.6	U
67-64-1	Acetone	38	U
74-88-4	Methyl Iodide	7.6	U
75-15-0	Carbon Disulfide	7.6	U
107-05-1	Allyl Chloride	7.6	U
75-09-2	Methylene Chloride	7.6	U
107-13-1	Acrylonitrile	7.6	U
156-60-5	trans-1,2-Dichloroethene	7.6	U
1634-04-4	Methyl-t-Butyl Ether	7.6	U
540-59-0	1,2-Dichloroethene (total)	7.6	U
75-34-3	1,1-Dichloroethane	7.6	U
108-05-4	Vinyl Acetate	7.6	U
126-99-8	Chloroprene	7.6	U
594-20-7	2,2-Dichloropropane	7.6	U
156-59-2	cis-1,2-Dichloroethene	7.6	U
78-93-3	2-Butanone	38	U
107-12-0	Propionitrile	30	U
74-97-5	Bromochloromethane	7.6	U
126-98-7	Methacrylonitrile	7.6	U
109-99-9	Tetrahydrofuran	110	U
67-66-3	Chloroform	7.6	U
71-55-6	1,1,1-Trichloroethane	7.6	U
56-23-5	Carbon Tetrachloride	7.6	U
563-58-6	1,1-Dichloropropene	7.6	U
71-43-2	Benzene	7.6	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25639

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: 21005 SAS No.: SDG No.: 124082

Matrix: (soil/water) SOIL Lab Sample ID: 740273

Sample wt/vol: 13.2 (g/mL) G Lab File ID: 740273

Level: (low/med) MED Date Received: 02/09/08

% Moisture: not dec. _____ Date Analyzed: 02/12/08

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	380	U
107-06-2	1,2-Dichloroethane	7.6	U
79-01-6	Trichloroethene	7.6	U
78-87-5	1,2-Dichloropropane	7.6	U
74-95-3	Dibromomethane	7.6	U
80-62-6	Methyl Methacrylate	7.6	U
123-91-1	1,4-Dioxane	380	U
75-27-4	Bromodichloromethane	7.6	U
110-75-8	2-Chloroethyl Vinyl Ether	7.6	U
10061-01-5	cis-1,3-Dichloropropene	7.6	U
108-10-1	4-Methyl-2-pentanone	38	U
108-88-3	Toluene	7.6	U
10061-02-6	trans-1,3-Dichloropropene	7.6	U
97-63-2	Ethyl Methacrylate	7.6	U
79-00-5	1,1,2-Trichloroethane	7.6	U
127-18-4	Tetrachloroethene	7.6	U
142-28-9	1,3-Dichloropropane	7.6	U
591-78-6	2-Hexanone	38	U
124-48-1	Dibromochloromethane	7.6	U
106-93-4	1,2-Dibromoethane	7.6	U
108-90-7	Chlorobenzene	7.6	U
630-20-6	1,1,1,2-Tetrachloroethane	7.6	U
100-41-4	Ethylbenzene	7.6	U
1330-20-7	Xylene (m,p)	7.6	U
95-47-6	Xylene (o)	7.6	U
1330-20-7	Xylene (total)	7.6	U
100-42-5	Styrene	7.6	U
75-25-2	Bromoform	7.6	U
98-82-8	Isopropylbenzene	7.6	U
1476-11-5	cis-1,4-Dichloro-2-butene	7.6	U
108-86-1	Bromobenzene	7.6	U
79-34-5	1,1,2,2-Tetrachloroethane	7.6	U
96-18-4	1,2,3-Trichloropropane	7.6	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-S-25639

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: 21005 SAS No.: SDG No.: 124082

Matrix: (soil/water) SOIL Lab Sample ID: 740273

Sample wt/vol: 13.2 (g/mL) G Lab File ID: 740273

Level: (low/med) MED Date Received: 02/09/08

% Moisture: not dec. _____ Date Analyzed: 02/12/08

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	7.6	U
103-65-1	n-Propylbenzene	7.6	U
95-49-8	2-Chlorotoluene	7.6	U
106-43-4	4-Chlorotoluene	7.6	U
108-67-8	1,3,5-Trimethylbenzene	7.6	U
98-06-6	tert-Butylbenzene	7.6	U
95-63-6	1,2,4-Trimethylbenzene	7.6	U
135-98-8	sec-Butylbenzene	7.6	U
541-73-1	1,3-Dichlorobenzene	7.6	U
99-87-6	4-Isopropyltoluene	7.6	U
106-46-7	1,4-Dichlorobenzene	7.6	U
95-50-1	1,2-Dichlorobenzene	7.6	U
104-51-8	n-Butylbenzene	7.6	U
96-12-8	1,2-Dibromo-3-Chloropropane	7.6	U
120-82-1	1,2,4-Trichlorobenzene	7.6	U
87-68-3	Hexachlorobutadiene	7.6	U
91-20-3	Naphthalene	7.6	U
87-61-6	1,2,3-Trichlorobenzene	7.6	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-TB-020708

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: 21005 SAS No.: SDG No.: 124082

Matrix: (soil/water) SOIL Lab Sample ID: 740277

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 740277

Level: (low/med) MED Date Received: 02/09/08

% Moisture: not dec. _____ Date Analyzed: 02/12/08

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	10	U
74-87-3	Chloromethane	10	U
75-01-4	Vinyl Chloride	10	U
74-83-9	Bromomethane	10	U
75-00-3	Chloroethane	10	U
75-69-4	Trichlorofluoromethane	10	U
107-02-8	Acrolein	50	U
75-35-4	1,1-Dichloroethene	10	U
76-13-1	Freon TF	10	U
67-64-1	Acetone	50	U
74-88-4	Methyl Iodide	10	U
75-15-0	Carbon Disulfide	10	U
107-05-1	Allyl Chloride	10	U
75-09-2	Methylene Chloride	10	U
107-13-1	Acrylonitrile	10	U
156-60-5	trans-1,2-Dichloroethene	10	U
1634-04-4	Methyl-t-Butyl Ether	10	U
540-59-0	1,2-Dichloroethene (total)	10	U
75-34-3	1,1-Dichloroethane	10	U
108-05-4	Vinyl Acetate	10	U
126-99-8	Chloroprene	10	U
594-20-7	2,2-Dichloropropane	10	U
156-59-2	cis-1,2-Dichloroethene	10	U
78-93-3	2-Butanone	50	U
107-12-0	Propionitrile	40	U
74-97-5	Bromochloromethane	10	U
126-98-7	Methacrylonitrile	10	U
109-99-9	Tetrahydrofuran	140	U
67-66-3	Chloroform	10	U
71-55-6	1,1,1-Trichloroethane	10	U
56-23-5	Carbon Tetrachloride	10	U
563-58-6	1,1-Dichloropropene	10	U
71-43-2	Benzene	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-TB-020708

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: 21005 SAS No.: SDG No.: 124082

Matrix: (soil/water) SOIL Lab Sample ID: 740277

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 740277

Level: (low/med) MED Date Received: 02/09/08

% Moisture: not dec. _____ Date Analyzed: 02/12/08

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	500	U
107-06-2	1,2-Dichloroethane	10	U
79-01-6	Trichloroethene	10	U
78-87-5	1,2-Dichloropropane	10	U
74-95-3	Dibromomethane	10	U
80-62-6	Methyl Methacrylate	10	U
123-91-1	1,4-Dioxane	500	U
75-27-4	Bromodichloromethane	10	U
110-75-8	2-Chloroethyl Vinyl Ether	10	U
10061-01-5	cis-1,3-Dichloropropene	10	U
108-10-1	4-Methyl-2-pentanone	50	U
108-88-3	Toluene	10	U
10061-02-6	trans-1,3-Dichloropropene	10	U
97-63-2	Ethyl Methacrylate	10	U
79-00-5	1,1,2-Trichloroethane	10	U
127-18-4	Tetrachloroethene	10	U
142-28-9	1,3-Dichloropropane	10	U
591-78-6	2-Hexanone	50	U
124-48-1	Dibromochloromethane	10	U
106-93-4	1,2-Dibromoethane	10	U
108-90-7	Chlorobenzene	10	U
630-20-6	1,1,1,2-Tetrachloroethane	10	U
100-41-4	Ethylbenzene	10	U
1330-20-7	Xylene (m,p)	10	U
95-47-6	Xylene (o)	10	U
1330-20-7	Xylene (total)	10	U
100-42-5	Styrene	10	U
75-25-2	Bromoform	10	U
98-82-8	Isopropylbenzene	10	U
1476-11-5	cis-1,4-Dichloro-2-butene	10	U
108-86-1	Bromobenzene	10	U
79-34-5	1,1,2,2-Tetrachloroethane	10	U
96-18-4	1,2,3-Trichloropropane	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

ARGLAB SAMPLE NO.

SV-TB-020708

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: 21005 SAS No.: SDG No.: 124082

Matrix: (soil/water) SOIL Lab Sample ID: 740277

Sample wt/vol: 10.0 (g/mL) G Lab File ID: 740277

Level: (low/med) MED Date Received: 02/09/08

% Moisture: not dec. _____ Date Analyzed: 02/12/08

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	10	U
103-65-1	n-Propylbenzene	10	U
95-49-8	2-Chlorotoluene	10	U
106-43-4	4-Chlorotoluene	10	U
108-67-8	1,3,5-Trimethylbenzene	10	U
98-06-6	tert-Butylbenzene	10	U
95-63-6	1,2,4-Trimethylbenzene	10	U
135-98-8	sec-Butylbenzene	10	U
541-73-1	1,3-Dichlorobenzene	10	U
99-87-6	4-Isopropyltoluene	10	U
106-46-7	1,4-Dichlorobenzene	10	U
95-50-1	1,2-Dichlorobenzene	10	U
104-51-8	n-Butylbenzene	10	U
96-12-8	1,2-Dibromo-3-Chloropropane	10	U
120-82-1	1,2,4-Trichlorobenzene	10	U
87-68-3	Hexachlorobutadiene	10	U
91-20-3	Naphthalene	10	U
87-61-6	1,2,3-Trichlorobenzene	10	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MEOHBLK021208MA

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: 21005 SAS No.: SDG No.: 124082

Matrix: (soil/water) SOIL Lab Sample ID: MEOHBLK021208MA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: MQXB04B

Level: (low/med) MED Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/12/08

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
75-71-8	Dichlorodifluoromethane	20	U
74-87-3	Chloromethane	20	U
75-01-4	Vinyl Chloride	20	U
74-83-9	Bromomethane	20	U
75-00-3	Chloroethane	20	U
75-69-4	Trichlorofluoromethane	20	U
107-02-8	Acrolein	100	U
75-35-4	1,1-Dichloroethene	20	U
76-13-1	Freon TF	20	U
67-64-1	Acetone	100	U
74-88-4	Methyl Iodide	20	U
75-15-0	Carbon Disulfide	20	U
107-05-1	Allyl Chloride	20	U
75-09-2	Methylene Chloride	20	U
107-13-1	Acrylonitrile	20	U
156-60-5	trans-1,2-Dichloroethene	20	U
1634-04-4	Methyl-t-Butyl Ether	20	U
540-59-0	1,2-Dichloroethene (total)	20	U
75-34-3	1,1-Dichloroethane	20	U
108-05-4	Vinyl Acetate	20	U
126-99-8	Chloroprene	20	U
594-20-7	2,2-Dichloropropane	20	U
156-59-2	cis-1,2-Dichloroethene	20	U
78-93-3	2-Butanone	100	U
107-12-0	Propionitrile	80	U
74-97-5	Bromochloromethane	20	U
126-98-7	Methacrylonitrile	20	U
109-99-9	Tetrahydrofuran	280	U
67-66-3	Chloroform	20	U
71-55-6	1,1,1-Trichloroethane	20	U
56-23-5	Carbon Tetrachloride	20	U
563-58-6	1,1-Dichloropropene	20	U
71-43-2	Benzene	20	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MEOHBLK021208MA

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: 21005 SAS No.: SDG No.: 124082

Matrix: (soil/water) SOIL Lab Sample ID: MEOHBLK021208MA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: MQXB04B

Level: (low/med) MED Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/12/08

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
78-83-1	Isobutyl Alcohol	1000	U
107-06-2	1,2-Dichloroethane	20	U
79-01-6	Trichloroethene	20	U
78-87-5	1,2-Dichloropropane	20	U
74-95-3	Dibromomethane	20	U
80-62-6	Methyl Methacrylate	20	U
123-91-1	1,4-Dioxane	1000	U
75-27-4	Bromodichloromethane	20	U
110-75-8	2-Chloroethyl Vinyl Ether	20	U
10061-01-5	cis-1,3-Dichloropropene	20	U
108-10-1	4-Methyl-2-pentanone	100	U
108-88-3	Toluene	9.4	J
10061-02-6	trans-1,3-Dichloropropene	20	U
97-63-2	Ethyl Methacrylate	20	U
79-00-5	1,1,2-Trichloroethane	20	U
127-18-4	Tetrachloroethene	20	U
142-28-9	1,3-Dichloropropane	20	U
591-78-6	2-Hexanone	100	U
124-48-1	Dibromochloromethane	20	U
106-93-4	1,2-Dibromoethane	20	U
108-90-7	Chlorobenzene	20	U
630-20-6	1,1,1,2-Tetrachloroethane	20	U
100-41-4	Ethylbenzene	20	U
1330-20-7	Xylene (m,p)	20	U
95-47-6	Xylene (o)	20	U
1330-20-7	Xylene (total)	20	U
100-42-5	Styrene	20	U
75-25-2	Bromoform	20	U
98-82-8	Isopropylbenzene	20	U
1476-11-5	cis-1,4-Dichloro-2-butene	20	U
108-86-1	Bromobenzene	20	U
79-34-5	1,1,2,2-Tetrachloroethane	20	U
96-18-4	1,2,3-Trichloropropane	20	U

FORM 1
VOLATILE ORGANICS ANALYSIS DATA SHEET

CLIENT SAMPLE NO.

MEOHBLK021208MA

Lab Name: TESTAMERICA BURLINGTON Contract: 21005

Lab Code: STLV Case No.: 21005 SAS No.: SDG No.: 124082

Matrix: (soil/water) SOIL Lab Sample ID: MEOHBLK021208MA

Sample wt/vol: 5.0 (g/mL) G Lab File ID: MQXB04B

Level: (low/med) MED Date Received: _____

% Moisture: not dec. _____ Date Analyzed: 02/12/08

GC Column: CAP ID: 0.53 (mm) Dilution Factor: 1.0

Soil Extract Volume: 10000(uL) Soil Aliquot Volume: 500(uL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/KG	Q
110-57-6	trans-1,4-Dichloro-2-butene	20	U
103-65-1	n-Propylbenzene	20	U
95-49-8	2-Chlorotoluene	20	U
106-43-4	4-Chlorotoluene	20	U
108-67-8	1,3,5-Trimethylbenzene	20	U
98-06-6	tert-Butylbenzene	20	U
95-63-6	1,2,4-Trimethylbenzene	20	U
135-98-8	sec-Butylbenzene	20	U
541-73-1	1,3-Dichlorobenzene	20	U
99-87-6	4-Isopropyltoluene	20	U
106-46-7	1,4-Dichlorobenzene	20	U
95-50-1	1,2-Dichlorobenzene	20	U
104-51-8	n-Butylbenzene	20	U
96-12-8	1,2-Dibromo-3-Chloropropane	20	U
120-82-1	1,2,4-Trichlorobenzene	20	U
87-68-3	Hexachlorobutadiene	20	U
91-20-3	Naphthalene	20	U
87-61-6	1,2,3-Trichlorobenzene	20	U

ENVIROSYSTEMS, INC.

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Phone (410) 964-0330 • Fax (410) 740-9306
Email: info@envsystems.com • Webpage: www.envsystems.com/envsys

November 05, 2007

Jorge S. Alvarado, PH. D
Argonne National Laboratory
Environmental Research Division
Applied Geosciences and Environmental
Management Section
9700 South Cass Avenue, ER-203
Argonne, Illinois 60439

RE: Report #070290

Dear Jorge,

Enclosed is the Analytical Data Package for Organics Analysis for the samples received on October 30, 2007. These samples were analyzed by using method SW-846 8260B and USEPA CLP SOWOLM04.3 and the chain of custody instructions.

Please do not hesitate to call if you have any questions, comments, or require additional information.

Sincerely,

Mohan Khare

Mohan Khare Ph.D.
President/CEO

Enclosure (1)
MK/ncc

SDG NARRATIVE
VOLATILE ORGANICS (VOC)

Envirosystems, Inc.

Contract: N/A
Client: Argonne National Laboratory
Case: N/A
SDG: ARG71018

1. SAMPLE RECIEPT

Date received: 10-30-2007
Cooler Temperature: 2

Sample Summary

Client ID	Laboratory ID	Matrix	pH
SUMORGAN-W-25360	0071018-01	WATER	7
SUMOORE-W-25361	0071018-02	WATER	7
SVMOOT-W-25368	0071018-03	WATER	7
SUTB-W-25387	0071018-04	WATER	7

2. HOLDING TIMES

A. **Sample Preparation:** All holding times were met.
B. **Sample Analysis:** All holding times were met

3. METHODS

The samples were analyzed and reported by using method SW-846 8260B and USEPA CLP SOW OLM04.3 for target compound list.

4. INSTRUMENT AND CHROMATOGRAPHIC CONDITIONS

A Hewlett Packard 6890 gas chromatograph equipped with a Hewlett Packard 5975 MSD was used for sample analysis. The capillary column used was a Restek 20m by 0.18 mm ID by 1.0 µm film thickness (Restek Cat. # RTX-624). The trap used with the sample concentrator is an OI Analytical Trap #10, 30cm packed with Tenax/silica gel/cms (PN#228122).

5. PREPARATION

The submitted samples were analyzed as received.

6. ANALYSIS

A. **Calibration:**

1. **Initial calibration**

All acceptance criteria as stipulated by SW-846 8260b were met for all SPCC's and CCC's. All target compounds met the required percent RSD.

SDG NARRATIVE
VOLATILE ORGANICS (VOC)

II. Blanks:

All acceptance criteria were met.

II. Surrogates:

All acceptance criteria were met.

B. Spikes:

I. Laboratory Control Spikes (LCS)

LCS and LCSD samples were not analyzed.

II. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

The client did not request a MS/MSD.

C. Internal Standards:

All acceptance criteria were met.

D. Samples

Sample analysis proceeded normally.

I certify that this Sample Data Package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in the hard copy Sample Data Package and in the Electronic Data Deliverables has been authorized by the laboratory manager or the manager's designee, as verified by the following signatures.

_____ _____

Laboratory Manager Date

2. Chain of Custody Records

Argonne NATIONAL LABORATORY

6327

MATRIX: WATER	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***	Shipping Container:
RECEIVING LAB: ENVIROSYSTEMS		Shipping Info:
PROJECT/SITE: SAVANNAH, MO		Field Contact (Name & Temporary Phone):
SAMPLER(S) (Signature)		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: VOC										REMARKS
10.25.07	SUMORGAN-W-25360	2	X										
10.25.07	SUMOORE-W-25361	2	X										
10.26.07	SUMOOT-W-25368	2	X										
10.29.07	SUTB-W-25387	2	X										

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
	10.29.07	1830			10/30/07	11:00	Barbara Crook

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Remarks
						2°C Temp

Y	N	FOR LAB USE ONLY
✓		Custody seal was intact when shipment received.
✓		Sample containers were intact when received.
✓		Shipment was at required temperature when received.
✓		Sample labels, Tags and COC agree.

*A sample is under custody if:

1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Science Division, 9700 S. Cass Avenue, Argonne, IL 60439

VOLATILE SAMPLE DATA

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUMORGAN-W-25360

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG71018

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0071018-01

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H73FA180.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/30/2007

% Moisture: not dec. Date Analyzed: 10/30/2007

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	10	
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SUMORGAN-W-25360

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG71018

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0071018-01

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H73FA180.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/30/2007

% Moisture: not dec. Date Analyzed: 10/30/2007

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SUMORGAN-W-25360

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG71018

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0071018-01

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H73FA180.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/30/2007

% Moisture: not dec. Date Analyzed: 10/30/2007

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) UG/L Purge Volume: 5.00 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SUMOORE-W-25361

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG71018

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0071018-02

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H73FA181.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/30/2007

% Moisture: not dec. Date Analyzed: 10/30/2007

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SUMOORE-W-25361

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG71018

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0071018-02

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H73FA181.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/30/2007

% Moisture: not dec. Date Analyzed: 10/30/2007

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SUMOORE-W-25361

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG71018

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0071018-02

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H73FA181.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/30/2007

% Moisture: not dec. Date Analyzed: 10/30/2007

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) UG/L Purge Volume: 5.00 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
06					
07					
08					
09					
10					
11					
12					
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16					
17					
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19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SVMOOT-W-25368

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG71018

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0071018-03

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H73FA182.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/30/2007

% Moisture: not dec. Date Analyzed: 10/30/2007

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.9	
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	100	
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.
SVMOOT-W-25368

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG71018

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0071018-03

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H73FA182.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/30/2007

% Moisture: not dec. Date Analyzed: 10/30/2007

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SVMOOT-W-25368

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG71018

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0071018-03

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H73FA182.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/30/2007

% Moisture: not dec. Date Analyzed: 10/30/2007

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) UG/L Purge Volume: 5.00 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
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26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

[1]EPA-designated Registry Number.

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUTB-W-25387

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG71018

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0071018-04

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H73FA183.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/30/2007

% Moisture: not dec. Date Analyzed: 10/30/2007

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

SUTB-W-25387

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG71018

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0071018-04

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H73FA183.D

Level: (TRACE/LOW/MED) LOW Date Received: 10/30/2007

% Moisture: not dec. Date Analyzed: 10/30/2007

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	5.0	U

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.
SUTB-W-25387

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG71018

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0071018-04

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H73FA183.D

Level: (TRACE or LOW/MED) LOW Date Received: 10/30/2007

% Moisture: not dec. Date Analyzed: 10/30/2007

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) UG/L Purge Volume: 5.00 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
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23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

Blank Data

1A - FORM I VOA-1
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKFH

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG71018

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0J73001-BLK1

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H73FA179.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 10/30/2007

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
75-71-8	Dichlorodifluoromethane	5.0	U
74-87-3	Chloromethane	5.0	U
75-01-4	Vinyl chloride	5.0	U
74-83-9	Bromomethane	5.0	U
75-00-3	Chloroethane	5.0	U
75-69-4	Trichlorofluoromethane	5.0	U
75-35-4	1,1-Dichloroethene	5.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	U
67-64-1	Acetone	5.0	U
75-15-0	Carbon disulfide	5.0	U
79-20-9	Methyl acetate	5.0	U
75-09-2	Methylene chloride	5.0	U
156-60-5	trans-1,2-Dichloroethene	5.0	U
1634-04-4	Methyl tert-butyl ether	5.0	U
75-34-3	1,1-Dichloroethane	5.0	U
156-59-2	cis-1,2-Dichloroethene	5.0	U
78-93-3	2-Butanone	5.0	U
67-66-3	Chloroform	5.0	U
71-55-6	1,1,1-Trichloroethane	5.0	U
110-82-7	Cyclohexane	5.0	U
56-23-5	Carbon Tetrachloride	5.0	U
71-43-2	Benzene	5.0	U
107-06-2	1,2-Dichloroethane	5.0	U

1B - FORM I VOA-2
VOLATILE ORGANICS ANALYSIS DATA SHEET

EPA SAMPLE NO.

VBLKFH

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG71018

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0J73001-BLK1

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H73FA179.D

Level: (TRACE/LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 10/30/2007

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

Purge Volume: 5.00 (mL)

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/kg) UG/L	Q
79-01-6	Trichloroethene	5.0	U
108-87-2	Methylcyclohexane	5.0	U
78-87-5	1,2-Dichloropropane	5.0	U
75-27-4	Bromodichloromethane	5.0	U
10061-01-5	cis-1,3-Dichloropropene	5.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
108-88-3	Toluene	5.0	U
10061-02-6	trans-1,3-Dichloropropene	5.0	U
79-00-5	1,1,2-Trichloroethane	5.0	U
127-18-4	Tetrachloroethene	5.0	U
591-78-6	2-Hexanone	5.0	U
124-48-1	Dibromochloromethane	5.0	U
106-93-4	1,2-Dibromoethane	5.0	U
108-90-7	Chlorobenzene	5.0	U
100-41-4	Ethylbenzene	5.0	U
95-47-6	o-Xylene	5.0	U
179601-23-1	m,p-Xylene	5.0	U
100-42-5	Styrene	5.0	U
75-25-2	Bromoform	5.0	U
98-82-8	Isopropylbenzene	5.0	U
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U
541-73-1	1,3-Dichlorobenzene	5.0	U
106-46-7	1,4-Dichlorobenzene	5.0	U
95-50-1	1,2-Dichlorobenzene	5.0	U
96-12-8	1,2-Dibromo-3-chloropropane	5.0	U
120-82-1	1,2,4-Trichlorobenzene	5.0	U
91-20-3	Naphthalene	0.43	J

1J - FORM I VOA-TIC
VOLATILE ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO.

VBLKFH

Lab Name: Envirosystems, Inc. Contract:

Lab Code: ENVSYS Case No.: Mod. Ref No.: SDG No.: ARG71018

Matrix: (SOIL/SED/WATER) WATER Lab Sample ID: 0J73001-BLK1

Sample wt/vol: 5.00 (g/mL) ML Lab File ID: H73FA179.D

Level: (TRACE or LOW/MED) LOW Date Received:

% Moisture: not dec. Date Analyzed: 10/30/2007

GC Column: RTX-624 ID: 0.18 (mm) Dilution Factor: 1.0

Soil Extract Volume: (uL) Soil Aliquot Volume: (uL)

CONCENTRATION UNITS: (ug/L or ug/kg) UG/L Purge Volume: 5.00 (mL)

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
01					
02					
03					
04					
05					
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17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
	E966796[1]	Total Alkanes	N/A		

[1] EPA-designated Registry Number.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

November 16, 2007

Mr. Clyde Dennis
Argonne National Laboratory
9700 S. Cass Avenue
Building 201, Office B149
Argonne, IL 60439

Re: Laboratory Project No. 21005
Case: SAVANNAH; SDG: 122808

Dear Mr. Dennis:

Enclosed are analytical results for samples that were received by TestAmerica Burlington on November 2nd, 2007. Laboratory identification numbers were assigned, and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 11/02/07 ETR No: 122808		
730840	SVMOORE-W-25361	10/25/07	WATER
730841	SVMOORE-W-25361F	10/25/07	FILTRATE
730842	SVMORGAN-W-25360	10/25/07	WATER
730843	SVMORGAN-W-25360F	10/25/07	FILTRATE
730844	SVMARSHALL-W-25366	10/26/07	WATER
730845	SVMARSHALL-W-25366F	10/26/07	FILTRATE
730846	SVMCPIKE-W-25373	10/28/07	WATER
730847	SVMCPIKE-W-25373F	10/28/07	FILTRATE
730848	SVHUGHES-W-25381	10/29/07	WATER
730849	SVHUGHES-W-25381F	10/29/07	FILTRATE
730850	SVBARR-W-25377	10/28/07	WATER
730851	SVBARR-W-25377F	10/28/07	FILTRATE
730852	SVCITYTR-W-25384	10/29/07	WATER
730853	SVCITYTR-W-25384F	10/29/07	FILTRATE
730854	SVCLIZERNEW-W-25378	10/28/07	WATER
730855	SVCLIZERNEW-W-25378F	10/28/07	FILTRATE
730857	SVBURK-W-25365	10/26/07	WATER
730858	SVBURK-W-25365F	10/26/07	FILTRATE
730859	SVCITYSI-W-25385	10/29/07	WATER
730860	SVCITYSI-W-25385F	10/29/07	FILTRATE
730861	SVMILLER-W-25372	10/27/07	WATER
730862	SVMILLER-W-25372F	10/27/07	FILTRATE
730863	SVMDOT-W-25368	10/26/07	WATER

30 Community Drive, Suite 11 South Burlington, VT 05403 **tel** 802.660.1990 **fax** 802.660.1919 **www.testamericainc.com**

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 11/02/07 ETR No: 122808		
730864	SVMDOT-W-25368F	10/26/07	FILTRATE
730865	SVCLIZEROLD-W-25380	10/29/07	WATER
730866	SVCLIZEROLD-W-25380F	10/29/07	FILTRATE
730867	SVPOTTER-W-25376	10/28/07	WATER
730868	SVPOTTER-W-25376F	10/28/07	FILTRATE

Documentation of the condition of the samples at the time of their receipt and any exception to the laboratory's Sample Acceptance Policy is documented in the Sample Handling section of this submittal. In order to accommodate field length limitations in processing the data summary forms, the laboratory did, in certain instances, abbreviate the sample identifier. The electronically formatted data provides for the full sample identifier.

The samples were analyzed for trace metals by SW846 Methods 3010A/6010B. Sample volumes were filtered by the laboratory through a 0.45-micron filter prior to being analyzed for the trace metals. An "F" suffix has been added to the sample identifiers to distinguish the sample volumes as filtrates. Matrix spike and replicate analyses were not performed on samples in this sample set. A laboratory control sample was prepared and analyzed in association with the samples, and there was an acceptable recovery performance in that analysis. A serial dilution analysis was performed on the digestate of sample SVMOORE-W-25361, and the results of that analysis gave indication of possible matrix interference specific to zinc. Trace concentrations of manganese, phosphorus, silicon, sodium, and zinc, and negative offsets specific to magnesium, potassium, and sodium were identified in the analysis of the method blanks associated with the analytical work.

The samples in this sample set were analyzed for major anions by USEPA 300.0. The analytical work was performed by TestAmerica Chicago. The sample volumes were sent from TestAmerica Burlington to the Chicago laboratory under chain-of-custody, and those were received in good condition. The data report from TestAmerica Chicago is submitted in its entirety.

The analytical results associated with the samples presented in this test report were generated under a quality system that adheres to requirements specified in the NELAC standard. Release of the data in this test report and any associated electronic deliverables is authorized by the Laboratory Director's designee as verified by the following signature.

If there are any questions regarding this submittal, please contact me at 802 655-1203.

Sincerely,

Kirk F. Young
Project Manager

KFY/hsf
Enclosure

TestAmerica Burlington Data Qualifier Definitions

Organic

U: Compound analyzed but not detected at a concentration above the reporting limit.

J: Estimated value.

N: Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds (TICs) where the identification of a compound is based on a mass spectral library search.

P: SW-846: Greater than 40% difference for detected concentrations between two GC columns. Unless otherwise specified the higher of the two values is reported on the Form I.

CLP SOW: Greater than 25% difference for detected concentrations between two GC columns. Unless otherwise specified the lower of the two values is reported on the Form I.

C: Pesticide result whose identification has been confirmed by GC/MS.

B: Analyte is found in the sample and the associated method blank. The flag is used for tentatively identified compounds as well as positively identified compounds.

E: Compounds whose concentrations exceed the upper limit of the calibration range of the instrument for that specific analysis.

D: Concentrations identified from analysis of the sample at a secondary dilution.

A: Tentatively identified compound is a suspected aldol condensation product.

X,Y,Z: Laboratory defined flags that may be used alone or combined, as needed. If used, the description of the flag is defined in the project narrative.

Inorganic/Metals

E: Reported value is estimated due to the presence of interference.

N: Matrix spike sample recovery is not within control limits.

* Duplicate sample analysis is not within control limits.

B: The result reported is less than the reporting limit but greater than the instrument detection limit.

U: Analyte was analyzed for but not detected above the reporting limit.

Method Codes:

P ICP-AES
MS ICP-MS
CV Cold Vapor AA
AS Semi-Automated Spectrophotometric

FQA009:04.24.06:3
TestAmerica Burlington

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Chain of Custody

Argonne NATIONAL LABORATORY

6340

MATRIX: Water	ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD*	Shipping Container:
RECEIVING LAB: SEVERN-TRENT		Shipping Info:
PROJECT/SITE: SAVANNAH, MO		Field Contact (Name & Temporary Phone): 402-465-9021
SAMPLER(S) (Signature) Bedling, LAFRENIERE		

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: Cations	ANALYSIS: Anions								REMARKS
10-25-07	SVMOORE-W-25361	2	1	1								
10-25-07	SVMORGAN-W-25360	2	1	1								
10-26-07	SVMarshall-W-25366	2	1	1								
10-26-07	SVMcPike-W-25373	2	1	1								
10-29-07	SVHughes-W-25381	2	1	1								
10-28-07	SVBARR-W-25377	2	1	1								
10-29-07	SVcity7R-W-25384	2	1	1								
10-28-07	SVcliZERNeW-W-25378	2	1	1								
10-26-07	SVBURK-W-25365	2	1	1								
10-29-07	SV City 5I-W-25385	2	1	1								
10-27-07	SVMiller-W-25372	2	1	1								
10-26-07	SVMDot-W-25368	2	1	1								
10-29-07	SVtLizerOLD-W-25380	2	1	1								
10-28-07	SV Potter-W-25376	2	1	1								

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
Bbedling	11/1/07	20:30	11/02/07 09:25				

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Remarks

Y	N	FOR LAB USE ONLY
X		Custody seal was intact when shipment received.
X		Sample containers were intact when received.
X		Shipment was at required temperature when received.
X		Sample labels, Tags and COC agree. COC does not list times.

*A sample is under custody if:

1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Science Division, 9700 S. Cass Avenue, Argonne, IL 60439

EVS-160 (6-07)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample Data Summary – Metals

USEPA-CLP FORMS

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: _____ SDG No.: 122808

SOW No.: _____

EPA Sample No.	Lab Sample ID.
SVBARR-W-25377F	730851
SVBURK-W-25365F	730858
SVCITYSI-W-25385F	730860
SVCITYTR-W-25384F	730853
SVCLIZERNEW-W-25378F	730855
SVCLIZEROLD-W-25380F	730866
SVHUGHES-W-25381F	730849
SVMARSHALL-W-25366F	730845
SVMCPIKE-W-25373F	730847
SVMDOT-W-25368F	730864
SVMILLER-W-25372F	730862
SVMOORE-W-25361F	730841
SVMORGAN-W-25360F	730843
SVPOTTER-W-25376F	730868

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments: _____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____

Date: _____ Title: _____

COVER PAGE - IN

USEPA-CLP FORMS
-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
SVBARR-W-25377F

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: SDG No.: 122808

Matrix (soil/water): FILTRATE Lab Sample ID: 730851

Level (low/med): LOW Date Received: 11/02/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	44.8	B		P
7440-70-2	Calcium	61700			P
7439-89-6	Iron	10.0	B		P
7439-95-4	Magnesium	11700			P
7439-96-5	Manganese	36.1			P
7440-23-5	Sodium	12100			P
7723-14-0	Phosphorus	180	B		P
7440-09-7	Potassium	1250	B		P
7440-21-3	Silicon	14500			P
7440-66-6	Zinc	143		E	P

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Comments:

Form I - IN

USEPA-CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SVBURK-W-25365F

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: SDG No.: 122808

Matrix (soil/water): FILTRATE Lab Sample ID: 730858

Level (low/med): LOW Date Received: 11/02/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	36.8	B		P
7440-70-2	Calcium	51300			P
7439-89-6	Iron	9.1	B		P
7439-95-4	Magnesium	14000			P
7439-96-5	Manganese	234			P
7440-23-5	Sodium	21100			P
7723-14-0	Phosphorus	1.1	B		P
7440-09-7	Potassium	4670	B		P
7440-21-3	Silicon	5570			P
7440-66-6	Zinc	544		E	P

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Form I - IN

USEPA-CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SVCITYSI-W-25385F

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: SDG No.: 122808

Matrix (soil/water): FILTRATE Lab Sample ID: 730860

Level (low/med): LOW Date Received: 11/02/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	29.2	B		P
7440-70-2	Calcium	41700			P
7439-89-6	Iron	30.2	B		P
7439-95-4	Magnesium	22300			P
7439-96-5	Manganese	0.30	B		P
7440-23-5	Sodium	22900			P
7723-14-0	Phosphorus	9.2	B		P
7440-09-7	Potassium	4420	B		P
7440-21-3	Silicon	904			P
7440-66-6	Zinc	4.9	B	E	P

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Form I - IN

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-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SVCITYTR-W-25384F

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: SDG No.: 122808

Matrix (soil/water): FILTRATE Lab Sample ID: 730853

Level (low/med): LOW Date Received: 11/02/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	60.4	B		P
7440-70-2	Calcium	25900			P
7439-89-6	Iron	6.4	U		P
7439-95-4	Magnesium	25400			P
7439-96-5	Manganese	0.10	U		P
7440-23-5	Sodium	24000			P
7723-14-0	Phosphorus	11.2	B		P
7440-09-7	Potassium	4910	B		P
7440-21-3	Silicon	5790			P
7440-66-6	Zinc	3.3	B	E	P

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Form I - IN

USEPA-CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SVCLIZERNEW-W-25378F

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: SDG No.: 122808

Matrix (soil/water): FILTRATE Lab Sample ID: 730855

Level (low/med): LOW Date Received: 11/02/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9.1	U		P
7440-70-2	Calcium	25100			P
7439-89-6	Iron	6.4	U		P
7439-95-4	Magnesium	7720			P
7439-96-5	Manganese	0.19	B		P
7440-23-5	Sodium	11600			P
7723-14-0	Phosphorus	152	B		P
7440-09-7	Potassium	666	B		P
7440-21-3	Silicon	15800			P
7440-66-6	Zinc	8.2	B	E	P

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Form I - IN

USEPA-CLP FORMS
-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SVCLIZEROLD-W-25380F

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: SDG No.: 122808

Matrix (soil/water): FILTRATE Lab Sample ID: 730866

Level (low/med): LOW Date Received: 11/02/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	9.2	B		P
7440-70-2	Calcium	24500			P
7439-89-6	Iron	34.5	B		P
7439-95-4	Magnesium	7710			P
7439-96-5	Manganese	53.4			P
7440-23-5	Sodium	14100			P
7723-14-0	Phosphorus	4.0	B		P
7440-09-7	Potassium	771	B		P
7440-21-3	Silicon	13800			P
7440-66-6	Zinc	32.9		E	P

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Form I - IN

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-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SVHUGHES-W-25381F

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: SDG No.: 122808

Matrix (soil/water): FILTRATE Lab Sample ID: 730849

Level (low/med): LOW Date Received: 11/02/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	59.8	B		P
7440-70-2	Calcium	57900			P
7439-89-6	Iron	22.0	B		P
7439-95-4	Magnesium	12800			P
7439-96-5	Manganese	0.93	B		P
7440-23-5	Sodium	17700			P
7723-14-0	Phosphorus	63.4	B		P
7440-09-7	Potassium	540	B		P
7440-21-3	Silicon	12400			P
7440-66-6	Zinc	11.6	B	E	P

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SVMARSHALL-W-25366F

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: SDG No.: 122808

Matrix (soil/water): FILTRATE Lab Sample ID: 730845

Level (low/med): LOW Date Received: 11/02/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	36.6	B		P
7440-70-2	Calcium	62700			P
7439-89-6	Iron	9.5	B		P
7439-95-4	Magnesium	16500			P
7439-96-5	Manganese	105			P
7440-23-5	Sodium	23100			P
7723-14-0	Phosphorus	4.4	B		P
7440-09-7	Potassium	1220	B		P
7440-21-3	Silicon	11200			P
7440-66-6	Zinc	244		E	P

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INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SVMCPIKE-W-25373F

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: SDG No.: 122808

Matrix (soil/water): FILTRATE Lab Sample ID: 730847

Level (low/med): LOW Date Received: 11/02/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	105	B		P
7440-70-2	Calcium	30200			P
7439-89-6	Iron	58.5	B		P
7439-95-4	Magnesium	6030			P
7439-96-5	Manganese	1.4	B		P
7440-23-5	Sodium	9030			P
7723-14-0	Phosphorus	108	B		P
7440-09-7	Potassium	890	B		P
7440-21-3	Silicon	15800			P
7440-66-6	Zinc	1.4	B	E	P

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-I-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
SVMDOT-W-25368F

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: SDG No.: 122808

Matrix (soil/water): FILTRATE Lab Sample ID: 730864

Level (low/med): LOW Date Received: 11/02/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	50.1	B		P
7440-70-2	Calcium	69500			P
7439-89-6	Iron	9.6	B		P
7439-95-4	Magnesium	21800			P
7439-96-5	Manganese	3.1	B		P
7440-23-5	Sodium	19100			P
7723-14-0	Phosphorus	114	B		P
7440-09-7	Potassium	1120	B		P
7440-21-3	Silicon	17600			P
7440-66-6	Zinc	49.4		E	P

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-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SVMILLER-W-25372F

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: SDG No.: 122808

Matrix (soil/water): FILTRATE Lab Sample ID: 730862

Level (low/med): LOW Date Received: 11/02/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	119	B		P
7440-70-2	Calcium	191000			P
7439-89-6	Iron	10.5	B		P
7439-95-4	Magnesium	54500			P
7439-96-5	Manganese	0.10	U		P
7440-23-5	Sodium	37000			P
7723-14-0	Phosphorus	67.4	B		P
7440-09-7	Potassium	3400	B		P
7440-21-3	Silicon	16100			P
7440-66-6	Zinc	0.10	U	E	P

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USEPA-CLP FORMS
-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.
SVMOORE-W-25361F

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: SDG No.: 122808

Matrix (soil/water): FILTRATE Lab Sample ID: 730841

Level (low/med): LOW Date Received: 11/02/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	67.1	B		P
7440-70-2	Calcium	93100			P
7439-89-6	Iron	28.9	B		P
7439-95-4	Magnesium	28900			P
7439-96-5	Manganese	0.10	U		P
7440-23-5	Sodium	50600			P
7723-14-0	Phosphorus	196	B		P
7440-09-7	Potassium	3860	B		P
7440-21-3	Silicon	7360			P
7440-66-6	Zinc	14.3	B	E	P

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Form I - IN

USEPA-CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SVMORGAN-W-25360F

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: SDG No.: 122808

Matrix (soil/water): FILTRATE Lab Sample ID: 730843

Level (low/med): LOW Date Received: 11/02/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	43.9	B		P
7440-70-2	Calcium	58800			P
7439-89-6	Iron	9.8	B		P
7439-95-4	Magnesium	5730			P
7439-96-5	Manganese	0.23	B		P
7440-23-5	Sodium	12300			P
7723-14-0	Phosphorus	188	B		P
7440-09-7	Potassium	1390	B		P
7440-21-3	Silicon	15300			P
7440-66-6	Zinc	30.2		E	P

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Form I - IN

USEPA-CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SVPOTTER-W-25376F

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: SDG No.: 122808

Matrix (soil/water): FILTRATE Lab Sample ID: 730868

Level (low/med): LOW Date Received: 11/02/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum	44.9	B		P
7440-70-2	Calcium	50800			P
7439-89-6	Iron	19.1	B		P
7439-95-4	Magnesium	10200			P
7439-96-5	Manganese	115			P
7440-23-5	Sodium	14800			P
7723-14-0	Phosphorus	145	B		P
7440-09-7	Potassium	988	B		P
7440-21-3	Silicon	13200			P
7440-66-6	Zinc	8.2	B	E	P

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Form I - IN

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 500-7596-1

Job Description: STL Burlington - 122808

For:
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Attention: Mr. Kirk F Young

Louis Manzano
Project Manager I
louis.manzano@testamericainc.com

11/12/2007

cc: Rayburn Lavigne

These test results meet all the requirements of NELAC for accredited parameters.

The Lab Certification ID# is 100201.

All questions regarding this test report should be directed to the TestAmerica Project Manager whose signature appears on this report. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

Job Narrative
500-J7596-1

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

General Chemistry
Method(s) 300.0: The final orthophosphate CCV was high, but it only bracketed the MS/MSD. The MS/MSD will not be reanalye because hold time for orthophosphate has expired.

Method(s) 300.0: The following sample(s) was received outside of holding time for nitrate and orthophosphate: 500-7596-1,2,3,4,5,6,7,8,9,10,11,12,13,14.

Method(s) 300.0: The instrument software for ion chromatography misidentified the nitrate peaks at the following injections (1,13,18,19,20). Manual integrations were performed on the samples for correct nitrate peak identification.

Method(s) 300.0: The chloride matrix spike / matrix spike duplicate (MS/MSD) recoveries on 500-7596-1 for batch 26047were outsl control limits. The associated laboratory control standard (LCS) met acceptance criteria.

No other analytical or quality issues were noted.

METHOD SUMMARY

Client: TestAmerica Laboratories, Inc. Job Number: 500-7596-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Anions	TAL CHI	MCAWW 300.0	

Lab References:

TAL CHI = TestAmerica Chicago

Method References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

METHOD / ANALYST SUMMARY

Client: TestAmerica Laboratories, Inc. Job Number: 500-7596-1

Method		Analyst	Analyst ID
MCAWW	300.0	Ficarello, Peter M	PMF

SAMPLE SUMMARY

Client: TestAmerica Laboratories, Inc. Job Number: 500-7596-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled		Date/Time Received	
500-7596-1	SVMOORE-W-25361	Water	10/25/2007	1200	11/03/2007	0915
500-7596-2	SVMORGAN-W-25360	Water	10/25/2007	1200	11/03/2007	0915
500-7596-3	SVMARSHALL-W-25366	Water	10/26/2007	1200	11/03/2007	0915
500-7596-4	SVMCPIKE-W-25373	Water	10/28/2007	1200	11/03/2007	0915
500-7596-5	SVHUGHES-W-25381	Water	10/29/2007	1200	11/03/2007	0915
500-7596-6	SVBARR-W-25377	Water	10/28/2007	1200	11/03/2007	0915
500-7596-7	SVCITYTR-W-25384	Water	10/29/2007	1200	11/03/2007	0915
500-7596-8	SVCLIZERNEW-W-25378	Water	10/28/2007	1200	11/03/2007	0915
500-7596-9	SVBURK-W-25365	Water	10/26/2007	1200	11/03/2007	0915
500-7596-10	SVCITYSI-W-25385	Water	10/29/2007	1200	11/03/2007	0915
500-7596-11	SVMILLER-W-25372	Water	10/27/2007	1200	11/03/2007	0915
500-7596-12	SVMDOT-W-25368	Water	10/26/2007	1200	11/03/2007	0915
500-7596-13	SVCLIZEROLD-W-25380	Water	10/29/2007	1200	11/03/2007	0915
500-7596-14	SVPOTTER-W-25376	Water	10/28/2007	1200	11/03/2007	0915

SAMPLE RESULTS

Mr. Kirk F Young
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7596-1

Client Sample ID:SVMOORE-W-25361
Lab Sample ID: 500-7596-1

Date Sampled: 10/25/2007 1200
Date Received:11/03/2007 0915
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
Method: 300.0			Date Analyzed:	11/03/2007	1317	
Orthophosphate as P	<0.20	H	mg/L	0.042	0.20	1.0
Method: 300.0			Date Analyzed:	11/03/2007	1332	
Nitrate as N	28	H B	mg/L	0.11	1.0	10
Sulfate	89		mg/L	0.40	2.0	10
Method: 300.0			Date Analyzed:	11/07/2007	1524	
Chloride	93	B	mg/L	0.60	4.0	20

Mr. Kirk F Young
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7596-1

Client Sample ID:SVMORGAN-W-25360
Lab Sample ID: 500-7596-2

Date Sampled: 10/25/2007 1200
Date Received:11/03/2007 0915
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
Method: 300.0			Date Analyzed: 11/03/2007 1346			
Orthophosphate as P	0.15	J H	mg/L	0.042	0.20	1.0
Method: 300.0			Date Analyzed: 11/03/2007 1400			
Chloride	12		mg/L	0.30	2.0	10
Nitrate as N	5.4	H B	mg/L	0.11	1.0	10
Sulfate	26		mg/L	0.40	2.0	10

Mr. Kirk F Young
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7596-1

Client Sample ID:SVMARSHALL-W-25366
Lab Sample ID: 500-7596-3

Date Sampled: 10/26/2007 1200
Date Received:11/03/2007 0915
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
Method: 300.0			Date Analyzed: 11/03/2007 1415			
Nitrate as N	0.69	H B	mg/L	0.011	0.10	1.0
Orthophosphate as P	<0.20	H	mg/L	0.042	0.20	1.0
Method: 300.0			Date Analyzed: 11/03/2007 1429			
Chloride	32		mg/L	0.30	2.0	10
Sulfate	33		mg/L	0.40	2.0	10

Mr. Kirk F Young
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7596-1

Client Sample ID:SVMCPIKE-W-25373
Lab Sample ID: 500-7596-4

Date Sampled: 10/28/2007 1200
Date Received:11/03/2007 0915
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
Method: 300.0			Date Analyzed: 11/03/2007 1443			
Chloride	4.2		mg/L	0.030	0.20	1.0
Nitrate as N	1.7	H B	mg/L	0.011	0.10	1.0
Orthophosphate as P	0.095	J H	mg/L	0.042	0.20	1.0
Method: 300.0			Date Analyzed: 11/03/2007 1458			
Sulfate	15		mg/L	0.40	2.0	10

Mr. Kirk F Young
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7596-1

Client Sample ID:SVHUGHES-W-25381
Lab Sample ID: 500-7596-5

Date Sampled: 10/29/2007 1200
Date Received:11/03/2007 0915
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
Method: 300.0			Date Analyzed: 11/03/2007 1541			
Orthophosphate as P	<0.20	H	mg/L	0.042	0.20	1.0
Method: 300.0			Date Analyzed: 11/03/2007 1555			
Chloride	25		mg/L	0.30	2.0	10
Nitrate as N	4.4	H B	mg/L	0.11	1.0	10
Sulfate	40		mg/L	0.40	2.0	10

Mr. Kirk F Young
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7596-1

Client Sample ID:SVBARR-W-25377
Lab Sample ID: 500-7596-6

Date Sampled: 10/28/2007 1200
Date Received:11/03/2007 0915
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
Method: 300.0			Date Analyzed: 11/03/2007 1609			
Chloride	5.6		mg/L	0.030	0.20	1.0
Nitrate as N	0.28	H B	mg/L	0.011	0.10	1.0
Orthophosphate as P	0.055	J H	mg/L	0.042	0.20	1.0
Method: 300.0			Date Analyzed: 11/03/2007 1624			
Sulfate	18		mg/L	0.40	2.0	10

Mr. Kirk F Young
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7596-1

Client Sample ID:SVCITYTR-W-25384
Lab Sample ID: 500-7596-7

Date Sampled: 10/29/2007 1200
Date Received:11/03/2007 0915
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
Method: 300.0			Date Analyzed: 11/03/2007 1638			
Nitrate as N	0.24	H B	mg/L	0.011	0.10	1.0
Orthophosphate as P	<0.20	H	mg/L	0.042	0.20	1.0
Method: 300.0			Date Analyzed: 11/03/2007 1652			
Chloride	30		mg/L	0.30	2.0	10
Sulfate	20		mg/L	0.40	2.0	10

Mr. Kirk F Young
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7596-1

Client Sample ID:SVCLIZERNEW-W-25378
Lab Sample ID: 500-7596-8

Date Sampled: 10/28/2007 1200
Date Received:11/03/2007 0915
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
Method: 300.0			Date Analyzed: 11/03/2007 1707			
Chloride	2.2		mg/L	0.030	0.20	1.0
Nitrate as N	4.2	H B	mg/L	0.011	0.10	1.0
Orthophosphate as P	0.14	J H	mg/L	0.042	0.20	1.0
Method: 300.0			Date Analyzed: 11/03/2007 1721			
Sulfate	18		mg/L	0.40	2.0	10

Mr. Kirk F Young
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7596-1

Client Sample ID:SVBURK-W-25365
Lab Sample ID: 500-7596-9

Date Sampled: 10/26/2007 1200
Date Received:11/03/2007 0915
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
Method: 300.0			Date Analyzed: 11/03/2007 1735			
Nitrate as N	0.11	H B	mg/L	0.011	0.10	1.0
Orthophosphate as P	<0.20	H	mg/L	0.042	0.20	1.0
Method: 300.0			Date Analyzed: 11/03/2007 1750			
Chloride	23		mg/L	0.30	2.0	10
Sulfate	26		mg/L	0.40	2.0	10

Mr. Kirk F Young
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7596-1

Client Sample ID:SVCITYSI-W-25385
Lab Sample ID: 500-7596-10

Date Sampled: 10/29/2007 1200
Date Received:11/03/2007 0915
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
Method: 300.0			Date Analyzed: 11/03/2007 1832			
Nitrate as N	0.21	H B	mg/L	0.011	0.10	1.0
Orthophosphate as P	<0.20	H	mg/L	0.042	0.20	1.0
Method: 300.0			Date Analyzed: 11/03/2007 1847			
Chloride	36		mg/L	0.30	2.0	10
Sulfate	14		mg/L	0.40	2.0	10

Mr. Kirk F Young
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7596-1

Client Sample ID:SVMILLER-W-25372
Lab Sample ID: 500-7596-11

Date Sampled: 10/27/2007 1200
Date Received:11/03/2007 0915
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
Method: 300.0			Date Analyzed:	11/03/2007	1901	
Nitrate as N	2.2	H B	mg/L	0.011	0.10	1.0
Orthophosphate as P	<0.20	H	mg/L	0.042	0.20	1.0
Method: 300.0			Date Analyzed:	11/03/2007	1916	
Sulfate	39		mg/L	0.40	2.0	10
Method: 300.0			Date Analyzed:	11/07/2007	1635	
Chloride	510	B	mg/L	3.0	20	100

Mr. Kirk F Young
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7596-1

Client Sample ID:SVMDOT-W-25368
Lab Sample ID: 500-7596-12

Date Sampled: 10/26/2007 1200
Date Received:11/03/2007 0915
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
Method: 300.0			Date Analyzed:	11/03/2007	1930	
Nitrate as N	1.4	H B	mg/L	0.011	0.10	1.0
Orthophosphate as P	<0.20	H	mg/L	0.042	0.20	1.0
Method: 300.0			Date Analyzed:	11/03/2007	1944	
Sulfate	23		mg/L	0.40	2.0	10
Method: 300.0			Date Analyzed:	11/07/2007	1649	
Chloride	200	B	mg/L	3.0	20	100

Mr. Kirk F Young
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7596-1

Client Sample ID:SVCLIZEROLD-W-25380
Lab Sample ID: 500-7596-13

Date Sampled: 10/29/2007 1200
Date Received:11/03/2007 0915
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
Method: 300.0			Date Analyzed: 11/03/2007 1958			
Nitrate as N	2.1	H B	mg/L	0.011	0.10	1.0
Orthophosphate as P	<0.20	H	mg/L	0.042	0.20	1.0
Method: 300.0			Date Analyzed: 11/03/2007 2013			
Chloride	7.5		mg/L	0.30	2.0	10
Sulfate	41		mg/L	0.40	2.0	10

Mr. Kirk F Young
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7596-1

Client Sample ID:SVPOTTER-W-25376
Lab Sample ID: 500-7596-14

Date Sampled: 10/28/2007 1200
Date Received:11/03/2007 0915
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
Method: 300.0			Date Analyzed: 11/03/2007 2027			
Nitrate as N	0.13	H B	mg/L	0.011	0.10	1.0
Orthophosphate as P	0.057	J H	mg/L	0.042	0.20	1.0
Method: 300.0			Date Analyzed: 11/03/2007 2041			
Chloride	11		mg/L	0.30	2.0	10
Sulfate	38		mg/L	0.40	2.0	10

DATA REPORTING QUALIFIERS

Client: TestAmerica Laboratories, Inc. Job Number: 500-7596-1

Lab Section	Qualifier	Description
General Chemistry		
	B	Compound was found in the blank and sample.
	^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA or MRL standard: Instrument related QC exceeds the control limits.
	F	MS or MSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	H	Sample was prepped or analyzed beyond the specified holding time

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

November 20, 2007

Mr. Clyde Dennis
Argonne National Laboratory
9700 S. Cass Avenue
Building 203, Office 149
Argonne, IL 60439

Re: Laboratory Project No. 21005
Case: SAVANNAH; SDG: 122954

Dear Mr. Dennis:

Enclosed are analytical results for samples that were received by TestAmerica Chicago on November 2nd, 2007. The samples in this sample set were aqueous samples, and these were analyzed for nitrate/nitrite nitrogen by USEPA Method 353.2, using preserved sample volumes. The analytical work was performed by TestAmerica Chicago. The data report from TestAmerica Chicago is submitted in its entirety.

If there are any questions regarding this submittal, please contact me at 802 660-1990.

Sincerely,

Kirk F. Young
Project Manager

KFY/hsf
Enclosure

30 Community Drive, Suite 11 South Burlington, VT 05403 **tel** 802.660.1990 **fax** 802.660.1919 **www.testamericainc.com**

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 500-7575-1

Job Description: STL Burlington - 122954

For:
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Attention: Rayburn Lavigne

Louis Manzano
Project Manager I
louis.manzano@testamericainc.com

11/13/2007
Revision: 1

cc: Mr. Kirk F Young

These test results meet all the requirements of NELAC for accredited parameters.

The Lab Certification ID# is 100201.

All questions regarding this test report should be directed to the TestAmerica Project Manager whose signature appears on this report. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

TestAmerica Laboratories, Inc.
TestAmerica Chicago 2417 Bond Street, University Park, IL 60466
Tel (708) 534-5200 Fax (708) 534-5211 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

Job Narrative
500-J7575-1

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

General Chemistry
No analytical or quality issues were noted.

METHOD SUMMARY

Client: TestAmerica Laboratories, Inc. Job Number: 500-7575-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Nitrate	TAL CHI	MCAWW 353.2	

Lab References:

TAL CHI = TestAmerica Chicago

Method References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

METHOD / ANALYST SUMMARY

Client: TestAmerica Laboratories, Inc.

Job Number: 500-7575-1

Method		Analyst	Analyst ID
MCAWW	353.2	Ficarello, Peter M	PMF

SAMPLE SUMMARY

Client: TestAmerica Laboratories, Inc. Job Number: 500-7575-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled		Date/Time Received	
500-7575-1	SVMOORE-W-25361	Water	10/25/2007	1200	11/02/2007	1020
500-7575-2	SVMOGAN-W-25360	Water	10/25/2007	1200	11/02/2007	1020
500-7575-3	SVBORK-W-25365	Water	10/26/2007	1200	11/02/2007	1020
500-7575-4	SVMDOT-W-25368	Water	10/26/2007	1200	11/02/2007	1020
500-7575-5	SVMARSHALL-W-25366	Water	10/26/2007	1200	11/02/2007	1020
500-7575-6	SVMILLER-W-25372	Water	10/27/2007	1200	11/02/2007	1020
500-7575-7	SVMCPIKE-W-25373	Water	10/27/2007	1200	11/02/2007	1020
500-7575-8	SVADKINS-W-25374	Water	10/27/2007	1200	11/02/2007	1020
500-7575-9	SVBARR-W-25377	Water	10/28/2007	1200	11/02/2007	1020
500-7575-10	SVPOTTER-W-25376	Water	10/28/2007	1200	11/02/2007	1020
500-7575-11	SVCITYTR-W-25384	Water	10/29/2007	1200	11/02/2007	1020
500-7575-12	SVHUGHESPD-W-25382	Water	10/29/2007	1200	11/02/2007	1020
500-7575-13	SVCITYSI-W-25385	Water	10/29/2007	1200	11/02/2007	1020
500-7575-14	SVHUGHES-W-25381	Water	10/29/2007	1200	11/02/2007	1020
500-7575-15	SVCLIZEROLD-W-25380	Water	10/29/2007	1200	11/02/2007	1020
500-7575-16	SVCLIZERNEW-W-25378	Water	10/28/2007	1200	11/02/2007	1020

SAMPLE RESULTS

Rayburn Lavigne
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7575-1

Client Sample ID:SVMOORE-W-25361
Lab Sample ID: 500-7575-1

Date Sampled: 10/25/2007 1200
Date Received: 11/02/2007 1020
Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 353.2		Date Analyzed:	11/06/2007 1327		
Nitrogen, Nitrate Nitrite	29000	ug/L	580	2000	20

Rayburn Lavigne
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7575-1

Client Sample ID:SVMOGAN-W-25360
Lab Sample ID: 500-7575-2

Date Sampled: 10/25/2007 1200
Date Received:11/02/2007 1020
Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 353.2		Date Analyzed:	11/06/2007 1300		
Nitrogen, Nitrate Nitrite	5800	ug/L	290	1000	10

Rayburn Lavigne
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7575-1

Client Sample ID:SVBORK-W-25365
Lab Sample ID: 500-7575-3

Date Sampled: 10/26/2007 1200
Date Received: 11/02/2007 1020
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
Method: 353.2				Date Analyzed:	11/06/2007 1329	
Nitrogen, Nitrate Nitrite	30	J	ug/L	29	100	1.0

Rayburn Lavigne
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7575-1

Client Sample ID:SVMDOT-W-25368
Lab Sample ID: 500-7575-4

Date Sampled: 10/26/2007 1200
Date Received: 11/02/2007 1020
Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 353.2		Date Analyzed:	11/06/2007 1354		
Nitrogen, Nitrate Nitrite	1600	ug/L	290	1000	10

Rayburn Lavigne
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7575-1

Client Sample ID:SVMARSHALL-W-25366
Lab Sample ID: 500-7575-5

Date Sampled: 10/26/2007 1200
Date Received: 11/02/2007 1020
Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 353.2		Date Analyzed:	11/09/2007 0818		
Nitrogen, Nitrate Nitrite	490	ug/L	29	100	1.0

Rayburn Lavigne
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7575-1

Client Sample ID:SVMILLER-W-25372
Lab Sample ID: 500-7575-6

Date Sampled: 10/27/2007 1200
Date Received: 11/02/2007 1020
Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 353.2		Date Analyzed:	11/06/2007 1358		
Nitrogen, Nitrate Nitrite	1000	ug/L	290	1000	10

Rayburn Lavigne
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7575-1

Client Sample ID:SVMCPIKE-W-25373
Lab Sample ID: 500-7575-7

Date Sampled: 10/27/2007 1200
Date Received: 11/02/2007 1020
Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 353.2		Date Analyzed:	11/06/2007 1400		
Nitrogen, Nitrate Nitrite	1500	ug/L	290	1000	10

Rayburn Lavigne
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7575-1

Client Sample ID:SVADKINS-W-25374
Lab Sample ID: 500-7575-8

Date Sampled: 10/27/2007 1200
Date Received: 11/02/2007 1020
Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 353.2		Date Analyzed:	11/09/2007	0824	
Nitrogen, Nitrate Nitrite	620	ug/L	29	100	1.0

Rayburn Lavigne
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7575-1

Client Sample ID:SVBARR-W-25377
Lab Sample ID: 500-7575-9

Date Sampled: 10/28/2007 1200
Date Received: 11/02/2007 1020
Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 353.2		Date Analyzed:	11/09/2007 0826		
Nitrogen, Nitrate Nitrite	150	ug/L	29	100	1.0

Rayburn Lavigne
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7575-1

Client Sample ID:SVPOTTER-W-25376
Lab Sample ID: 500-7575-10

Date Sampled: 10/28/2007 1200
Date Received: 11/02/2007 1020
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
Method: 353.2			Date Analyzed:	11/09/2007	0828	
Nitrogen, Nitrate Nitrite	41	J	ug/L	29	100	1.0

Rayburn Lavigne
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7575-1

Client Sample ID:SVCITYTR-W-25384
Lab Sample ID: 500-7575-11

Date Sampled: 10/29/2007 1200
Date Received: 11/02/2007 1020
Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 353.2		Date Analyzed:	11/09/2007 0830		
Nitrogen, Nitrate Nitrite	100	ug/L	29	100	1.0

Rayburn Lavigne
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7575-1

Client Sample ID:SVHUGHESPD-W-25382
Lab Sample ID: 500-7575-12

Date Sampled: 10/29/2007 1200
Date Received: 11/02/2007 1020
Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 353.2		Date Analyzed:	11/09/2007	0832	
Nitrogen, Nitrate Nitrite	<100	ug/L	29	100	1.0

Rayburn Lavigne
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7575-1

Client Sample ID:SVCITYSI-W-25385
Lab Sample ID: 500-7575-13

Date Sampled: 10/29/2007 1200
Date Received: 11/02/2007 1020
Client Matrix: Water

Analyte	Result/Qualifier		Unit	MDL	RL	Dilution
Method: 353.2			Date Analyzed:	11/09/2007 0834		
Nitrogen, Nitrate Nitrite	76	J	ug/L	29	100	1.0

Rayburn Lavigne
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7575-1

Client Sample ID:SVHUGHES-W-25381
Lab Sample ID: 500-7575-14

Date Sampled: 10/29/2007 1200
Date Received: 11/02/2007 1020
Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 353.2		Date Analyzed:	11/06/2007 1419		
Nitrogen, Nitrate Nitrite	1900	ug/L	290	1000	10

Rayburn Lavigne
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7575-1

Client Sample ID:SVCLIZEROLD-W-25380
Lab Sample ID: 500-7575-15

Date Sampled: 10/29/2007 1200
Date Received: 11/02/2007 1020
Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 353.2		Date Analyzed:	11/06/2007 1421		
Nitrogen, Nitrate Nitrite	3900	ug/L	290	1000	10

Rayburn Lavigne
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7575-1

Client Sample ID:SVCLIZERNEW-W-25378
Lab Sample ID: 500-7575-16

Date Sampled: 10/28/2007 1200
Date Received: 11/02/2007 1020
Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 353.2		Date Analyzed:	11/06/2007 1423		
Nitrogen, Nitrate Nitrite	4200	ug/L	290	1000	10

DATA REPORTING QUALIFIERS

Client: TestAmerica Laboratories, Inc. Job Number: 500-7575-1

Lab Section	Qualifier	Description
General Chemistry		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Argonne NATIONAL LABORATORY

6339 500-7575

MATRIX: WATER	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***		Shipping Container:
RECEIVING LAB: TEST AMERICA			Shipping Info:
PROJECT/SITE: SAVANNAH, MO			Field Contact (Name & Temporary Phone): 402-465-9021
SAMPLER(S) (Signature) Bedivy, LAFRENIERE			

	DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: TOTAL N									REMARKS
5	10/25/07	SVMOORE-W-25361	1										
2	↓	SVMORGAN-W-25360	1										FOR TOTAL N
3	10/26/07	SVBURK-W-25365	1										PRESERVED pH<2
4	↓	SVMDOT-W-25368	1										
5	↓	SVMARSHALL-W-25366	1										
6	10/27/07	SVMILLER-W-25372	1										
7	↓	SVMCPIKE-W-25373	1										
8	↓	SVADKINS-W-25374	1										
9	10/28/07	SVBARR-W-25377	1										
10	↓	SVPOTTER-W-25376	1										

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
B. Bedivy	10/31/07	2013 0					

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Remarks
			[illegible]	11/1/07	1020	

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:

1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Science Division, 9700 S. Cass Avenue, Argonne, IL 60439

EVS-150 (6-07)

Argonne NATIONAL LABORATORY

6342 500-7575

MATRIX: WATER	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***		Shipping Container:
RECEIVING LAB: TEST AMERICA			Shipping Info:
PROJECT/SITE: SAVANNAH, MO			Field Contact (Name & Temporary Phone): 402-465-9021
SAMPLER(S) (Signature) Bedivy, LAFRENIERE			

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: TOTAL N	REMARKS
10/29/07	SVCITYTR-W-25384	1	✓	
	SVHUGHESPD-W-25382	1		FOR TOTAL N ANALYSIS pH<2
	SVCITYSI-W-25385	1		
	SVHUGHES-W-25381	1		
	SVCLIZEROLD-W-25380	1	✓	

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
B. Bedivy	11/1/07	20:30					

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Remarks
			[signature]	11/3/07	1020	

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:

1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Science Division, 9700 S. Cass Avenue, Argonne, IL 60439

EVS-160 (6-07)

Argonne NATIONAL LABORATORY

6343 500-73

MATRIX: WATER	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***		Shipping Container:
RECEIVING LAB: TEST AMERICA			Shipping Info:
PROJECT/SITE: SAVANNAH, MO			Field Contact (Name & Temporary Phone):
SAMPLER(S) (Signature) Sedring, LAFRENIERE			

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: TOTAL N										REMARKS
10/28/07	SVCLIZERNEW-W-25378	1	1										pH<2

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
B. Sedring	11/1/07	20:30	[illegible]				

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Remarks
				11/2/07	1020	

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:

1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Science Division, 9700 S. Cass Avenue, Argonne, IL 60439

EVS-150 (6-07)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

November 12, 2007

Mr. Clyde Dennis
Argonne National Laboratory
9700 S. Cass Avenue
Building 203, Office 149
Argonne, IL 60439

Re: Laboratory Project No. 21005
Case: SAVANNAH; SDG: 122809

Dear Mr. Dennis:

Enclosed are analytical results for samples that were received by TestAmerica Burlington on November 2nd, 2007. Laboratory identification numbers were assigned, and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 11/02/07 ETR No: 122809		
730871	SVTANK1-W-25408	11/01/07	WATER
730872	SVCOMB-W-25409	11/01/07	WATER

Documentation of the condition of the samples at the time of their receipt and any exception to the laboratory's Sample Acceptance Policy is documented in the Sample Handling section of this submittal.

The samples were analyzed for trace metals by SW846 Methods 3010A/6010B. The sample volumes were not filtered prior to being analyzed for the trace metals. The samples were received without acid preservation, and the laboratory did acidify the samples at the time that they were logged into the laboratory. The sample volumes were held in an acidified state in the original sample containers for more than a 24-hour period prior to initiating the analytical work. Matrix spike and replicate analyses were not performed on samples in this sample set. A laboratory control sample was prepared and analyzed in association with the samples, and there was an acceptable recovery performance in that analysis. A serial dilution analysis was performed on the digestate of sample SVTANK1-W-25408, and the results of that analysis gave no indication of a matrix interference specific to the elements under evaluation. Trace concentrations of aluminum, arsenic, chromium, copper, nickel, selenium, and zinc, and negative offsets specific to barium, cadmium, cobalt, iron, potassium, and silver were identified in the analysis of the method blank associated with the analytical work.

30 Community Drive, Suite 11 South Burlington, VT 05403 **tel** 802.660.1990 **fax** 802.660.1919 **www.testamericainc.com**

The samples were analyzed for nitrate/nitrite nitrogen by USEPA Method 353.2, using preserved sample volumes. The analytical work was performed by STL Chicago. The data report from STL Chicago is submitted in its entirety.

The analytical results associated with the samples presented in this test report were generated under a quality system that adheres to requirements specified in the NELAC standard. Release of the data in this test report and any associated electronic deliverables is authorized by the Laboratory Director's designee as verified by the following signature.

If there are any questions regarding this submittal, please contact me at 802 660-1990.

Sincerely,

Kirk F. Young
Project Manager

KFY/hsf
Enclosure

TestAmerica Burlington Data Qualifier Definitions

Organic

U: Compound analyzed but not detected at a concentration above the reporting limit.

J: Estimated value.

N: Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds (TICs) where the identification of a compound is based on a mass spectral library search.

P: SW-846: Greater than 40% difference for detected concentrations between two GC columns. Unless otherwise specified the higher of the two values is reported on the Form I.

CLP SOW: Greater than 25% difference for detected concentrations between two GC columns. Unless otherwise specified the lower of the two values is reported on the Form I.

C: Pesticide result whose identification has been confirmed by GC/MS.

B: Analyte is found in the sample and the associated method blank. The flag is used for tentatively identified compounds as well as positively identified compounds.

E: Compounds whose concentrations exceed the upper limit of the calibration range of the instrument for that specific analysis.

D: Concentrations identified from analysis of the sample at a secondary dilution.

A: Tentatively identified compound is a suspected aldol condensation product.

X,Y,Z: Laboratory defined flags that may be used alone or combined, as needed. If used, the description of the flag is defined in the project narrative.

Inorganic/Metals

E: Reported value is estimated due to the presence of interference.

N: Matrix spike sample recovery is not within control limits.

* Duplicate sample analysis is not within control limits.

B: The result reported is less than the reporting limit but greater than the instrument detection limit.

U: Analyte was analyzed for but not detected above the reporting limit.

Method Codes:

P ICP-AES
MS ICP-MS
CV Cold Vapor AA
AS Semi-Automated Spectrophotometric

FQA009:04.24.06:3
TestAmerica Burlington

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Chain of Custody

Argonne NATIONAL LABORATORY

6337

MATRIX: SEVERN - TRENT	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***		Shipping Container:
RECEIVING LAB: WATER			Shipping Info:
PROJECT/SITE: SAVANNAH, MO		ANALYSIS	Field Contact (Name & Temporary Phone): 402-465-9021
SAMPLER(S) (Signature) Sedivy / BIERRE			

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	HVY. MTLS	REMARKS
11/1/07	SVTANK1-W-25408	1	↓	FOR HEAVY METALS ANALYSIS
↓	SVCOMB-W-25409	1	↓	

RUSH SERVICE REQUIRED

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
B. Sedivy	11/1/07	20:30	[illegible] 11/02/07 0925				

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Remarks

Y	N	FOR LAB USE ONLY
X		Custody seal was intact when shipment received.
X		Sample containers were intact when received.
X		Shipment was at required temperature when received.
	X	Sample labels, Tags and COC agree. COC does not list times.

*A sample is under custody if:

1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Science Division, 9700 S. Cass Avenue, Argonne, IL 60439

EVS-160 (8-07)

Argonne NATIONAL LABORATORY

5000-
6331 7570

MATRIX: WATER	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***		Shipping Container:
RECEIVING LAB: TEST AMERICA			Shipping Info:
PROJECT/SITE: SAVANNAH, MO		ANALYSIS	Field Contact (Name & Temporary Phone): 402-465-9021
SAMPLER(S) (Signature) Sedlity / BIERRE			

	DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	TOTAL N	REMARKS
1	11/1/07	SVTANK1-W-25408	1	↓	
2	↓	SVCOMB-W-25409	1	↓	SAMPLES FOR TOTAL N PH<2
					RUSH SERVICE REQUIRED

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
B. Sedlity	11/1/07	18:30	[signature]				

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Remarks
				11-2-07	1020	

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:

1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Science Division, 9700 S. Cass Avenue, Argonne, IL 60439

EVS-160 (8-07)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample Data Summary – Metals

USEPA-CLP FORMS

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: _____ SDG No.: 122809

SOW No.: _____

EPA Sample No.	Lab Sample ID.
SVCOMB-W-25409	730872
SVTANK1-W-25408	730871

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES

If yes-were raw data generated before application of background corrections? Yes/No NO

Comments: _____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____

Date: _____ Title: _____

COVER PAGE - IN

USEPA-CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SVCOMB-W-25409

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: SDG No.: 122809

Matrix (soil/water): WATER Lab Sample ID: 730872

Level (low/med): LOW Date Received: 11/02/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-22-4	Silver	0.30	U		P
7429-90-5	Aluminum	123	B		P
7440-36-0	Antimony	0.90	U		P
7440-38-2	Arsenic	1.5	B		P
7440-39-3	Barium	245			P
7440-41-7	Beryllium	0.13	B		P
7440-70-2	Calcium	71200			P
7440-43-9	Cadmium	0.10	U		P
7440-48-4	Cobalt	0.20	U		P
7440-47-3	Chromium	1.9	B		P
7440-50-8	Copper	6.2	B		P
7439-89-6	Iron	1270			P
7439-95-4	Magnesium	13900			P
7439-96-5	Manganese	81.3			P
7440-23-5	Sodium	15400			P
7440-02-0	Nickel	3.6	B		P
7439-92-1	Lead	2.3	B		P
7440-09-7	Potassium	1270	B		P
7782-49-2	Selenium	2.8	B		P
7440-28-0	Thallium	0.90	U		P
7440-62-2	Vanadium	0.66	B		P
7440-66-6	Zinc	17.1	B		P

Color Before: colorless Clarity Before: clear Texture:

Color After: colorless Clarity After: clear Artifacts:

Comments:

Form I - IN

USEPA-CLP FORMS

-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SVTANK1-W-25408

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: SDG No.: 122809

Matrix (soil/water): WATER Lab Sample ID: 730871

Level (low/med): LOW Date Received: 11/02/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-22-4	Silver	0.30	U		P
7429-90-5	Aluminum	159	B		P
7440-36-0	Antimony	0.90	U		P
7440-38-2	Arsenic	3.2	B		P
7440-39-3	Barium	401			P
7440-41-7	Beryllium	0.10	U		P
7440-70-2	Calcium	115000			P
7440-43-9	Cadmium	0.12	B		P
7440-48-4	Cobalt	0.20	U		P
7440-47-3	Chromium	3.4	B		P
7440-50-8	Copper	8.8	B		P
7439-89-6	Iron	122	B		P
7439-95-4	Magnesium	26600			P
7439-96-5	Manganese	28.4			P
7440-23-5	Sodium	24800			P
7440-02-0	Nickel	4.3	B		P
7439-92-1	Lead	2.6	B		P
7440-09-7	Potassium	1320	B		P
7782-49-2	Selenium	1.6	B		P
7440-28-0	Thallium	0.90	U		P
7440-62-2	Vanadium	1.4	B		P
7440-66-6	Zinc	41.6			P

Color Before: colorless Clarity Before: clear Texture:

Color After: colorless Clarity After: clear Artifacts:

Comments:

Form I - IN

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 500-7570-1

Job Description: STL Burlington - 122809

For:
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Attention: Mr. Kirk F Young

Louis Manzano
Project Manager I
louis.manzano@testamericainc.com
11/07/2007

cc: Rayburn Lavigne

These test results meet all the requirements of NELAC for accredited parameters.

The Lab Certification ID# is 100201.

All questions regarding this test report should be directed to the TestAmerica Project Manager whose signature appears on this report. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

General Chemistry
No analytical or quality issues were noted.

METHOD SUMMARY

Client: TestAmerica Laboratories, Inc. Job Number: 500-7570-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Nitrate	TAL CHI	MCAWW 353.2	

Lab References:

TAL CHI = TestAmerica Chicago

Method References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

METHOD / ANALYST SUMMARY

Client: TestAmerica Laboratories, Inc.

Job Number: 500-7570-1

Method		Analyst	Analyst ID
MCAWW	353.2	Ficarello, Peter M	PMF

SAMPLE SUMMARY

Client: TestAmerica Laboratories, Inc.

Job Number: 500-7570-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled		Date/Time Received	
500-7570-1	SVTANK1-W-25408	Water	11/01/2007	1650	11/02/2007	1020
500-7570-2	SVCOMB-W-25409	Water	11/01/2007	1655	11/02/2007	1020

SAMPLE RESULTS

Mr. Kirk F Young
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7570-1

Client Sample ID:SVTANK1-W-25408
Lab Sample ID: 500-7570-1

Date Sampled: 11/01/2007 1650
Date Received:11/02/2007 1020
Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 353.2		Date Analyzed:	11/06/2007 1250		
Nitrogen, Nitrate Nitrite	1800	ug/L	290	1000	10

Mr. Kirk F Young
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7570-1

Client Sample ID:SVCOMB-W-25409
Lab Sample ID: 500-7570-2

Date Sampled: 11/01/2007 1655
Date Received:11/02/2007 1020
Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 353.2		Date Analyzed:	11/06/2007	1325	
Nitrogen, Nitrate Nitrite	550	ug/L	29	100	1.0

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

November 15, 2007

Mr. Clyde Dennis
Argonne National Laboratory
9700 S. Cass Avenue
Building 201, Office B149
Argonne, IL 60439

Re: Laboratory Project No. 21005
Case: SAVANNAH; SDG: 122865

Dear Mr. Dennis:

Enclosed are the analytical results for the sample that was received by TestAmerica Burlington on November 6th, 2007. A laboratory identification number was assigned, and designated as follows:

Lab ID	Client Sample ID	Sample Date	Sample Matrix
	Received: 11/06/07 ETR No: 122865		
731192	SVTANK2-W-25411	11/03/07	WATER

Documentation of the condition of the sample at the time of their receipt and any exception to the laboratory's Sample Acceptance Policy is documented in the Sample Handling section of this submittal.

The sample was analyzed for trace metals by SW846 Methods 3010A/6010B. The sample volume was not filtered prior to being analyzed for the trace metals. The sample was received without acid preservation, and the laboratory did acidify the sample at the time that it was logged into the laboratory. The sample volume was held in an acidified state in the original sample container for more than a 24-hour period prior to initiating the analytical work. Matrix spike and replicate analyses were not performed on the sample in this sample set. A laboratory control sample was prepared and analyzed in association with the sample, and there was an acceptable recovery performance in that analysis. A serial dilution analysis was performed on the digestate of sample SVTANK2-W-2541, and the results of that analysis gave no indication of a matrix interference specific to the elements under evaluation. Trace concentrations of antimony, barium, cadmium, cobalt, chromium, copper, iron, magnesium, manganese, selenium, sodium, vanadium, and zinc, and negative offsets specific to thallium and silver were identified in the analysis of the method blank associated with the analytical work.

The sample was analyzed for nitrate/nitrite nitrogen by USEPA Method 353.2, using a preserved sample volume. The analytical work was performed by TestAmerica Chicago. The data report from TestAmerica Chicago is submitted in its entirety.

30 Community Drive, Suite 11 South Burlington, VT 05403 **tel** 802.660.1990 **fax** 802.660.1919 **www.testamericainc.com**

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

The analytical results associated with the sample presented in this test report were generated under a quality system that adheres to requirements specified in the NELAC standard. Release of the data in this test report and any associated electronic deliverables is authorized by the Laboratory Director's designee as verified by the following signature.

If there are any questions regarding this submittal, please contact me at 802 660-1990.

Sincerely,

Kirk F. Young
Project Manager

KFY/hsf
Enclosure

30 Community Drive, Suite 11 South Burlington, VT 05403 **tel** 802.660.1990 **fax** 802.660.1919 **www.testamericainc.com**

TestAmerica Burlington Data Qualifier Definitions

Organic

U: Compound analyzed but not detected at a concentration above the reporting limit.

J: Estimated value.

N: Indicates presumptive evidence of a compound. This flag is used only for tentatively identified compounds (TICs) where the identification of a compound is based on a mass spectral library search.

P: SW-846: Greater than 40% difference for detected concentrations between two GC columns. Unless otherwise specified the higher of the two values is reported on the Form I.

CLP SOW: Greater than 25% difference for detected concentrations between two GC columns. Unless otherwise specified the lower of the two values is reported on the Form I.

C: Pesticide result whose identification has been confirmed by GC/MS.

B: Analyte is found in the sample and the associated method blank. The flag is used for tentatively identified compounds as well as positively identified compounds.

E: Compounds whose concentrations exceed the upper limit of the calibration range of the instrument for that specific analysis.

D: Concentrations identified from analysis of the sample at a secondary dilution.

A: Tentatively identified compound is a suspected aldol condensation product.

X,Y,Z: Laboratory defined flags that may be used alone or combined, as needed. If used, the description of the flag is defined in the project narrative.

Inorganic/Metals

E: Reported value is estimated due to the presence of interference.

N: Matrix spike sample recovery is not within control limits.

* Duplicate sample analysis is not within control limits.

B: The result reported is less than the reporting limit but greater than the instrument detection limit.

U: Analyte was analyzed for but not detected above the reporting limit.

Method Codes:

P	ICP-AES
MS	ICP-MS
CV	Cold Vapor AA
AS	Semi-Automated Spectrophotometric

FQA009:04.24.06:3
TestAmerica Burlington

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Chain of Custody

Argonne NATIONAL LABORATORY

6010

MATRIX: WATER	**ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD***		Shipping Container:
RECEIVING LAB: SEVERN - TRENT			Shipping Info:
PROJECT/SITE: SAVANNAH, MO		ANALYSIS	Field Contact (Name & Temporary Phone): 402-465-9021
SAMPLER(S) (Signature) Sedivy, BIERRE			

DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	HVMT	REMARKS
11/3/07	SVTANK2-W-25411	1	X	FOR HEAVY METALS ANALYSIS
				RUSH SERVICE REQUIRED

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
B. Sedivy	11/5/07	17:00	11.6-07 1105				

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Remarks

Y	N	FOR LAB USE ONLY
X		Custody seal was intact when shipment received.
X		Sample containers were intact when received.
X		Shipment was at required temperature when received.
X	✓	Sample labels, Tags and COC agree. No time on COC

*A sample is under custody if:

1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Science Division, 9700 S. Cass Avenue, Argonne, IL 60439

EVS-160 (6-07)

Argonne NATIONAL LABORATORY

500-7637

6012

MATRIX: WATER	ARGONNE NATIONAL LABORATORY CHAIN OF CUSTODY RECORD*		Shipping Container:
RECEIVING LAB: TEST AMERICA			Shipping Info:
PROJECT/SITE: SAVANNAH MO			Field Contact (Name & Temporary Phone): 402-465-9021
SAMPLER(S) (Signature) Dedivy, Bierre			

	DATE OF COLLECTION	SAMPLE ID NUMBER(S)	Number of containers	ANALYSIS: TOTAL N									REMARKS
1	11/3/07	SVTANK2-W-25411	1	X									FOR TOTAL N ANALYSIS
													RUSH SERVICE REQUIRED

Relinquished by (Signature)	Date	Time	Received by (Signature)	Relinquished by (Signature)	Date	Time	Received by (Signature)
B. Dedivy	11/5/07	17:00	[illegible] 11/6/07 1630				

Relinquished by (Signature)	Date	Time	Received by (Signature)	Date	Time	Remarks

Y	N	FOR LAB USE ONLY
		Custody seal was intact when shipment received.
		Sample containers were intact when received.
		Shipment was at required temperature when received.
		Sample labels, Tags and COC agree.

*A sample is under custody if:

1. It is in your possession; or,
2. It is in your view, after having been in your possession; or,
3. It was in your possession and you locked it up; or,
4. It is in a designated secure area.

Argonne National Laboratory, Applied Geosciences & Environmental Mgt. Group, Environmental Science Division, 9700 S. Cass Avenue, Argonne, IL 60439

EVS-160 (6-07)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Sample Data Summary – Metals

USEPA-CLP FORMS

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: _____ SDG No.: 122865

SOW No.: _____

EPA Sample No.	Lab Sample ID.
SVTANK2-W-25411	731192

Were ICP interelement corrections applied?	Yes/No	YES
Were ICP background corrections applied?	Yes/No	YES
If yes-were raw data generated before application of background corrections?	Yes/No	NO

Comments: _____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____

Date: _____ Title: _____

COVER PAGE - IN

USEPA-CLP FORMS
-1-

INORGANIC ANALYSES DATA SHEET

EPA SAMPLE NO.

SVTANK2-W-25411

Lab Name: STL BURLINGTON Contract: 21005

Lab Code: STLVT Case No.: SAVANNAH SAS No.: SDG No.: 122865

Matrix (soil/water): WATER Lab Sample ID: 731192

Level (low/med): LOW Date Received: 11/06/07

% Solids: 0.0

Concentration Units (ug/L or mg/kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7440-22-4	Silver	0.47	B		P
7429-90-5	Aluminum	343			P
7440-36-0	Antimony	6.2	B		P
7440-38-2	Arsenic	2.1	B		P
7440-39-3	Barium	394			P
7440-41-7	Beryllium	0.49	B		P
7440-70-2	Calcium	87400			P
7440-43-9	Cadmium	1.5	B		P
7440-48-4	Cobalt	1.1	B		P
7440-47-3	Chromium	4.3	B		P
7440-50-8	Copper	2.9	B		P
7439-89-6	Iron	1680			P
7439-95-4	Magnesium	21400			P
7439-96-5	Manganese	50.3			P
7440-23-5	Sodium	20700			P
7440-02-0	Nickel	4.5	B		P
7439-92-1	Lead	4.4	B		P
7440-09-7	Potassium	1780	B		P
7782-49-2	Selenium	2.2	B		P
7440-28-0	Thallium	0.90	U		P
7440-62-2	Vanadium	1.9	B		P
7440-66-6	Zinc	120			P

Color Before: colorless Clarity Before: clear Texture:

Color After: colorless Clarity After: clear Artifacts:

Comments:

Form I - IN

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 500-7637-1

Job Description: STL Burlington - 122865

For:
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Attention: Mr. Kirk F Young

Louis Manzano
Project Manager I
louis.manzano@testamericainc.com
11/09/2007

cc: Rayburn Lavigne

These test results meet all the requirements of NELAC for accredited parameters.

The Lab Certification ID# is 100201.

All questions regarding this test report should be directed to the TestAmerica Project Manager whose signature appears on this report. All pages of this report are integral parts of the analytical data. Therefore, this report should be reproduced only in its entirety.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

Comments
No additional comments.

Receipt
All samples were received in good condition within temperature requirements.

General Chemistry
No analytical or quality issues were noted.

METHOD SUMMARY

Client: TestAmerica Laboratories, Inc. Job Number: 500-7637-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Nitrate	TAL CHI	MCAWW 353.2	

Lab References:

TAL CHI = TestAmerica Chicago

Method References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

METHOD / ANALYST SUMMARY

Client: TestAmerica Laboratories, Inc. Job Number: 500-7637-1

Method		Analyst	Analyst ID
MCAWW	353.2	Ficarello, Peter M	PMF

SAMPLE SUMMARY

Client: TestAmerica Laboratories, Inc. Job Number: 500-7637-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
500-7637-1	SVTANK2-W-25411	Water	11/03/2007 0730	11/06/2007 1030

SAMPLE RESULTS

Mr. Kirk F Young
TestAmerica Laboratories, Inc.
30 Community Drive
Suite 11
South Burlington, VT 05403

Job Number: 500-7637-1

Client Sample ID:SVTANK2-W-25411
Lab Sample ID: 500-7637-1

Date Sampled: 11/03/2007 0730
Date Received:11/06/2007 1030
Client Matrix: Water

Analyte	Result/Qualifier	Unit	MDL	RL	Dilution
Method: 353.2		Date Analyzed:	11/09/2007	0838	
Nitrogen, Nitrate Nitrite	440	ug/L	29	100	1.0

Environmental Science Division
Argonne National Laboratory
9700 South Cass Avenue, Bldg. 203
Argonne, IL 60439-4843
www.anl.gov

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